700

FILE COPY

Surname:
Murphy
Williams

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

MAR 22 1956

United Western Minerals Company
136 West Palace Avenue
Santa Fe, New Mexico

Re: Docket No. DMEA-3892 (Uranium)
Burr J. and Twist groups
Garfield County, Utah

Gentlemen:

Reference is made to your application for Government aid in an exploration project on the above-named groups of claims.

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 indicates to us that the probability of disclosing significant ore reserves on your property is not sufficiently promising to justify Government participation in an exploration program. 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,

[illegible]

Administrator

FMMurphy/izm 3-20-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Docket Copy
700

March 20, 1956

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-3892

Commodity: Uranium

Applicant: United Western Minerals Company
136 West Palace Avenue
Santa Fe, New Mexico

Property: Purchase subject royalty provisions of two non-contiguous groups of claims; the Burr J. group of 11 claims in secs. 8, 9, 16, and 18, T. 34 S., R. 7 E., and the Twist group of 40 claims in secs. 33, 34, and 35, T. 34 S., R. 8 E., and secs. 2, 3, and 11, T. 35 S., R. 8 E., Garfield County, Utah

Date of Application: June 30, 1955. More information requested.

Referred to Region III: August 22, 1955

Field Examination made: November 9, 1955

Field Team Report received: February 13, 1956

Amount of Application: $86,180.00

Work Proposed:

12 holes from 200 to 400 feet deep on the Burr J. claims
39 holes from 400 to 800 feet deep on the Twist claims

Estimated Costs:

9,240 feet non-core drilling @ $3.75/ft.	$34,650.00*
360 feet core drilling @ $5.00/ft.	1,800.00
11,600 feet non-core drilling @ $1.75/ft.	20,300.00
1,000 feet non-core drilling @ $1.25/ft.	1,250.00
300 hrs. caterpillar work @ $15/hr.	4,500.00
Labor on access roads	3,600.00
Supervision & consultant	3,100.00
Operating materials & supplies	1,430.00
Operating equipment (depreciation)	500.00
New buildings (temporary)	2,750.00
Repairs, equipment	3,000.00
Miscellaneous	5,000.00
Contingencies	5,000.00
Correct Total	$86,880.00
Error in 1st figure	-700.00
Operator's Total	$86,180.00

Excerpts from Field Team Report:

The subject group of claims lie on the steeply dipping east flank of the Circle Cliffs upwarp. Formations underlying the claims in ascending order are the Moenkopi, Shinarump, Chinle, Wingate, Kayenta, and Navajo.

On properties to the west, two companies have mined ore from a Shinarump channel. The Acme Uranium Company produced about 1,000 tons of ore that averaged 0.23% U_3O_8. The Rocky Mountain Uranium Corporation mined the same ore body for a distance of about 800 feet southeast from the Acme property, producing about 3,600 tons of ore that averaged 0.25% U_3O_8. The ore body was over 1,000 feet long but only a few feet in width and thickness. If the Shinarump "Rainy-Day" channel contined on the same bearing as it was mined, it would extend under the Twist No. 4 claim. However, the channel has pinched, at a point about 2,000 feet N. 70° W., of Twist No. 4 claim, and exploratory drilling and drifting by the Rocky Mountain Uranium Corporation have discovered no additional ore reserves.

The field examiners and Field Team recommend the subject application be denied because:

1. There is no evidence that the Shinarump channel is present on the subject property.

2. It is impractical to explore for a long narrow ore body by the deep drilling required on these properties.

3. Examinations of the outcrops west of the property, and underground development in the "Rainy-Day" mine indicate that no other channels are present.

Commodity Members' Comments: (excerpts)

USBM, J. E. Crawford, February 27, 1956:

Mr. Crawford concurs in the Field Team's recommendation to deny the application. He points out that apparently no reasonable target exists that would warrant an exploration project.

USGS, W. P. Williams, March 16, 1956:

A channel in the Moenkopi appears to be trending toward the Twist claims but the channel must be projected about 2,500 feet.

The prospects do not appear promising of finding sufficient new ore to justify the necessary exploration expenditures. I concur in the Field Team's recommendation that the application for DMEA assistance be denied.

Rare & Miscellaneous Metals Division, F. M. Murphy, March 20, 1956:

The Shinarump channel for which the Applicant proposes to explore might possibly extend into the subject property. However, the ore body which was mined for a distance of 1,000 feet from the outcrop never exceeded more than a few feet in width and ranged from 6 inches to 2 feet in depth.

To explore for such a small target by drilling holes to depths ranging from 200 to 800 feet does not seem to be a feasible exploration method. Moreover, if by chance an ore body similar to the one mined further west was found, the cost of mining would be extremely high because of its great depth from surface.

Because of the many unfavorable exploration factors, this Division concurs in the Field Team's recommendation.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

3/19/56 gla

RECEIVED

MAR 16 1956

IN REPLY REFER TO:

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

March 16, 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 3892, United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah.

In discussing possibilities for ore discovery on the subject property the examining team points out that the ore host, the Shinarump conglomerate, is probably not present on the Burr J. claims. A known channel in the Moenkopi formation appears to be trending toward the Twist claims but the channel must be extended about 2,500 feet.

Past production from the vicinity has been small and sporadic. The prospects do not appear promising of finding sufficient new ore to justify the necessary exploration expenditures. I concur with the Field Team's recommendation that the application for DMEA assistance be denied.

WPWilliams

W. P. Williams

IN REPLY REFER TO:

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

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MAR 16 1956

March 16, 1956

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Past production from the vicinity has been small and sporadic. The prospects do not appear promising of finding sufficient new ore to justify the necessary exploration expenditures. I concur with the Field Team's recommendation that the application for DMEA assistance be denied.

W. P. Williams

WPWilliams:iml
G-3/16/56

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 16 1956

March 16, 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 3692, United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah.

In discussing possibilities for ore discovery on the subject property the examining team points out that the ore host, the Shinarump conglomerate, is probably not present on the Burr J. claims. A known channel in the Moenkopi formation appears to be trending toward the Twist claims but the channel must be extended about 2,500 feet.

Past production from the vicinity has been small and sporadic. The prospects do not appear promising of finding sufficient new ore to justify the necessary exploration expenditures. I concur with the Field Team's recommendation that the application for DMEA assistance be denied.

W. P. Williams

WPWilliams:iml
G-3/16/56

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 16 1956

March 16, 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 3892, United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah.

In discussing possibilities for ore discovery on the subject property the examining team points out that the ore host, the Shinarump conglomerate, is probably not present on the Burr J. claims. A known channel in the Moenkopi formation appears to be trending toward the Twist claims but the channel must be extended about 2,500 feet.

Past production from the vicinity has been small and sporadic. The prospects do not appear promising of finding sufficient new ore to justify the necessary exploration expenditures. I concur with the Field Team's recommendation that the application for DMEA assistance be denied.

W. P. Williams

WPWilliams:iml
G-3/16/56

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

2-28-56 dgn

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

RECEIVED
FEB 28 1956

February 27, 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 3892, United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

I have reviewed the report of examination, United Western Minerals Company, DMEA Docket 3892, dated February 8 and received in this office February 17. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

Field examination of the Burr J. and Twist groups of claims by a DMEA team indicated that little or no Shinarump conglomerate is known to occur on the Burr J. group. This fact would eliminate a reasonable target for the exploration. The deep drilling that would be required to explore the Twist group of claims is impractical because the holes cannot be economically spaced close enough to adequately test the possible extension of a long, narrow ore body.

The field examiners recommend that the application be denied. We concur in the recommendation that the application for exploration assistance be denied.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E Crawford
John E. Crawford

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

RECEIVED
FEB 28 1956

February 27, 1956

Memorandum

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

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

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Field examination of the Burr J. and Twist groups of claims by a DMEA team indicated that little or no Shinarump conglomerate is known to occur on the Burr J. group. This fact would eliminate a reasonable target for the exploration. The deep drilling that would be required to explore the Twist group of claims is impractical because the holes cannot be economically spaced close enough to adequately test the possible extension of a long, narrow ore body.

The field examiners recommend that the application be denied. We concur in the recommendation that the application for exploration assistance be denied.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford

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

RECEIVED
FEB 28 1956

February 27, 1956

Memorandum

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

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

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Field examination of the Burr J. and Twist groups of claims by a DMEA team indicated that little or no Shinarump conglomerate is known to occur on the Burr J. group. This fact would eliminate a reasonable target for the exploration. The deep drilling that would be required to explore the Twist group of claims is impractical because the holes cannot be economically spaced close enough to adequately test the possible extension of a long, narrow ore body.

The field examiners recommend that the application be denied. We concur in the recommendation that the application for exploration assistance be denied.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John K. Crawford

FEB 20 1956

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

February 8, 1956

RECEIVED
FEB 13 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, Docket DMEA 3892 (Uranium), United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

Enclosed are the original and three copies of a Joint Report of Examination on the subject property.

The field examiners conclude that drilling for an extension of the Shinarump channel is not warranted, because there is no evidence of Shinarump sedimentation on or near the Burr-J group. They also conclude that there is no reasonable exploration target on these claims. On the Twist group their recommendation for denial is based on the fact that it is impractical to explore for an extension of a long, narrow ore body by the deep drilling required, because holes can not be economically spaced close enough to adequately test the ground. Examination of the outcrop west of the property and underground development in the Rainy Day Mine indicate that no other channels are present.

We concur in the recommendation that the application be denied.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(date)

IN REPLY REFER TO:
DMEA
Date Rec'd.
FEB 8 1956
BUREAU OF MINES
Denver, Colorado

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FEB 1 6 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

February 6, 1956

Memorandum

TRANSMITTED
FEB 8 - 1956

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 3892 (Uranium), United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

Enclosed are the original and nine copies of a joint examination report by H. F. Albee, Geological Survey, and M. H. Salsbury, Bureau of Mines, covering their examination of the subject property.

The applicant requested Government assistance to explore for uranium ore on the Burr J. and Twist claim groups by 20,400 feet of drilling at an estimated total cost of $86,180.00

Although ore has been mined from a very narrow, long ore body in a Shinarump channel about 2,000 feet west of the Twist claims, the examiners conclude that drilling for an extension of this ore body or for another ore body in an extension of the channel is not warranted, particularly at depths up to 800 feet. The Shinarump ore-bearing horizon does not appear to be present beneath the Burr J. claims and thus exploration on that group is not warranted.

Denial of the application for exploration assistance, DMEA Docket 3892, is recommended.

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(date)

for Scott W Hazen Jr
John F. Shaw
Supervising Mining Engineer

E. N. Harshman
E. N. Harshman
Member, Field Team

Enclosures (10)
E. N. Harshman:mp

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

RECEIVED
FEB 13 1956

January 20, 1956

TRANSMITTED
FEB 8 - 1956

Memorandum

To: E. N. Harshman, DMEA Field Team, Region III

From: J. William Hasler

Subject: Transmittal of report of field examination on DMEA Docket 3892, United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah.

The United Western Minerals Company applied for Government assistance to explore for uranium on the Burr J. and Twist group of claims in the Circle Cliffs area, Garfield County, Utah. The application was referred to the field and an examination was made November 9, by H. F. Albee, U. S. Geological Survey, and M. H. Salsbury, U. S. Bureau of Mines, accompanied by Mr. Alva A. Simpson, Jr., president of the company.

The claims are in two non-contiguous groups in an area where there has been small mining operations with production of a few thousand tons each. The property has been purchased by the applicant and is subject to a royalty on all production, payable to the sellers. Both groups of claims lie on a steeply dipping flank of the asymmetrical Circle Cliffs upwarp. The underlying formations are of Triassic and Jurassic age, and ore deposits in the area are found in the Shinarump formation of Triassic age. The Shinarump formation in the area of the Burr J. and Twist claims is lenticular, and no Shinarump is exposed on the Burr J. group, as the overlying Chinle formation rests directly on the Moenkopi. A Shinarump channel lying west of the Twist group of claims has produced some ore, but the ore

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(date)

bodies in the channel are known to pinch out some 2,000 feet northwest of the Twist group of claims. Since there is little or no Shinarump conglomerate known to occur on these groups of claims, the chances of finding uranium ore are not good. It is, therefore, recommended that the application be denied. I concur with the conclusions and recommendations of the examining team.

The Atomic Energy Commission was consulted relative to the appraisal of these claims.

Enclosed are the required maps, as well as the applicant's brochure.

J. William Hasler
J. William Hasler,
Geologist.

JWH/mlr

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
FEB 13 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

TRANSMITTED
FEB 8 - 1956

DMEA 3892

United Western Minerals Company

Burr J. and Twist Groups

Garfield County, Utah

Uranium

Joint Engineering and Geological Report

by

Howard F. Albee, Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

February 2, 1956

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(date)

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FEB 13 1956

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ILLUSTRATIONS

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1. Location map, Burr J. and Twist claims, United Western Minerals Company, Garfield County, Utah. DMEA 3892	1
2. Geologic map of part of the Circle Cliffs area showing the Burr J. and Twist groups of claims and proposed drill holes, United Western Minerals Company, Garfield County, Utah. DMEA 3892	2

DMEA 3892

UNITED WESTERN MINERALS COMPANY
BURR J. AND TWIST GROUPS
GARFIELD COUNTY, UTAH

RECEIVED
FEB 13 1956

INTRODUCTION AND SUMMARY

On July 5, 1955, United Western Minerals Company, 136 West Palace Avenue, Santa Fe, New Mexico, applied for government assistance to explore their property in the Circle Cliffs area, Garfield County, Utah (fig. 1).

A non-core and core drilling project totaling 20,400 feet of drilling in 46 holes was proposed at an estimated cost of $86,180.00. Government participation of 75 percent would be $64,635.00. The program was later revised to include 51 holes. No revised cost estimates were given.

A field examination was made on November 9, 1955, by a DMEA team in company with Alva A. Simpson Jr., President of the applicant company, and H. N. Rhodes, the superintendent-engineer.

The located claims are in two non-contiguous groups in an area where there have been small mining operations with a production of a few thousand tons each. The property has been purchased by the applicant but is subject to a royalty on all production payable to the sellers. A brief check in the field indicates that location procedures have been satisfactory. There is evidence of conflicts on both groups with other claims having later location dates. The claims appear to be valid however.

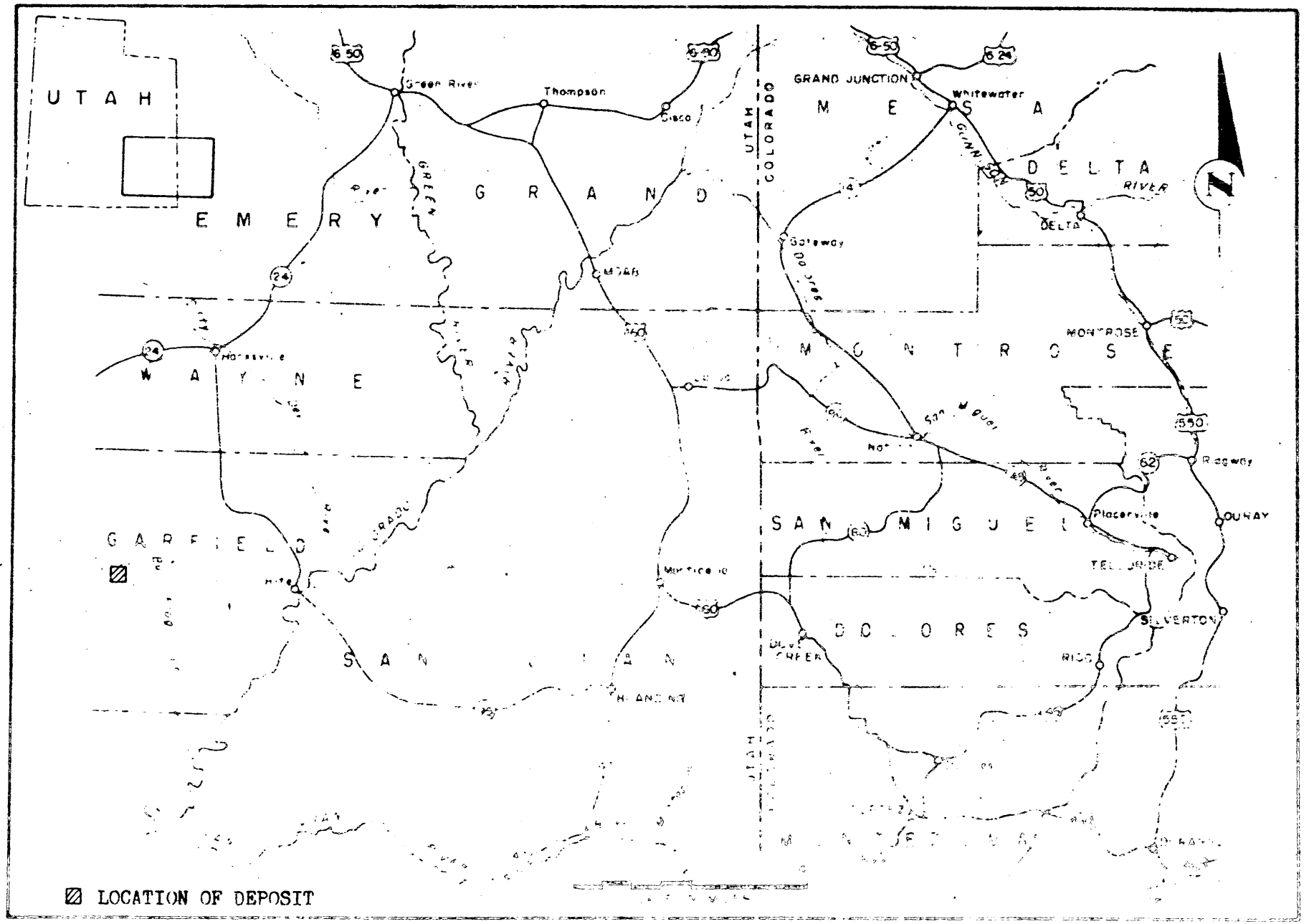

FIGURE 1 - LOCATION MAP, BURR J. AND TWIST CLAIMS, UNITED WESTERN MINERALS COMPANY, GARFIELD COUNTY, UTAH
DMEA 3892

Both groups of claims lie on the steeply dipping east flank of the asymmetrical Circle Cliffs upwarp (fig. 2). The underlying formations are of Triassic and Jurassic age. The beds strike about N. 30° W. and dip from 10° to 20° to the northeast, the dip increasing in that direction. The ore-bearing formation in the area, the Triassic Shinarump conglomerate, is lenticular where exposed in the vicinity of the claims. It thins and thickens within a short distance, and in many places is absent.

The extent of Shinarump sedimentation in the Circle Cliffs area has been extensively investigated by the Atomic Energy Commission and the Geological Survey. The conclusions reached by the examining team in the present case are substantiated by the results of this work.

There is a Chinle-Moenkopi outcrop on and near the Burr J. group that can be traced several hundred feet, but there is no Shinarump present. Because there is no evidence of Shinarump sedimentation on or near the Burr J. group, it is concluded that there is no reasonable exploration target on these claims.

West of the Twist group of claims a belt of Shinarump rocks about 1,200 feet wide is exposed in an outcrop and has been mapped. Investigation of the outcrop and underground exploration have resulted in the location of one channel which trends S. 70° E. and a very narrow ore body 1,000 feet long, reported to be typical of the area, has been mined along the south side of the channel. The deposit is

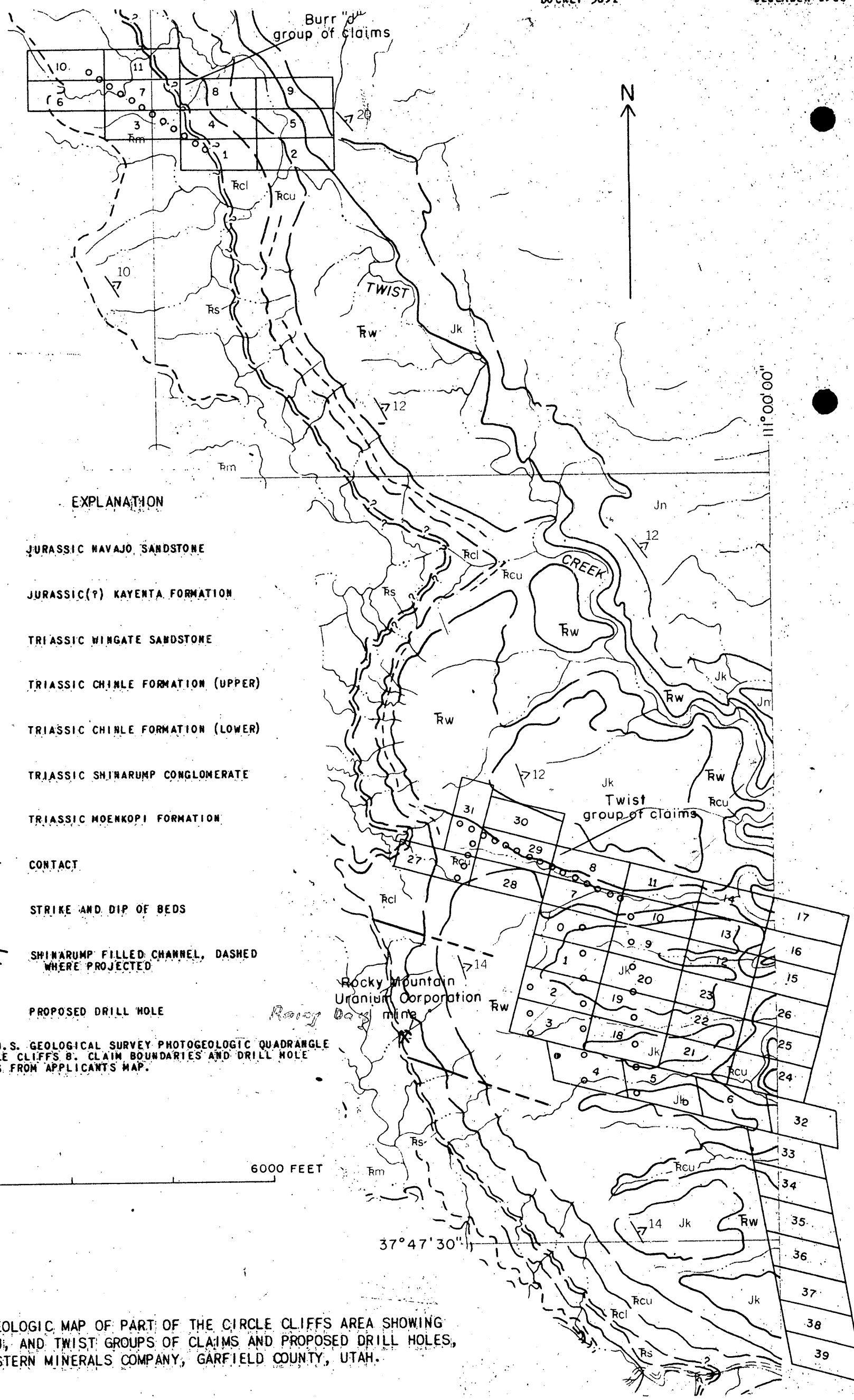

FIGURE 2. GEOLOGIC MAP OF PART OF THE CIRCLE CLIFFS AREA SHOWING THE BURR J, AND TWIST GROUPS OF CLAIMS AND PROPOSED DRILL HOLES, UNITED WESTERN MINERALS COMPANY, GARFIELD COUNTY, UTAH.

up to 10 feet wide and ranges from a few inches to 4 feet in thickness. The operators of the Rainy Day mine have done considerable work east of this channel but no other channels or mineralization were found.

An extension of the Rainy Day ore body would, if it continued on its present course, enter the applicant's Twist no. 4 claim in 2,000 feet.

A rather costly mining operation by the operators of the Rainy Day and Acme mines has produced between 4,000 and 5,000 tons of ore averaging 0.23 to 0.25 percent U_3O_8. It is reported that there was little or no profit in the operation. The channel ore body in the southeast face of the Rainy Day workings has pinched down to the point where it will not make a shipping grade of ore, and the mine is idle at the present time. This pinchout does not necessarily mark the limit of ore-grade mineralization southeasterly.

If the Rainy Day channel continues into the Twist group it will be under 800 to 1,000 feet of cover. Assuming that it does so, the cost of a new shaft to reach it at this depth would be prohibitive, in view of the probable small size of any channel deposit which would be likely to occur. Developing the Twist group by continuation of the present workings on the Rainy Day channel would probably not be economic unless the grade and quantity of ore should be better than that found to date.

In the absence of evidence of other Shinarump channeling on or near the Twist group, it is concluded that the proposed drilling project calling for holes 400 to over 800 feet in depth, is not justified. Moreover, drilling for the long narrow ore bodies which appear to be typical of the Circle Cliffs area would be unpractical at this depth because of the small target presented.

It is recommended that the application for Government assisted exploration under DMEA 3892 be denied.

ACKNOWLEDGEMENTS

The applicant's brochure included maps, a cost estimate, and ownership data. Drilling plans were presented but these were not laid out in relation to known geologic conditions.

The Atomic Energy Commission was consulted and G. H. Schenck, project chief at the Circle Cliffs A. E. C. camp furnished pertinent information on the area. Production figures were obtained from A. E. C. records. The results of Geological Survey reconnaissance in the area were also available.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Burr J. and Twist group of claims are both on the east side of the Circle Cliffs uplift. The Burr J. claims are north of Burr Canyon, the eastern entrance to the area, and the Twist group is south of Burr Canyon. The Burr J. group is in secs. 8, 9, 16, and 18, T. 34 S., R. 7 E., S. L. M. and the Twist group in secs. 33, 34, and 35, T. 34 S., R. 8 E., and secs. 2, 3, and 11,

T. 35 S., R. 8 E. These are reached by a fair, graded access road running 67 miles southwest of Hanksville, Utah. Hanksville is 60 miles from Green River, Utah over a graded highway (Utah 24), now being improved, and 208 miles further from Grand Junction, Colorado, the nearest major source of supplies. The nearest ore-buying station is 130 miles distant at White Canyon, Utah, and is via a ferry over the Colorado River at Hite, Utah. Ore from the area is usually trucked via Green River to other plants.

The elevation of the claims ranges from 6,000 to 6,400 feet. The climate is moderate, but surface operations in winter are not advisable. The topography of drilling areas over the claims ranges from gentle, easily accessible slopes on the Burr J claims, to steep precipitous Chinle slopes and Wingate cliffs bounding an easterly sloping, dissected mesa on the Twist claims.

The transportation costs in the rather remote area are high. Power, supplies, water, labor, or ore marketing facilities do not present any particular problems other than that of accessibility.

The applicants plan to expand an established camp which they have on the claims.

Labor and housing requirements for a drilling project would be met by a drilling contractor.

HISTORY, PRODUCTION, AND PROPERTY OWNERSHIP

Mining exploration for uranium ore in the Circle Cliffs area dates from about 1950. Early work was handicapped by lack of roads.

Atomic Energy Commission reconnaissance dates from 1952 and was followed by a Geological Survey mapping project.

There has been no ore found or mined on either the Burr J. or the Twist claims. Two operations on the one channel found west of the Twist claims produced about 1,000 tons and 3,600 tons of ore respectively. The average grade, according to A. E. C. records, was 0.23 and 0.25 percent U_3O_8, but some shipments have been of better grade. The applicant's report that they averaged 0.40 percent U_3O_8 is in error. In general, Circle Cliffs ore deposits have been small and of good grade. The typical long narrow shape of the channel ore bodies does not lend itself to exploration by deep drilling because holes must be drilled in fences with close spacing to insure adequate testing.

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Las Vegas located the Trees no. 1 claim, and Silas O. Tanner located the Ford group on the same day, no filing data was shown on the location notices. These claims overlap the western end of the Burr J. group. Rocky Mountain Uranium Corporation has a location, Yellow Streak no. 8 claim, which overlaps the Twist no. 27 claim. The Rocky Mountain location was made on December 14, 1954, by L. D. Jackson and Blaine A. Albrecht and recorded on page 49 book 25.

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The United Western Minerals Company has obtained all of the claims in the DMEA application, and several others, on a purchase agreement which provides for a royalty of 10 percent of the net mill return payable to the sellers. Consequently actual purchase of the claims cannot be completed.

PRESENT STATUS

Exploration and development

Exploration has not been done on either property except a small amount of rim stripping on the Burr J. group. The applicant reported the presence of Shinarump conglomerate in the rim exposed by

stripping but field investigation did not substantiate this, nor is it confirmed by Geological Survey mapping.

On the Rainy Day property west of the Twist group, where a channel deposit has been mined by the Rocky Mountain Uranium Corporation and the Acme Uranium Company, approximately 2,000 feet of underground development has been done. Of this amount, about 1,000 feet of incline drift has been driven on the ore deposit. Five hundred feet of crosscut was required to drive into the ore from the Rocky Mountain Uranium Corporation's new portal south of the outcrop of the ore on Acme Uranium Corporation ground. In addition, the Rocky Mountain crosscut has been continued about 400 feet northeast of the ore body to explore Shinarump sedimentation which continues beyond the channel. Nothing of interest was found.

The Shinarump channel ore body which has been developed and mined, is at least 1,000 feet long and is exposed in the southeast face of the incline which has been driven on it. It is unusually straight, up to 10 feet in width, and is from a few inches to 4 feet thick. There are still small pods of ore left in the walls of the incline and in the face but as mined, the material would not make a shipping grade.

There was considerable dilution in mining the Rainy Day ore, and when the ore streak pinched in the present face of the incline, the operation was stopped. It is of course possible that the ore may widen southeast of the present workings.

Mining and milling equipment and other facilities

The only improvements on the property are two trailers at the northeast end of the Twist group.

GEOLOGY AND ORE DEPOSITS

The Burr J. and Twist groups of claims lie on the steeply dipping east flank of the asymmetrical Circle Cliffs upwarp (fig. 2). The formations underlying the claims are of Triassic and Jurassic age. From bottom to top these formations are the Triassic Moenkopi, Shinarump, Chinle, and Wingate, and the Jurassic Kayenta, and Navajo. The easterly dip increases eastward across both groups of claims from about 10° to greater than 20°. The strike of the beds is about N. 30° W. The Twist group of claims is staked such that only the northernmost part of the group is stratigraphically lower than the Wingate. The greater part of the claims lies on the Wingate and Kayenta formations.

The Chinle formation is 680 feet thick at the south end of the Twist group as measured by Albee in 1953 and is 500 feet thick near the Burr J. group as measured by Moore in 1931. Where the Chinle underlies the Twist group it is at least 600 feet thick. Moore's section shows the Wingate to be 260 feet thick and the Kayenta to be 214 feet thick near the Burr J. claims. These thicknesses are about the same for the Wingate and Kayenta at the Twist group.

The ore-bearing formation, the Shinarump conglomerate, is lenticular in the area of the claims. It thickens and thins within short distances and in many places is absent. No Shinarump is exposed on the Burr J. group and the Chinle rests on the Moenkopi at the outcrop. A Shinarump channel may extend under the Twist group inasmuch as a channel is exposed about 2,500 feet west of the claim group (fig. 2). A short distance on either side of the channel the Shinarump wedges out.

The Shinarump channel, known as the Rainy Day channel, that crops out west of the Twist group trends about S. 70° E. and its projection would pass through the part of the group that is underlain by the Wingate and Kayenta formations. The channel is asymmetrical, with the steeper side to the south. Each side of the channel dips gently inward for a short distance, then the dip increases appreciably. This forms a shoulder in the underlying Moenkopi on each side of the channel.

Two mining companies have mined ore from the Moenkopi that forms the southernmost shoulder of the channel. The Acme Uranium Company has mined the ore body for about 200 feet from the outcrop to the southeastern edge of their property. They have produced about a thousand tons of ore that averaged about 0.23 percent U_3O_8. The Rocky Mountain Uranium Corporation has driven a tunnel parallel to the Acme property into the channel. They have mined the ore body southeast for about 800 feet from the Acme property

line and have produced about 3,600 tons of ore that averaged about 0.25 percent U_3O_8. The ore body was over a thousand feet long but only a few feet in width and thickness. The ore contained as much as several percent U_3O_8 through the narrow thickness and width and the ore was diluted with much low grade to barren rock. About a thousand feet to the southeast from the outcrop of the channel, and toward the Twist group, the ore grade material has pinched to such small dimensions that operations have been suspended. If the ore body had continued on the same bearing as it was mined it would extend under the Twist no. 4 claim. The channel has pinched, at a point about 2,000 feet N. 70° W. of Twist no. 4 claim and exploratory drilling and drifting by the Rocky Mountain Uranium Corporation have discovered no additional ore reserves.

Ore Reserves

There are no ore reserves on the property. No sampling was done. Outcrops on the Burr J. claims and exposures in the Rainy Day mine were checked radiometrically.

PROPOSED EXPLORATION

The applicant has proposed a drilling program totaling 20,400 feet of core and non-core drilling in 46 holes at an estimated cost of $86,180.00. Government participation at 75 percent would be $64,635.00. A revised application consisting of 51 holes was submitted, but revised cost figures were not given.

A total of 12 holes from 200 to 400 feet in depth were proposed on the Burr J. claims and 39 holes from 400 to 800 feet deep on the Twist claims. The drilling pattern on the Burr J. group was essentially a row of holes extending northwesterly on 250-foot spacing. The 20 deep holes on the Twist group, which would be collared in the Wingate formation, are located in north-south fences 1,000 feet apart with holes in the fences on a 500-foot spacing. The 19 other holes are proposed at the north end of the Twist group. These are on closer spacing of 250 feet and in two fences at right angles to each other. The purpose of this closer spacing and the pattern of holes is not clear, unless it is that the drilling depths are less.

None of the proposed drilling is planned with regard to the known size and locations of Shinarump channels. Holes to intersect the possible extension of the one known narrow channel in the vicinity of the claims are no closer than any other holes. Because there is no reasonable exploration target on the Burr J. claims, and because drilling for the possible extension of the long narrow Rainy Day ore body is not practical at depths of 800 feet, no alternate proposal is being made by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that there are no reasonable exploration targets on the property. On the Burr J. claims, this conclusion is based on the fact that there is probably no Shinarump

sedimentation present. On the Twist group, the conclusion is based on the fact that it is impractical to explore for an extension of a long narrow ore body by the deep drilling required because holes could not be economically spaced close enough to adequately test the ground. In addition, examination of the outcrops west of the property, and underground development in the Rainy Day mine indicate that no other channels are present.

It is recommended that the application for Government assisted exploration under DMEA 3892 be denied.

REFERENCE CITED

Gregory, H. E. and Moore, R. C., The Kaiparowits region, a geographic and geologic reconnaissance of parts of Utah and Arizona: U. S. Geological Survey Professional Paper 164, pages 55, 62, and 64, 1931

2/14/56 cfm

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

February 8, 1956

224 New Customhouse
Denver 2, Colorado

FEB 13 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 3892 (Uranium), United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

Enclosed are the original and three copies of a Joint Report of Examination on the subject property.

The field examiners conclude that drilling for an extension of the Shinarump channel is not warranted, because there is no evidence of Shinarump sedimentation on or near the Burr-J group. They also conclude that there is no reasonable exploration target on these claims. On the Twist group their recommendation for denial is based on the fact that it is impractical to explore for an extension of a long, narrow ore body by the deep drilling required, because holes can not be economically spaced close enough to adequately test the ground. Examination of the outcrop west of the property and underground development in the Rainy Day Mine indicate that no other channels are present.

We concur in the recommendation that the application be denied.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

2-17-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED FEB 13 1956

IN REPLY REFER TO:
DMEA
Date Rec'd.
FEB 8 1956
BUREAU OF MINES
Denver, Colorado

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

February 6, 1956

Memorandum

TRANSMITTED
FEB 8 - 1956

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 3892 (Uranium), United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

Enclosed are the original and nine copies of a joint examination report by H. F. Albee, Geological Survey, and M. H. Salsbury, Bureau of Mines, covering their examination of the subject property.

The applicant requested Government assistance to explore for uranium ore on the Burr J. and Twist claim groups by 20,400 feet of drilling at an estimated total cost of $86,180.00

Although ore has been mined from a very narrow, long ore body in a Shinarump channel about 2,000 feet west of the Twist claims, the examiners conclude that drilling for an extension of this ore body or for another ore body in an extension of the channel is not warranted, particularly at depths up to 800 feet. The Shinarump ore-bearing horizon does not appear to be present beneath the Burr J. claims and thus exploration on that group is not warranted.

Denial of the application for exploration assistance, DMEA Docket 3892, is recommended.

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(date)

John F. Shaw
Supervising Mining Engineer

E. N. Harshman
Member, Field Team

Enclosures (10)
E. N. Harshman:mp

MINERAL DEPOSITS
DMEA
RECEIVED
JAN 26 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

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

FEB 13 1956

January 20, 1956

Memorandum

TRANSMITTED
FEB 8 - 1956

To: E. N. Harshman, DMEA Field Team, Region III

From: J. William Hasler

Subject: Transmittal of report of field examination on DMEA Docket 3892, United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah.

The United Western Minerals Company applied for Government assistance to explore for uranium on the Burr J. and Twist group of claims in the Circle Cliffs area, Garfield County, Utah. The application was referred to the field and an examination was made November 9, by H. F. Albee, U. S. Geological Survey, and M. H. Salsbury, U. S. Bureau of Mines, accompanied by Mr. Alva A. Simpson, Jr., president of the company.

The claims are in two non-contiguous groups in an area where there has been small mining operations with production of a few thousand tons each. The property has been purchased by the applicant and is subject to a royalty on all production, payable to the sellers. Both groups of claims lie on a steeply dipping flank of the asymmetrical Circle Cliffs upwarp. The underlying formations are of Triassic and Jurassic age, and ore deposits in the area are found in the Shinarump formation of Triassic age. The Shinarump formation in the area of the Burr J. and Twist claims is lenticular, and no Shinarump is exposed on the Burr J. group, as the overlying Chinle formation rests directly on the Moenkopi. A Shinarump channel lying west of the Twist group of claims has produced some ore, but the ore

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(date)

bodies in the channel are known to pinch out some 2,000 feet northwest of the Twist group of claims. Since there is little or no Shinarump conglomerate known to occur on these groups of claims, the chances of finding uranium ore are not good. It is, therefore, recommended that the application be denied. I concur with the conclusions and recommendations of the examining team.

The Atomic Energy Commission was consulted relative to the appraisal of these claims.

Enclosed are the required maps, as well as the applicant's brochure.

J. William Hasler
J. William Hasler,
Geologist.

JWH/mlr

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

RECEIVED
FEB 1956

TRANSMITTED

FEB 8 - 1956

DMEA 5892

United Western Minerals Company

Burr J. and Twist Groups

Garfield County, Utah

Uranium

Joint Engineering and Geological Report

by

Howard F. Albee, Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

February 2, 1956

Reviewed by
DMEA OPERATING COMMITTEE
2-17-56
(Date)

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2. Geologic map of part of the Circle Cliffs area showing the Burr J. and Twist groups of claims and proposed drill holes, United Western Minerals Company, Garfield County, Utah. DMEA 3892	2

DMEA 3892

RECEIVED
FEB 13 1956

UNITED WESTERN MINERALS COMPANY
BURR J. AND TWIST GROUPS
GARFIELD COUNTY, UTAH

INTRODUCTION AND SUMMARY

On July 5, 1955, United Western Minerals Company, 136 West Palace Avenue, Santa Fe, New Mexico, applied for government assistance to explore their property in the Circle Cliffs area, Garfield County, Utah (fig. 1).

A non-core and core drilling project totaling 20,400 feet of drilling in 46 holes was proposed at an estimated cost of $86,180.00. Government participation of 75 percent would be $64,635.00. The program was later revised to include 51 holes. No revised cost estimates were given.

A field examination was made on November 9, 1955, by a DMEA team in company with Alva A. Simpson Jr., President of the applicant company, and N. N. Rhodes, the superintendent-engineer.

The located claims are in two non-contiguous groups in an area where there have been small mining operations with a production of a few thousand tons each. The property has been purchased by the applicant but is subject to a royalty on all production payable to the sellers. A brief check in the field indicates that location procedures have been satisfactory. There is evidence of conflicts on both groups with other claims having later location dates. The claims appear to be valid however.

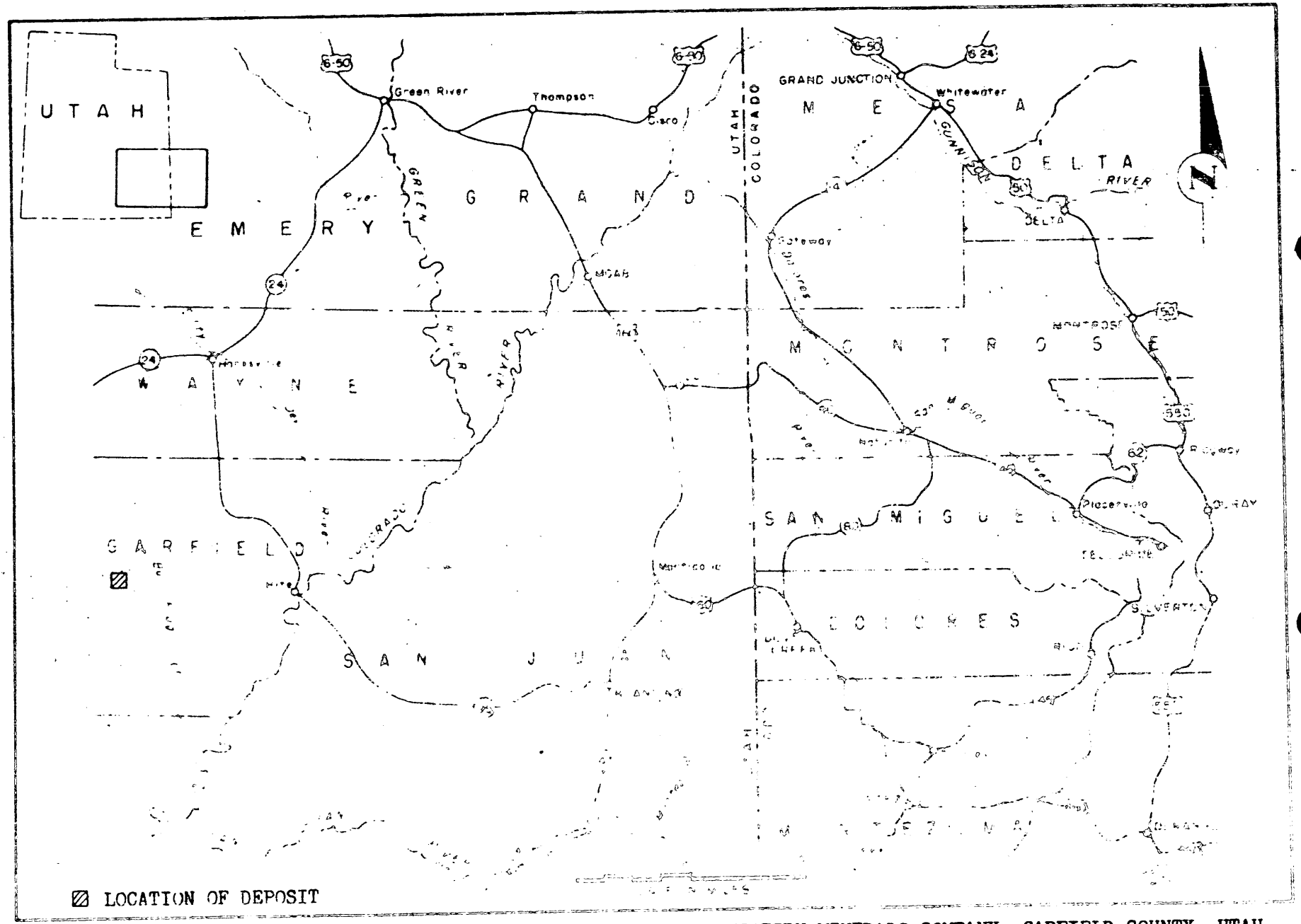

FIGURE 1 - LOCATION MAP, BURR J. AND TWIST CLAIMS, UNITED WESTERN MINERALS COMPANY, GARFIELD COUNTY, UTAH
DMEA 3892

Both groups of claims lie on the steeply dipping east flank of the asymmetrical Circle Cliffs upwarp (fig. 2). The underlying formations are of Triassic and Jurassic age. The beds strike about N. 30° W. and dip from 10° to 20° to the northeast, the dip increasing in that direction. The ore-bearing formation in the area, the Triassic Shinarump conglomerate, is lenticular where exposed in the vicinity of the claims. It thins and thickens within a short distance, and in many places is absent.

The extent of Shinarump sedimentation in the Circle Cliffs area has been extensively investigated by the Atomic Energy Commission and the Geological Survey. The conclusions reached by the examining team in the present case are substantiated by the results of this work.

There is a Chinle-Moenkopi outcrop on and near the Burr J. group that can be traced several hundred feet, but there is no Shinarump present. Because there is no evidence of Shinarump sedimentation on or near the Burr J. group, it is concluded that there is no reasonable exploration target on these claims.

West of the Twist group of claims a belt of Shinarump rocks about 1,200 feet wide is exposed in an outcrop and has been mapped. Investigation of the outcrop and underground exploration have resulted in the location of one channel which trends S. 70° E. and a very narrow ore body 1,000 feet long, reported to be typical of the area, has been mined along the south side of the channel. The deposit is

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3892
DECEMBER 1955

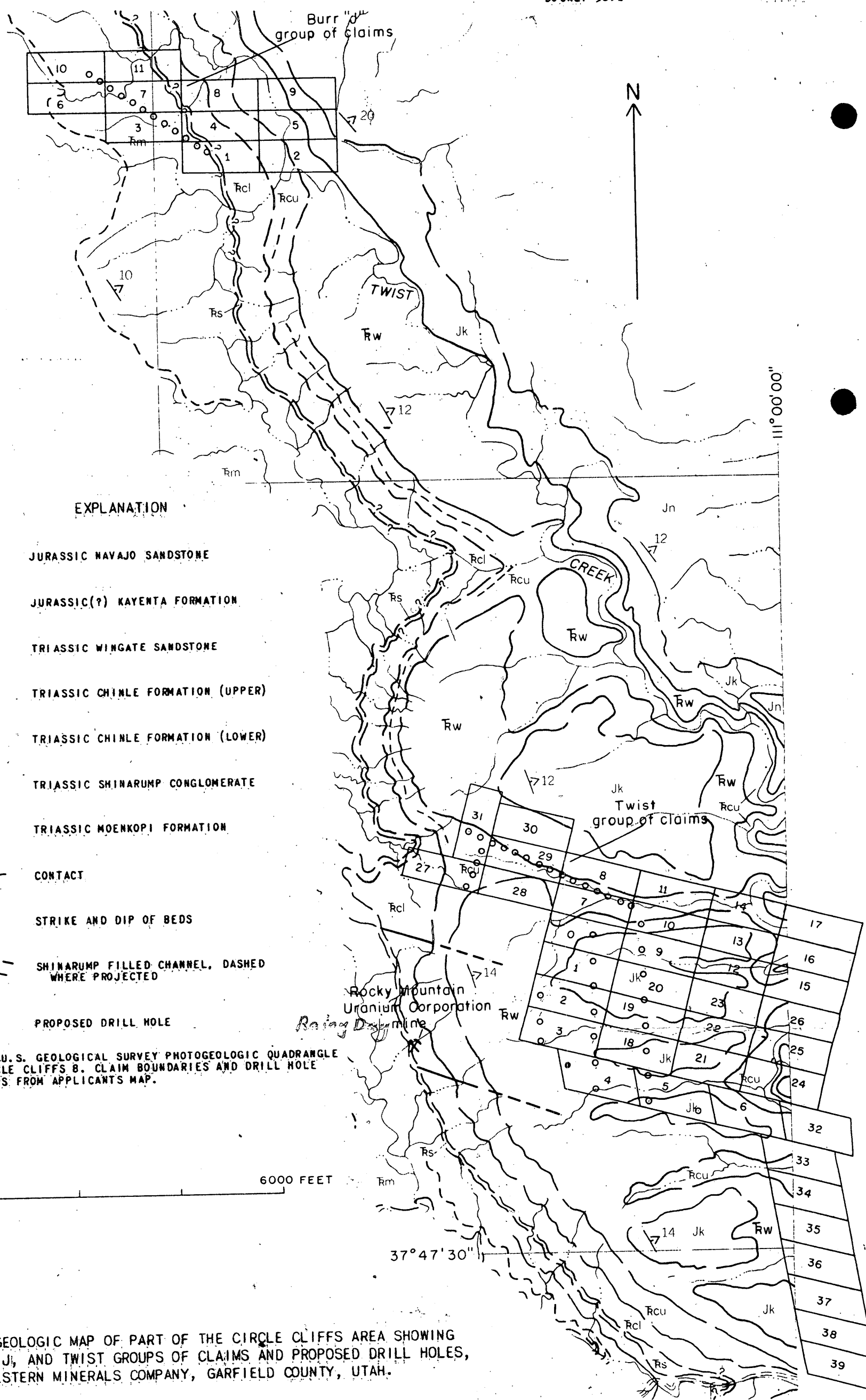

FIGURE 2. GEOLOGIC MAP OF PART OF THE CIRCLE CLIFFS AREA SHOWING THE BURR JI, AND TWIST GROUPS OF CLAIMS AND PROPOSED DRILL HOLES, UNITED WESTERN MINERALS COMPANY, GARFIELD COUNTY, UTAH.

up to 10 feet wide and ranges from a few inches to 4 feet in thickness. The operators of the Rainy Day mine have done considerable work east of this channel but no other channels or mineralization were found.

An extension of the Rainy Day ore body would, if it continued on its present course, enter the applicant's Twist no. 4 claim in 2,000 feet.

A rather costly mining operation by the operators of the Rainy Day and Acme mines has produced between 4,000 and 5,000 tons of ore averaging 0.23 to 0.25 percent U_3O_8. It is reported that there was little or no profit in the operation. The channel ore body in the southeast face of the Rainy Day workings has pinched down to the point where it will not make a shipping grade of ore, and the mine is idle at the present time. This pinchout does not necessarily mark the limit of ore-grade mineralization southeasterly.

If the Rainy Day channel continues into the Twist group it will be under 800 to 1,000 feet of cover. Assuming that it does so, the cost of a new shaft to reach it at this depth would be prohibitive, in view of the probable small size of any channel deposit which would be likely to occur. Developing the Twist group by continuation of the present workings on the Rainy Day channel would probably not be economic unless the grade and quantity of ore should be better than that found to date.

In the absence of evidence of other Shinarump channeling on or near the Twist group, it is concluded that the proposed drilling project calling for holes 400 to over 800 feet in depth, is not justified. Moreover, drilling for the long narrow ore bodies which appear to be typical of the Circle Cliffs area would be unpractical at this depth because of the small target presented.

It is recommended that the application for Government assisted exploration under DMEA 3892 be denied.

ACKNOWLEDGEMENTS

The applicant's brochure included maps, a cost estimate, and ownership data. Drilling plans were presented but these were not laid out in relation to known geologic conditions.

The Atomic Energy Commission was consulted and G. H. Schenck, project chief at the Circle Cliffs A. E. C. camp furnished pertinent information on the area. Production figures were obtained from A. E. C. records. The results of Geological Survey reconnaissance in the area were also available.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Burr J. and Twist group of claims are both on the east side of the Circle Cliffs uplift. The Burr J. claims are north of Burr Canyon, the eastern entrance to the area, and the Twist group is south of Burr Canyon. The Burr J. group is in secs. 8, 9, 16, and 18, T. 34 S., R. 7 E., S. L. M. and the Twist group in secs. 33, 34, and 35, T. 34 S., R. 8 E., and secs. 2, 3, and 11,

T. 35 S., R. 8 E. These are reached by a fair, graded access road running 67 miles southwest of Hanksville, Utah. Hanksville is 60 miles from Green River, Utah over a graded highway (Utah 24), now being improved, and 208 miles further from Grand Junction, Colorado, the nearest major source of supplies. The nearest ore-buying station is 130 miles distant at White Canyon, Utah, and is via a ferry over the Colorado River at Hite, Utah. Ore from the area is usually trucked via Green River to other plants.

The elevation of the claims ranges from 6,000 to 6,400 feet. The climate is moderate, but surface operations in winter are not advisable. The topography of drilling areas over the claims ranges from gentle, easily accessible slopes on the Burr J claims, to steep precipitous Chinle slopes and Wingate cliffs bounding an easterly sloping, dissected mesa on the Twist claims.

The transportation costs in the rather remote area are high. Power, supplies, water, labor, or ore marketing facilities do not present any particular problems other than that of accessibility.

The applicants plan to expand an established camp which they have on the claims.

Labor and housing requirements for a drilling project would be met by a drilling contractor.

HISTORY, PRODUCTION, AND PROPERTY OWNERSHIP

Mining exploration for uranium ore in the Circle Cliffs area dates from about 1950. Early work was handicapped by lack of roads.

Atomic Energy Commission reconnaissance dates from 1952 and was followed by a Geological Survey mapping project.

There has been no ore found or mined on either the Burr J. or the Twist claims. Two operations on the one channel found west of the Twist claims produced about 1,000 tons and 3,600 tons of ore respectively. The average grade, according to A. E. C. records, was 0.23 and 0.25 percent U_3O_8, but some shipments have been of better grade. The applicant's report that they averaged 0.40 percent U_3O_8 is in error. In general, Circle Cliffs ore deposits have been small and of good grade. The typical long narrow shape of the channel ore bodies does not lend itself to exploration by deep drilling because holes must be drilled in fences with close spacing to insure adequate testing.

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There was considerable dilution in mining the Rainy Day ore, and when the ore streak pinched in the present face of the incline, the operation was stopped. It is of course possible that the ore may widen southeast of the present workings.

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The only improvements on the property are two trailers at the northeast end of the Twist group.

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The Shinarump channel, known as the Rainy Day channel, that crops out west of the Twist group trends about S. 70° E. and its projection would pass through the part of the group that is underlain by the Wingate and Kayenta formations. The channel is asymmetrical, with the steeper side to the south. Each side of the channel dips gently inward for a short distance, then the dip increases appreciably. This forms a shoulder in the underlying Moenkopi on each side of the channel.

Two mining companies have mined ore from the Moenkopi that forms the southernmost shoulder of the channel. The Acme Uranium Company has mined the ore body for about 200 feet from the outcrop to the southeastern edge of their property. They have produced about a thousand tons of ore that averaged about 0.23 percent U_3O_8. The Rocky Mountain Uranium Corporation has driven a tunnel parallel to the Acme property into the channel. They have mined the ore body southeast for about 800 feet from the Acme property

line and have produced about 3,600 tons of ore that averaged about 0.25 percent U_3O_8. The ore body was over a thousand feet long but only a few feet in width and thickness. The ore contained as much as several percent U_3O_8 through the narrow thickness and width and the ore was diluted with much low grade to barren rock. About a thousand feet to the southeast from the outcrop of the channel, and toward the Twist group, the ore grade material has pinched to such small dimensions that operations have been suspended. If the ore body had continued on the same bearing as it was mined it would extend under the Twist no. 4 claim. The channel has pinched, at a point about 2,000 feet N. 70° W. of Twist no. 4 claim and exploratory drilling and drifting by the Rocky Mountain Uranium Corporation have discovered no additional ore reserves.

Ore Reserves

There are no ore reserves on the property. No sampling was done. Outcrops on the Burr J. claims and exposures in the Rainy Day mine were checked radiometrically.

PROPOSED EXPLORATION

The applicant has proposed a drilling program totaling 20,400 feet of core and non-core drilling in 46 holes at an estimated cost of $86,180.00. Government participation at 75 percent would be $64,635.00. A revised application consisting of 51 holes was submitted, but revised cost figures were not given.

A total of 12 holes from 200 to 400 feet in depth were proposed on the Burr J. claims and 39 holes from 400 to 800 feet deep on the Twist claims. The drilling pattern on the Burr J. group was essentially a row of holes extending northwesterly on 250-foot spacing. The 20 deep holes on the Twist group, which would be collared in the Wingate formation, are located in north-south fences 1,000 feet apart with holes in the fences on a 500-foot spacing. The 19 other holes are proposed at the north end of the Twist group. These are on closer spacing of 250 feet and in two fences at right angles to each other. The purpose of this closer spacing and the pattern of holes is not clear, unless it is that the drilling depths are less.

None of the proposed drilling is planned with regard to the known size and locations of Shinarump channels. Holes to intersect the possible extension of the one known narrow channel in the vicinity of the claims are no closer than any other holes. Because there is no reasonable exploration target on the Burr J. claims, and because drilling for the possible extension of the long narrow Rainy Day ore body is not practical at depths of 800 feet, no alternate proposal is being made by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that there are no reasonable exploration targets on the property. On the Burr J. claims, this conclusion is based on the fact that there is probably no Shinarump

sedimentation present. On the Twist group, the conclusion is based on the fact that it is impractical to explore for an extension of a long narrow ore body by the deep drilling required because holes could not be economically spaced close enough to adequately test the ground. In addition, examination of the outcrops west of the property, and underground development in the Rainy Day mine indicate that no other channels are present.

It is recommended that the application for Government assisted exploration under DMEA 3892 be denied.

REFERENCE CITED

Gregory, H. E. and Moore, R. C., The Kaiparowits region, a geographic and geologic reconnaissance of parts of Utah and Arizona: U. S. Geological Survey Professional Paper 164, pages 55, 62, and 64, 1931

9/6/55 gla

RECEIVED
SEP 1955

August 30, 1955

Memorandum

To: John F. Shaw

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA-3892 (Uranium), United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

The subject application in the amount of $86,180.00 is enclosed herewith, including the following documents:

1. MF-103 and accompanying answer sheets
2. Geologic appraisal of the McNary claims and a supplemental report by the Geoprofessional Services
3. Copy of letter from the Minerals Engineering Company dated June 6, 1955, to the applicant submitting a bid for noncore and core drilling
4. Photostat of a claim map
5. Geologic map of the McNary property
6. Geologic section of the McNary claims
7. Photogeologic map Circle Cliffs-B, Garfield County, Utah
8. Copy of a letter from Company engineer N. M. Rhodes to E. W. Ellis
9. Copy of memo from John E. Crawford to E. W. Ellis
10. Copy of memo from W. P. Williams to E. W. Ellis
11. Copy of letter of transmittal from Chairman Operating Committee to Executive Officer, Region III
12. Copy of Executive Officer's memo of August 26 transmitting application to this office
13. Additional maps of claims and proposed location work

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

W. H. KING

W. H. King

Enclosures

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

RECEIVED
SEP 6 1955

August 30, 1955

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W. N. KING

W. N. King

Enclosures

cc: E. H. Harshman
J. W. Hasler
W. M. Traver (3)

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

RECEIVED
AUG 29 1955

224 New Customhouse
Denver 2, Colorado

August 26, 1955

Memorandum

To: W. H. King (w/brochure)
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3892 (Uranium), United Western Minerals Company, Burr J. and Twist groups, Garfield County, Utah

Enclosed is the subject application in the amount of $86,180.00. The brochure consists of:

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Also enclosed is a copy of a letter from the Chairman of the Operating Committee and relevant memoranda from J. E. Crawford and W. P. Williams, members of the Uranium Commodity Committee. To the above mentioned letter and memoranda is attached a letter, dated August 11, 1955, from the applicant's engineer and copies of maps showing locations and depths of the proposed drill holes on the captioned claim groups. A field examination and suitable report are requested.

W. M. TRAVER,

Enclosures
HMC:pw Subject Chron Harshman Sec.Op.Comm. (2)

W. M. Traver

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

RECEIVED
AUG 29 1955

224 New Customhouse
Denver 2, Colorado

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W. M. TRAVER,

Enclosures
HMC:pw

W. M. Traver

Subject Chron Harshman Sec.Op.Comm. (2)

8/24/55 gla

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

August 23, 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: Review of supplemental information, DMEA Docket 3892, Burr J. and Twist groups, United Western Minerals Company, Garfield County, Utah

A review of the supplementary information submitted by the applicant shows that United Western Minerals Company proposes to explore their two groups of claims by drilling 12 holes in the Burr J group and 39 holes in the Twist group. The target for this drilling program is the Shinarump formation. Justification for the exploration, as given by the applicant, is the possibility of the ore channel of a nearby mine extending under the Twist group of claims. The applicant further states in the supplementary information that no formal radiometric surveys have been made on subject claims.

We suggest that the application be forwarded to the Field Team as stated in my July 14, 1955 memorandum, but doubt that assistance is warranted inasmuch as the supplementary information does not present definite evidence to justify an exploration program.

The supplemental information is attached.

John E. Crawford
John E. Crawford

Attachment

RECEIVED

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

August 23, 1955

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Uranium Commodity Committee, Room 4445

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BUREAU OF MINES
WASHINGTON 25, D. C.

August 23, 1955

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The supplemental information is attached.

John E. Crawford

Attachment

Surname Copy
Murphy
Ellis
Nelson
Gehan
Selfridge

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

Mr. Alva A. Simpson Jr., President
United Western Minerals Company
136 West Palace Avenue
Santa Fe, New Mexico

AUG 22 1955

Re: Docket No. DMEA-3892 (Uranium)
Burr J. and Twist groups
Garfield County, Utah

Dear Mr. Simpson:

The application for assistance in exploring the subject property in Garfield County, Utah, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region III at the following address:

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

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy:ai
8/19/55
cc to: Admr. Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

Surname Copy

Murphy
Gio
Selfridge

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

AUG 22 1955

Re: Docket No. DMEA-3892 (Uranium)
United Western Minerals Company
Burr J. and Twist groups
Garfield County, Utah

Dear Mr. Traver:

The subject application is referred to Region III Field Team for investigation, a field examination, and recommendation. A copy of the application was retained by your office.

Enclosed are copies of memoranda from J. E. Crawford, dated July 14, and W. P. Williams, dated August 17, 1955, members of the Uranium Commodity Committee. Also, enclosed are a letter, dated August 11, from the Applicant's engineer and copies of maps showing locations and depths of the proposed drill holes on the captioned claim groups.

In the event the Field Team recommends an exploration project on the subject properties, it should advise the Applicant that we will require subordination agreements from the following previous landowners who have retained a 10% royalty on the gross value of ore produced:

1) Max O. Jernigan and Alyce K. Jernigan, his wife
2) G. R. McClary and Claudia M. McClary, his wife
3) C. E. Lawrence and Mary J. Lawrence, his wife
4) E. L. Bailey and Tex M. Bailey, his wife.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JLB)

Enclosures

APPROVED:

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

/s/ M. E. Wilson (JLB)
Member, Geological Survey

FMMurphy:ai
8/19/55
cc to: Admr. Reading File
Docket
Operating Committee
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5222
JOHosted, Rm. 3210, GSA
Code 700 Mr. Murphy

UNITED WESTERN MINERALS COMPANY

P. O. BOX 921

136 WEST PALACE AVE.

SANTA FE, NEW MEXICO

August 11, 1955

Mr. Ernest William Ellis, Chief
Rare and Miscellaneous Metals Division
Defense Minerals Exploration Administration
U. S. Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3892 (Uranium)
Burr J. and Twist groups
Garfield County, Utah

Dear Mr. Ellis:

Reference is made to your letter of July 21, 1955 in which you requested further information regarding the above-captioned application. The information you requested in this letter is submitted herewith.

(a) Maps of the individual claim groups showing the number of each claim are contained in the accompanying exhibits.

(b) The approximate location of each proposed drill hole is shown on Exhibit A for each individual claim group. It will be necessary to alter the location of many holes on the Twist claim group due to the extremely unfavorable topography.

Drill holes on the Burr J group can be located as proposed due to the low relief common to the area.

Please regard the accuracy of the depths submitted herein to be questionable due again, to the unfavorable topography and inaccessibility of portions of the Twist claim group.

(c) The location of existing and proposed access roads is shown on Exhibit B for the individual claim groups. Here again the topographic situation on the Twist group makes the accurate location of the roads impossible at this time.

(d) Exhibit C submitted herewith indicates the inferred trend of indicated ore channels in the vicinity of the Twist claim group. A very small amount of information

RECEIVED
AUG 15 1955

on the location of these Shinarump channels is available to us at this time.

To my knowledge only the Rainy Day mine, owned by the Rocky Mountain Uranium Corporation, is being worked at this time.

There are no indicated ore channels on the Burr J claim group; however, it is possible to follow a channel in the Shinarump formation from the vicinity of the Rainy Day mine to a point slightly south of the Burr J group. This channel may continue under the Burr J claims. Only drilling can answer that question.

(e) To my knowledge no assays have been run on samples cut from the Burr J or Twist claim groups. Further, no formal radiometric surveys have been made on subject claims. The dozer cut on Burr J Claim No. 11 shows no abnormal radioactivity. However, an area of above normal radioactivity is found in a Shinarump remnant approximately 1,000 feet northwest of the Burr J Claim No. 10.

In the course of United Western Minerals Company's operations on the Burr J and Twist groups, the investigation of these properties for possible anomalies was considered of secondary importance. Your attention is directed to Exhibit C, which exhibit displays the information available on the present trend of ore-bearing Shinarump channels. It is seen that there is a very good possibility that the ore channel currently being mined by the Rocky Mountain Uranium Corporation at the Rainy Day mine will extend under the Twist group. Further, a channel is indicated on Twist Claim No. 27, and slight radioactivity is noted to the west of the claim itself on adjacent property.

It will be noted on Exhibit B that United Western Minerals Company has expended a considerable amount of money in building an access facility from the road running to the Rainy Day mine down through Blue Jay Canyon to a point just short of Muley Twist draw. United Western Minerals Company feels that the $15,000 expenditure made thus far on the Twist claim group was money well spent on an above-average uranium prospect.

I trust the above information will completely answer your questions and that the application of United Western Minerals Company can be processed promptly.

Sincerely yours,

H N Rhodes

H. N. Rhodes
Engineer

HNR:la

Surname 700

Murphy
Ellis
Mathewson

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

JUL 21 1955

United Western Minerals Company
136 West Palace Avenue
Santa Fe, New Mexico

Re: Docket No. DMEA-3892 (Uranium)
Burr J. and Twist groups
Garfield County, Utah

Gentlemen:

The above-docketed application for aid in an exploration project has been reviewed by this Division.

In order to assist us in processing the subject application will you kindly submit the following:

1. Maps or sketches of the Twist group and the Burr J. groups of claims showing:

(a) Number of each claim.

(b) Approximate location of each proposed drill hole; also, indicate the estimated depth of each hole.

(c) Location of principal access roads proposed.

(d) Indicate the inferred trend of the uranium ore-bearing channels that are presently being worked to the north and south of your property.

(e) Location and assay results of any samples taken; for example, from the bulldozer cut on the Burr J. claim No. 11. If radioactivity surveys have been made on the subject claims, the locations of high anomalies should be indicated.

We will require four copies of each of the maps submitted. As soon as this essential data is received, we shall promptly continue to process your application.

Sincerely yours,

SIGNED
Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

FMurphy:am
7-20-55
cc to: Admr. Reading File
Docket
Messrs. J.O.Hosted,Rm 3210,GSA
J.E.Crawford,Rm 3641
T.H.Kiilsgaard,R.5222
Code 700
Mr. Murphy
DMEA Field Team, Region III(2)

R.C.S.

IN REPLY REFER TO:

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

RECEIVED
AUG 18 1955

August 17, 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. 3892, United Western Minerals Company, Burr J. and Twist claim groups, Garfield County, Utah.

The applicant proposes an extensive exploration drilling project on fifty-one unpatented mining claims located in the Circle Cliffs area of Utah. The estimated cost of the program would be $86,180.

It has not been my personal observation that, "The Circle Cliffs . . . is a new, rapidly developing area in uranium development . . ." as stated in the application. On the contrary new, significant discoveries in the Circle Cliffs have been few and sporadic; and the ore production history of Circle Cliffs is not spectacular.

Drill hole depths in some places, to the base of the Shinarump conglomerate, would be more than 800 feet, which is somewhat excessive.

There appears to be no evidence of channel structure in the Shinarump formation on the property. No mineralization is known on the property.

Advantages of the property are that commercial grade ore has been discovered on adjoining properties. Channel structures from the adjoining properties may extend into the subject claims.

For proper evaluation the property should be examined in the field. It would be advisable for the field examiners to consult with Mr. E. S. Davidson, U. S. Geological Survey, Grand Junction, and Mr. Dave Grundy, Exploration Division, Grand Junction Operations Office, U. S. Atomic Energy Commission.

W P Williams

W. P. Williams

IN REPLY REFER TO:

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

RECEIVED AUG 18 1955

August 17, 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. 3892, United Western Minerals Company, Burr J. and Twist claim groups, Garfield County, Utah.

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WPWilliams:iml
G-8/17/55

WPW

W. P. Williams

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

7/18/5-5-fla

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

RECEIVED
JUL 1 1955

July 14, 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, DMEA Docket 3892, United Western Minerals Company, Garfield County, Utah

I have reviewed the attached application for assistance, United Western Minerals Company, DMEA Docket 3892; and I have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

We suggest that the application be referred to the Field Team for examination and report, and that the Field Team be requested to consult with Ernest R. Gordon, Atomic Energy Commission, Grand Junction, Colorado.

John E Crawford
John E. Crawford

Attachment

July 11, 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-3892 United Western Minerals Co.

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

July 11, 1955
Subject: DMEA-3892
Re: Exploration Assistance

United Western Minerals Co.
136 West Palace Avenue
Santa Fe, New Mexico

Gentlemen:

The receipt of your application dated June 30, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3892 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

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

RECEIVED
JUL 11 1955

224 New Customhouse
Denver 2, Colorado

July 7, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: (Uranium), United Western Minerals Company, (Burr J. and Twist groups), Garfield County, Utah

Enclosed are the original and two copies of the subject application in the amount of $86,180.00.

A review of the application indicates that the number and location of the drill holes are not shown. No evidence is presented of definite mineralization on the property, but the applicant states that ore is found within 1800 feet of the Twist claims.

One copy of the application is being retained in our files.

W. M. Traver

W. M. Traver

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd
JUL 5 1955
BUREAU OF MINES
Denver, Colorado

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

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

RECEIVED JUL 11 1955

Not to be filled in by applicant.

Docket No. 3892
Metal or Mineral Uranium
Date Received 7-11-55
Estimated Cost $ 86,180
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: United Western Minerals Company
136 West Palace Avenue
Santa Fe, New Mexico
Alva A. Simpson, Jr., President

(*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. See attached marked 1. (b).

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See attached marked 1. (c).

(*d*) If a partnership, add to the above statement the names and addresses of all partners. Not applicable.

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.
See attached marked 2. General.

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
See attached marked 3. (a).

(*b*) State any mine name by which the property is known. None.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise United Western Minerals Company owner of unpatented federal mining claims.

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. See attached marked 3. (d)

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached marked 3. (f).

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

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades See attached marked 4. (b).

(*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. See attached marked 4 (c).

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See attached marked 4 (d).

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. See attached marked 4 (e).

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5. *The exploration project.*—(*a*) State the mineral or minerals for which you will to explore
Uranium and vanadium type ores.

(*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. See attached marked 5. (b).

(*c*) The work will start within 30 days and be completed within 12 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. See attached marked 5. (d).

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.). See attached marked 6. (a) Independent contracts.

(*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. See attached marked 6.(b)

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. See attached marked 6. (c) Operating materials and supplies.

(*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. See attached marked 6. (d) Operating equipment.

(*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. See attached marked 6. (e) Rehabilitation and repairs.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project. See attached 6. (f)

(*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. See attached marked 6. (g).

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above. See attached marked 6. (h).

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)? Yes.

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

[X] Money [X] Use of equipment owned by you [X] Other All required personnel.

Explain in detail on acompanying paper. See attached marked 7. (b)

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 June 30, 1955

UNITED WESTERN MINERALS COMPANY
(Applicant)

By Alva A. Simpson Jr.
Alva A. Simpson, Jr., President

Herbert A. Holt
Herbert A. Holt, Secretary

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

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

1. (b) A Delaware Corporation, qualified to do business in New Mexico, Utah, Colorado and California.

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1. (c)

UNITED WESTERN MINERALS COMPANY

OFFICERS & DIRECTORS

President & Director	Alva A. Simpson, Jr. 136 West Palace Avenue Santa Fe, New Mexico
Secretary	Herbert A. Holt 136 West Palace Avenue Santa Fe, New Mexico
Treasurer	Herbert A. Holt 136 West Palace Avenue Santa Fe, New Mexico
Director (Chairman)	Patrick J. Hurley 301 Hillside Avenue Santa Fe, New Mexico
Director	Herman S. Dike c/o University Club 1 West 54th Street New York, New York
Director	Wilson Hurley Kerber Building Albuquerque, New Mexico
Director	John K. Schemmer 630 Fifth Avenue New York, New York
Director	Benno C. Schmidt 630 Fifth Avenue New York, New York
Director	Anneliese A. Simpson 136 West Palace Avenue Santa Fe, New Mexico

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2. General

In accordance with DMEA Order 1, Government Aid in Defense Exploration Projects, this application and all accompanying papers in quadruplicate with name and address on each sheet of application and on all accompanying papers is being filed with the Defense Minerals Exploration Administration, 224 New Customhouse, Denver 2, Colorado.

3. (a)

Fifty-one unpatented mining claims comprising the Burr J mining claims Nos. 1 to 11 inclusive and the Twist mining claims Nos. 0 to 39 inclusive, located approximately 85 miles southwest of Hanksville, Utah, in the eastern flank of the Circle Cliffs area, Garfield County, Utah.

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MINING DEED

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned MAX O. JENNIGAN and ALYCE K. JENNIGAN, his wife, G. R. McNARY and CLAUDIA M. McNARY, his wife, C. B. LAWRENCE and MARY J. LAWRENCE, his wife, and E. L. BAILEY and TEX M. BAILEY, his wife, all of the City of Albuquerque, County of Bernalillo, State of New Mexico, hereinafter called Grantors, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable considerations, the receipt of which is hereby acknowledged, do hereby grant, bargain, sell, convey, transfer and deliver unto UNITED WESTERN MINERALS COMPANY, a corporation, organized under the laws of the State of Delaware, and having its principal offices at 136 West Palace Avenue, City of Santa Fe, County of Santa Fe, State of New Mexico, hereinafter called Grantee, all of their right, title and interest in and to the Mining Claims hereinafter described, SAVE AND EXCEPT the royalty herein reserved unto Grantors, their heirs and assigns, forever.

Grantors reserve unto themselves, their heirs and assigns forever, and shall receive from Grantee, its successor and assigns ten percent (10%) of the gross value at the mine, in an unrefined, unconcentrated and unprocessed state, of all mineral ores produced by Grantee, its successors and assigns on the above listed claims, it being understood and agreed that such gross value at the mine shall be measured as follows:

A. No part of any development allowance shall be included in such value.

B. So long as a haulage allowance is paid by the purchaser of unrefined, unconcentrated, unprocessed ores and the haulage allowance equals between 80% and 120% of actual haulage costs, the value shall be measured by the price

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paid for such ores at the ore buying station, stock-piling station, mill or other delivery point and shall not include any part of the haulage allowance.

C. If no haulage allowance is paid by the buyer of the ores produced or if such allowance is less than 80% or more than 120% of the actual haulage costs, then such gross value at the mine shall be measured by the total consideration paid at the delivery point including the haulage allowance, if any, less the actual costs of haulage from the mine.

D. If ores produced from the mine are processed, concentrated, refined, or otherwise increased in value, at the cost or expense of Grantee, its successors and assigns, before sale, the gross value at the mine shall be measured upon whichever of the following basis Grantors may elect in writing:

(a) The gross value at the mine as calculated under Paragraphs A, B and C above less a deduction equal to the actual expenses and costs of processing, concentrating, refining or otherwise increasing the value of the raw ore as produced from the mine; or

(b) The amount of money which could be obtained for the ore in its natural state calculated as provided under Paragraphs A, B and C above.

The royalty reserved shall also include, and Grantee, its successors and assigns, shall pay to Grantors, their successors and assigns, ten percent (10%) of any bonus paid by the Atomic Energy Commission for the production of uranium bearing ore or other minerals mined from the claims listed below.

All royalty payments hereunder shall be due and payable thirty (30) days from the date of receipt of the sales price by Grantee, its successors and assigns.

Such claims being located and situated in the County of Garfield, State of Utah, to-wit:

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Not included in application

Name of Claim	Recording Date	Book	Page
Burr J No. 1	May 12, 1954	25	399
Burr J No. 2	May 12, 1954	25	400
Burr J No. 3	May 12, 1954	25	401
Burr J No. 4	May 12, 1954	25	402
Burr J No. 5	May 12, 1954	25	403
Burr J No. 6	May 12, 1954	25	404
Burr J No. 7	May 12, 1954	25	405
Burr J No. 8	May 12, 1954	25	406
Burr J No. 9	May 12, 1954	25	407
Burr J No. 10	May 12, 1954	25	408
Burr J No. 11	May 12, 1954	25	409
Comejo No. 1	May 12, 1954	25	410
Comejo No. 2	May 12, 1954	25	411
Comejo No. 3	May 12, 1954	25	412
Twist No. 0	June 18, 1954	31	207
Twist No. 1	June 18, 1954	31	208
Twist No. 2	June 18, 1954	31	209
Twist No. 3	June 18, 1954	31	210
Twist No. 4	June 18, 1954	31	211
Twist No. 5	June 18, 1954	31	212
Twist No. 6	June 18, 1954	31	213
Twist No. 7	June 18, 1954	31	214
Twist No. 8	June 18, 1954	31	215
Twist No. 9	June 18, 1954	31	216
Twist No. 10	June 18, 1954	31	217
Twist No. 11	June 18, 1954	31	218
Twist No. 12	June 18, 1954	31	219
Twist No. 13	June 18, 1954	31	220
Twist No. 14	June 18, 1954	31	221
Twist No. 15	June 18, 1954	31	222
Twist No. 16	June 18, 1954	31	223
Twist No. 17	June 18, 1954	31	224
Twist No. 18	June 18, 1954	31	225
Twist No. 19	June 18, 1954	31	226
Twist No. 20	June 24, 1954	32	267
Twist No. 21	June 24, 1954	32	268
Twist No. 22	June 24, 1954	32	269
Twist No. 23	June 24, 1954	32	270
Twist No. 24	June 24, 1954	32	271
Twist No. 25	June 24, 1954	32	272
Twist No. 26	June 24, 1954	32	273
Twist No. 27	June 24, 1954	32	274
Twist No. 28	June 24, 1954	32	275
Twist No. 29	June 24, 1954	32	276
Twist No. 30	June 24, 1954	32	277
Twist No. 31	June 24, 1954	32	278
Twist No. 32	June 24, 1954	32	279
Twist No. 33	June 24, 1954	32	280

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Name of Claim	Recording Date	Book	Page
Twist No. 34	June 24, 1954	32	281
Twist No. 35	June 24, 1954	32	282
Twist No. 36	June 24, 1954	32	283
Twist No. 37	June 24, 1954	32	284
Twist No. 38	June 24, 1954	32	285
Twist No. 39	June 24, 1954	32	286

together with all of the dips, spurs, angles and extensions thereof.

TO HAVE AND TO HOLD the above described property, together with all the rights, privileges and appurtenances thereunder belonging to the said Grantee, its successors and assigns forever.

WITNESS Our hands and seals this 8th day of April, 1955.

/s/ Max O. Jernigan
MAX O. JERNIGAN

/s/ Alyce K. Jernigan
ALYCE K. JERNIGAN

/s/ G. R. McNary
G. R. McNARY

/s/ Claudia M. McNary
CLAUDIA M. McNARY

/s/ C. B. Lawrence
C. B. LAWRENCE

/s/ Mary J. Lawrence
MARY J. LAWRENCE

/s/ E. L. Bailey
E. L. BAILEY

/s/ Tex M. Bailey
TEX M. BAILEY

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared MAX O. JERNIGAN and ALYCE K. JERNIGAN, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My Commission Expires:

/s/ Vera L. Mendoza
Notary Public

May 12, 1956

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared G. R. McNARY and CLAUDIA M. McNARY, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission Expires:

/s/ Vera L. Mendoza
Notary Public

May 12, 1956

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STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared C. B. LAWRENCE and MARY J. LAWRENCE, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My Commission Expires:

May 12, 1956

/s/ Vera L. Mendoza
Notary Public

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared E. L. BAILEY and TEX M. BAILEY, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My Commission expires:

May 12, 1956

/s/ Vera L. Mendoza
Notary Public

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3. (f)

Book and Page numbers of McNary claims recorded in Garfield County, Utah, Panguitch, Utah -- County Seat:

Burr J Mining Claims 1 to 11 inclusive	Recorded in Book 25, Pages 399 to 409 Inclusive Reception numbers 49,114 to 49,124 Filed for record the 12th of May, 1954 at 9:30 A.M.
Twist Mining Claims 0 to 19 inclusive	Recorded in Book 31, Pages 207 to 226 Inclusive Reception numbers 52,403 to 52,422 Filed for record the 18th of June, 1954 at 1:00 P.M.
Twist Mining Claims 20 to 39 inclusive	Recorded in Book 32, Pages 267 to 286 Inclusive Reception numbers 52,959 to 52,978 Filed for record the 24th of June, 1954 at 1:00 P.M.

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4. (a)

The Circle Cliffs, Garfield County, Utah, is a new, rapidly developing area in uranium development on the Colorado Plateau. This area, previously isolated by lack of roads, now is the location of an A. E. C. field camp and a Bureau of Land Management survey camp, as well as the location of several active producing mines and many exploration and development programs. At the present time access roads, drill roads, surveying and assessment work is being done on these claims. Three mines on adjacent properties are producing ore at present. United Western Minerals Company has no interest in these mines. The working mines are Silver Streak and Rainy Day No. 2 owned by Rocky Mountain Uranium Corporation. The other mine is Rainy Day No. 1 owned by Acme Uranium Corporation. These mines are easily accessible by dirt road up the A. E. C. Burr Trail access road.

The 11 Burr J mining claims located at the top of Burr Trail have been surveyed, access and drilling roads have been laid out with a D-6 and D-8 bulldozer. Geological reports attached and geological studies indicate these claims are all approximately from 100 feet to 400 feet above the Shinarump formation which is the ore bearing formation in this area.

The Twist mining claims, 0 to 39 inclusive, separated from the Burr J mining claims by a distance of approximately two and one-half miles, have access roads and drill site roads completed by D-6 and D-8 bulldozer with diamond drilling and blasting. Geological reports attached and geological studies indicate that the surface area is some 300 to 800 feet above the known ore horizon found in this area in the Shinarump formation. These claims bound Rocky Mountain Uranium Corporation claims with a producing mine and Acme Uranium Corporation claims with production on the western side. The surface indications and geological studies with radioactive instruments indicate that proper development (drilling) gives good possibilities of uncovering a commercial ore body. All this area is accessible for examination.

4. (b)

No past or current production on these claims.

One adjacent property has produced approximately 2,000 tons of 0.40% of U_3O_8 and the other is currently producing 30 to 50 tons daily of 0.50% U_3O_8.

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4. (c)

The properties comprise fifty-one mining claims located in an unsurveyed area of Garfield County, Utah. The claims are in two groups. One group consists of eleven (11) claims, Burr J #1 through Burr J #11; the other, of forty (40) claims, Twist #0 through Twist #39. The claims lie on the eastern edge of the Circle Cliffs upwarp where the steeply turned strata of the water pocket monocline has been exposed by erosion. The whole Triassic Section is exposed on this flank with the oldest unit, the Moenkopi Formation, exposed over a large part of the elevated center of the Circle Cliffs upwarp. Above the Moenkopi base the Shinarump Conglomerate rests unconformably. The youngest Triassic Formation, the Chinle Formation, rests conformably on the Shinarump Conglomerate. Above the Chinle Formation are the three members of the Glen Canyon group of Jurassic age; namely, the Wingate Sandstone, the Kayenta Formation and the Navajo Sandstone.

The Shinarump Conglomerate has been under intensive study throughout its exposure on the entire Colorado Plateau. Most uranium ore bodies found in the Shinarump Conglomerate have been closely associated with stream channels in the underlying Moenkopi Formation.

Although there are no Moenkopi channels exposed on the claims, there are channels exposed on the properties immediately adjacent to the claims on the west. This adjacent property is controlled by Rocky Mountain Uranium Corporation and by Acme Uranium Company, who are currently mining their respective properties.

The channels that are being followed by these two companies bear a few degrees north of east which, if continued in this direction, will lie under the Twist claims which are immediately to the west.

Since the Rainy Day #1 mine operated by Acme Uranium Company has reportedly produced 2,000 tons of ore averaging 0.4% and Rocky Mountain Uranium Corporation is currently producing 30 to 50 tons daily from their Rainy Day #2 mine, the conditions for exploration seem very favorable. Conditions seem especially favorable considering the fact that Rocky Mountain Uranium Corporation is still exploring in ore back 1,000 feet in their drift which places them approximately 1,800 feet from United Western Minerals Company's Twist claims. (See accompanying sketch)

On the Burr J claims (11) the only exposure of Shinarump Conglomerate is on the two northwestern claims. From a thin feather edge of sandstone, it gradually thickens to the north where some mineralization has been found by exploring the face with a bulldozer. To the south and east, the Shinarump Conglomerate dips under the Chinle Formation with the depth increasing as it dips under the flank of the fold. Although indications of significant channels are lacking where the Shinarump is exposed there is no indication that channels do not exist. The presence of favorable channels can be detected only by drilling. Since ore bearing channels have been found to the north and to the south, conditions merit drilling.

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The depth of drilling on the 11 group will vary from a few feet to 300 feet, whereas the 40 group will require depths of from 100 feet to 800 feet, Approximately half of the 40 group can be drilled from the middle of the Chinle Formation which will probably require a depth of 250 feet to 300 feet to reach through to the Shinarump Conglomerate.

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4. (d)

The two groups of claims can be reached by a dirt road which leaves State Highway No. 24 at Notom Ranch (between Hanksville and Capitol Reef National Monument) and runs South to the Burr Trail A. E. C. access road. The 11 group (Burr J) lie immediately north of a point where the road reaches the inside edge of the flank at the top of the Burr Trail road. About a quarter of a mile beyond this point the road branches and runs south about 5½ miles to the Rainy Day mines. The 40 claims (Twist claims) lie immediately east of the Rainy Day property which places them approximately ½ mile off the road. Drill roads and access roads to the claims are now under construction.

At present both Rocky Mountain Uranium Corporation and Acme Uranium Company are hauling their ore to Marysvale, Utah, a distance of approximately 175 miles. About 45 miles of this 175 is dirt road. The condition of this dirt road varies from bad to good. The balance of the road is black top and in good condition. The nearest mine supply houses are Richfield, Utah, about 200 miles, or Green River, Utah, a distance of 123 miles where S & M Supply is erecting a building.

Due to the distance from any town it will be necessary to furnish living accommodations at the site.

4. (e)

Due to the past mining activities in the general area, trained manpower is available. Most supplies are available at Bicknell, Hanksville, or Green River, Utah.

Water is not available near the claims so must be hauled from Frutia or Torry, Utah, a distance of about 45 miles. There is a water service company operating in the area and they are currently hauling water to the Rainy Day mine, A. E. C. camp and Bureau of Land Management camp.

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5. (b)

The accompanying sketch of the Burr J claims shows that drilling will be required from a depth of 100 to 400 feet. At this depth core should be taken on all holes. A minimum of 2,500 feet of drilling from the Chinle formation is figured.

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5. (d)

United Western Minerals Company is a company composed of several corporations and individuals (see News Release attached).

Supervising engineer will be Harlan Newell Rhodes of Santa Fe, New Mexico.

Education:

Graduate of New Mexico School of Mines, Socorro, New Mexico, in Petroleum and Mining Engineering.

Employment Experience:

New Mexico Oil Conservation Commission
New Mexico State Land Office - Mining Engineer
Private employment, Gallup, New Mexico, - Mining Engineer on the Navajo Reservation, Colorado Plateau
Magnolia Petroleum Company
Dallas Power and Light Company - Surveyor
Petty Geophysical Engineering Company

Supervision of exploration will be Mr. Max O. Jernigan, geologist-engineer.

Education:

University of New Mexico, Albuquerque, New Mexico, and New Mexico A & M, Las Cruces, New Mexico.

Employment Experience:

New Mexico State Land Office - Field Engineer
Atomic Energy Commission - Engineering and Construction Division, Los Alamos, New Mexico
Bureau of Land Management, New Mexico - Surveying Division
Independent geological exploration and development work in the Colorado Plateau area since 1952 to the present
Pueblo Southern Corporation, Santa Fe, New Mexico - Geological engineering work
Graham McNary and Associates, Albuquerque, New Mexico - Geological engineering work, 1952 and 1954
United Western Minerals Company at present - Chief of exploration and development program.

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PRESS RELEASE

April 27, 1955

United Western Minerals Company, a Delaware corporation with main offices in Santa Fe, New Mexico, announced today through its President, Alva A. Simpson, Jr. that it had completed the acquisition through merger of all of the mining and oil and gas properties of United States Uranium Corporation, and Pueblo-Southern Corporation of Santa Fe, New Mexico and Border Uranium Corporation, Pueblo, Colorado. The transaction is wholly privately financed. No public offering of stock has been made. The merger took place in the First National Bank, Santa Fe, New Mexico.

In addition to these corporations, other properties were acquired by United Western Minerals Company from Dr. Jose Maldonado, Andrew F. Mitchell, Patrick J. Hurley, Alva A. Simpson, Jr. and John Candelario, all of Santa Fe, New Mexico; Max O. Jernigan, G. R. McNary, E. L. Bailey, C. B. Laurence, Darrell C. Williams, Dr. G. F. Ohlenroth, Edward J. Mankin, Dudley Cornell, Dr. Sam Yonemato, B. V. Wood, Roy Eidal and Dewey Rivera, all of Albuquerque, New Mexico; Arthur Lyon, George D. Fehr, Earl E. Fehr, Paul F. Catterson, John A. Howell, Earl H. Perkins, Richard P. Smoot, Joe Lyon, Jr., Joe M. Lyon, Jr., Hal W. Chandler, Bernard H. Wolff, David L. Clive, Jack de Ojeda, S. Robert Gilbertson and Ralph E. Jorgenson, all of Salt Lake City, Utah; Scott R. Brown and George W. Brown of Farmington, New Mexico and Charles W. Hendel, III of Blanding, Utah and J. Ted Bonner of Moab, Utah.

United Western also obtained an option to acquire all of the properties, including mine, mill and machinery, of Western Manganese Corporation of Greenville, California.

The properties in New Mexico alone comprise approximately 500,000 acres of mineral leases, claims and permits of State federal and private lands with the major part of the holdings being in the Grant's Laguna area of McKinley and Valencia Counties. These lands have been selected on the basis of careful geological and engineering studies and are believed to represent the choicest holdings of various individuals and companies acquired over the past three years. Manganese properties in Soccoro County and Beryllium-Mica claims in Santa Fe County are among the properties.

In Utah the Company holds approximately 36,000 acres of uranium-vanadium leases, permits and claims on federal and state lands, including a producing mine in the Henry mountains. The Com-

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pany expects the former McNary claims which it has acquired in the Circle Cliffs area in Utah which will be drilled in the near future to be in production by the middle of June.

The company also has approximately 26,000 acres of unproven oil and gas leases in Utah and approximately 22,000 acres of unproven oil and gas leases in New Mexico. In addition the Company has interests of valuable manganese, mercury and calcite holdings in the Republic of Mexico.

United Western Minerals Company has also sold to J. H. Whitney & Co. and White, Weld & Co., both of New York City, 300,000 shares of its common stock at the price of $1.00 per share, as well as an option to acquire an additional 250,000 shares at the same price. Whitney and White, Weld have also taken farmout agreements from Western on approximately 62,500 acres of leases, claims and permits for the purpose of conducting exploratory operations for the discovery of uranium. Under the terms of the Uranium Farmout Agreement, Whitney and White, Weld propose to spend approximately $250,000 in the conduct of operations under that agreement. Whitney and White, Weld have also taken a farmout on certain of the oil and gas leases of United Western on which it is proposed that geological studies will shortly be commenced.

Alva A. Simpson, Jr. will be the President, General Manger and a Director of the Company. Patrick J. Hurley, of Santa Fe, New Mexico, will be Chairman of the Board of Directors. Other Directors will be Norman S. Dike of Thompson, Conn., Wilson Hurley of Albuquerque, New Mexico and Benno Schmidt and John K. Schemmer of New York City.

This is one of the most important developments in the rapidly growing uranium business in this area; the consummation by United Western of this transaction constitutes one of the largest single private uranium consolidations in history.

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5. (d)

Geological studies and exploration, as attached, from Geoprofessional Services, Inc., Salt Lake City, Utah.

Geological engineering consultation from George C. Heikes. The following is quoted from Who's Who in America, Volume 28:

> "Geologist, Anaconda Copper Mining Co., Butte, Mont. 1925-26; chief geol., Giesche Sp. Akc. (subsidiary Anaconda), Katowice, Poland, 1926-30, asst. to mgr. mines, 1930-34; asst. to cons. engr. Phila. and Reading Coal and Iron Co., Phila, 1935-36; spl. agent in charge non-ferrous metal mining, study of productivity of mine labor in U. S., U. S. Bur. of Mines, 1936-37; chief mining engr., Nat. Lead Co., St. Louis, Mo., 1937-41; asst. chief copper and zinc branch, Office of Prdn. Management, Washington, D.C., 1941; dir. zinc div. W. P. B., Washington, D.C. 1942-43; resident mgr. Olin Corp., Aluminum Reduction Works, Tacoma, Washington, 1943-44; dir. aluminum-magnesium div. W.P.B., Washington, D.C., 1944-45; vice pres. Mines, Inc. (subsidiary of Ventures Lts. Toronto, Can.), 1945-48; mining geologist Kennecott Copper Corp., 1948-49; chief mining br. Industry Div. ECA mission to Greece, 1949-51; chief mining development div., Defense Materials Procurement Agy., Region III (Europe, Middle East, Africa) since 1952, Mem. Am. Inst. Mining and Metall. Engrs., Mining and Metall. Soc. Am., Soc. Econ. Geologists, Canadian Inst. Mining and Metall. Instn. Mining and Metallurgy."

Mining Engineering and consultation from Mr. Horace C. Moses, who is the former General Manager of Kennicott Mining Company and General Manager of Chino mines. He is the past president and director for many years of the New Mexico Mining Association, and a man identified with all mining in the southwest for many years.

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6. (a) Independent Contracts.

Work can be contracted at the following costs:

DRILLING

Depth	Non-Core Drilling	Non-Core Wet	Core Drilling
0 to 200'	$1.25 per foot	$2.00 per foot	$2.50 per foot
200 to 400'	1.75 " "	2.50 " "	3.00 " "
400 to 600'	2.75 " "	3.50 " "	4.00 " "
600 to 800'	3.75 " "	4.75 " "	5.00 " "

Contract on drilling the 40 claim group (Twist Nos. 0 - 39)			
800 ft. holes - 9,600 feet	34,650		
9,240 feet @ $3.75 (Non-core)	$33,950.00 ?		
360 feet @ 5.00 (Core)	1,800.00		
400 ft. holes - 9,600 feet			
9,600 feet @ $1.75 (Non-core)	16,800.00	52,550.00	
Contract on drilling the 11 claim group (Burr J Nos. 1 - 11)			
200 ft. holes - 1,000 feet			
1,000 feet @ $1.25 (Non-core)	1,250.00		
400 ft. holes - 2,000 feet			
2,000 feet @ $1.75 (Non-core)	3,500.00	4,750.00	$57,300.00
Caterpillar and bulldozer work constructing additional roads to drill sites:			
300 hours at $15.00 per hour with equipment and operator		4,500.00	4,500.00
			$61,800.00

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6. (b) Labor, supervision, consultants.

LABOR

Blasting crew (3 men) for road and drill sites. Combination powder man and jackhammer operator.		
3 men @ $20.00 per day - 60 days	$3,600.00	

SUPERVISION

Geologic and engineering supervision		
1 man @ $25.00 per day - 84 days	2,100.00	

CONSULTANTS

Geological and engineering consultants	1,000.00	
		$6,700.00

6. (c) Operating materials and supplies.

Powder, fuse and caps	800.00	
Camp equipment and supplies,		
House trailer rental @ $65.00 per month	195.00	
Miscellaneous camp equipment @$25.00 per month	75.00	
Fuel and oil @ $6.00 per day	360.00	
		$1,430.00

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6. (d) Operating equipment.

Homelite drill complete	$1,800.00
215 CFM 1R compressor (used)	1,500.00
2 Cleveland drills	125.00
Hose and fittings	50.00
Steel and bits	100.00
1941 ½-Ton Ford pickup truck	300.00
1940 3/4-Ton Ford pickup truck	300.00
1951 1-Ton Jeep pickup truck	800.00
Babble Geiger counter 600 B	350.00
Reelmaster reel	125.00
500 ft. cable	125.00
Probe	75.00
	$5,650.00

The above equipment is owned by the operator and the following figures are based on use allowance:

2 months @ $250.00 per month — $500.00

6. (e) Rehabilitation and repairs.

None. — - -

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6 (f) New buildings, improvements, installations.

The construction of the following buildings will be necessary to carry out the exploration and development program:

Temporary portable building constructed of pine lumber, cook shack and dining hall, 16' x 30'	$ 750.00	
Tool equipment shed, 16' x 30'	750.00	
Pine construction sleeping quarters, 16' x 30'	750.00	
Flooring for tent houses; lumber and other necessary items for trailer houses	500.00	$ 2,750.00

6. (g) Miscellaneous

Cost of repairs to and maintenance of operating equipment (This estimate is based upon repairs only to the company vehicles, drills and equipment and the cost of gasoline, oil, grease and repairs for 3 months. The drilling and bulldozer cost of repairs and maintenance are not estimated as it is anticipated that these will be contracted.)	$3,000.00	
Accounting, analytical work, workmen's compensation, employer's liability insurance and payroll taxes (This estimate does not include workmen's compensation, employer's liability insurance and payroll taxes for the contractors or their employees)	5,000.00	$8,000.00

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6. (h) Contingencies.

It is estimated that an additional $5,000.00 may be necessary for the construction of drill roads and drill sites due to the difficult terrain in this area. Also included in this amount are certain funds that may be necessary along with the Rocky Mountain Uranium Corporation, Acme Uranium Company, Blue Goose Mining Company, Atomic Energy Commission, Carpenter Drilling Company and other interested parties in this area in the improvement of the road from the bottom of Burr Trail to Motom joining the state highway. This might be a pro-rated cost to each operator in this area.

$5,000.00

RECAP 6. Estimate of costs

6. (a)	$61,800.00
(b)	6,700.00
(c)	1,430.00
(d)	500.00
(e)	- -
(f)	2,750.00
(g)	8,000.00
(h)	5,000.00
	$86,180.00

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7. (b).

United Western Minerals Company is prepared to furnish its share of the cost in the proposed project in accordance with government regulations on government participation, Section 7, DMEA #1.

(1) Money

United Western Minerals Company has funds in cash bank deposits available for this purpose.

(2) Equipment

United Western Minerals Company has certain mining equipment and vehicles available for use in the exploration and development program outlined for the Circle Cliffs area.

(3) United Western Minerals Company has qualified personnel, engineers, geologists, experienced miners, drillers and field men that will be furnished for the Circle Cliffs project.

The foregoing statements, geological reports, maps and plans are attached to and make a part of the United Western Minerals Company's application for aid in an exploration and development project pursuant to DMEA Order 1, under the Defense Production Act of 1950 as amended.

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GEOLOGIC APPRAISAL OF THE McNARY CLAIMS

GARFIELD COUNTY, UTAH

INTRODUCTION

The property comprises fifty-one mining claims located in an unsurveyed area of Garfield County, Utah. The claims are in two groups: One group consists of eleven claims, the other of forty claims. The claims lie on the eastern side of the Circle Cliffs upwarp in a region of steeply dipping strata.

The area can be reached by a dirt road extending from Henkeville, Utah west to Boton Ranch and southward through Circle Cliffs. The road is graded regularly and is in good condition. The one group of claims lies adjacent to this road at the point where the road traverses Burr Canyon. The group of forty claims lies farther south and is bordered on the west and south by property under the control of the Rocky Mountain Uranium Corporation.

GEOLOGY

In the course of dissecting the steeply upturned strata of the Waterpocket monocline, erosion has exposed the whole Triassic section of geologic formations normal to this region. The oldest exposed Triassic rock unit is the Moenkopi formation. It outcrops over a large part of the elevated core of the Circle Cliffs upwarp. The next formation, the Shinarump conglomerate, rests unconformably upon the Moenkopi formation. The Shinarump conglomerate has been the object of intensive study over the entire Colorado Plateau since uranium mineralization in commercial quantities was discovered. Most uranium ore bodies found in the Shinarump conglomerate have been closely associated with channels that were carved into Moenkopi surface during the time of Shinarump deposition. Sands, gravels, and plant remains accumulated in these channels and became consolidated. At other points on the Moenkopi surface only a thin veneer of gravel and sands was deposited. Thus the Shinarump has a wide range of the thickness if measured at different points. In the Circle Cliffs area the Shinarump remains as a resistant cap atop buttes of the Moenkopi formation throughout the center of the upwarp and forms a ledge in the rims that flank the core. The youngest Triassic formation in the area is the Chinle formation, which lies upon the Shinarump conglomerate. For mapping purposes the Chinle formation has been divided into an upper and lower unit. The lower unit forms a slope that steepens near its top, the upper unit erodes to produce a more vertical slope, steepest near the top.

Above the Chinle formation the formations of the Glen Canyon group of Jurassic age are exposed. This group consists of a great thickness of resistant sandstone.

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THE ELEVEN CLAIM GROUP

The only exposure of the Shinarump formation on the group of eleven claims is on the two westernmost claims. Here it is a thin feather edge of sandstone gradually thickening to the north. Indications of significant channels are lacking. The remainder of this group lies over the Chinle formation with the distance from the surface to the Shinarump conglomerate increasing from west to east. There is a lack of evidence that a channel exists within this area bounded by these claims. If a channel is present under the claims it is buried farther east and will only be discovered by drilling.

THE FORTY CLAIM GROUP

This group of claims begins at the eastern boundary of the Rocky Mountain Uranium Corporation property and extends eastward to the Mule Twist Draw. The westernmost claim rests upon the lower part of the Chinle formation. The rest of the group covers an area in which the upper Chinle and Wingate formations are present. No access to the claims is presently available.

No means exists of predicting the presence of favorable conditions for uranium deposition beyond information deciphered from outcrops of the ore-bearing horizon or by drilling. Thus this group must be considered as a completely untested area.

RECOMMENDATIONS

It is recommended that these properties be held pending further work on adjacent properties. Conditions appear quite unfavorable for uranium deposition on the group of eleven claims, and in the writer's opinion they do not warrant drilling at present.

The group of forty claims is located in such an inaccessible position that unless large ore bodies are developed on adjacent properties where exploration conditions are more favorable, the calculated risks are far too great to justify the cost of exploration. Should a major find be made on adjacent claims, then the economic factors which play such a large part in determining the feasibility of exploring a property should be re-evaluated.

see exp. [illegible]

Submitted by,
GEOPROFESSIONAL SERVICES, INC.

/s/ Robert G. Coucher

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A. J. Hardley
President 8-9448

F. W. Christiansen
Vice-President 7-4980

H. C. Williams
Vice-President 87-1812

W. L. Stokes
Vice-President 6-5614

A. W. Rogers
Sec. Treas. 84-1748

C. L. Ashton
Director 9-1115

GEOPROFESSIONAL Services, Inc.
141 East Second South-Suite 203-
Salt Lake City 1, Utah

April 25, 1955

P. O. Box 918
Albuquerque, New Mexico

SUPPLEMENTAL REPORT TO
GEOLOGIC APPRAISAL
OF THE McNARY PROPERTY

Since this report was written the Rocky Mountain Uranium Corporation has discovered ore on claims adjacent to those discussed in the report.

Production has been maintained at about fifty tons per day for a number of months. The total production to date is not available but must be considered to be quite large.

In view of this production, it is now believed that a limited amount of exploration is justified on the McNary claims. It is recommended that drilling be conducted on the claim that overlies the lower unit of the Chinle formation. If ore is encountered it may then be feasible to drill portions of the group where depths will be greater.

At present there is no evidence that the mineralization on the Rocky Mountain property will pass under claims of the McNary group, but there is also no evidence that their's is the only mineralized zone behind the outcrops, and for this reason a limited exploration program seems justified.

Submitted by,

GEOPROFESSIONAL SERVICES, Inc.

Robert G. Coucher

RGC:cj

MINERALS ENGINEERING COMPANY
P. O. BOX 1951
GRAND JUNCTION, COLORADO

REC JUL 11 '55

June 6, 1955

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

Mr. Alva A. Simpson, Jr.
President
United Western Minerals Company
Santa Fe, New Mexico

Dear Mr. Simpson:

In reply to your letter of May 20 regarding a drilling program in the Circle Cliffs area, we hereby submit the following bid:

	Price per Foot		
	Non Core		Core
Depth	Dry	Wet	
0-200 feet	$ 1.25	$ 2.00	$ 2.50
200-400 feet	1.75	2.50	3.00
400-600 feet	2.75	3.50	4.00
600-800 feet	3.75	4.75	5.00

Any delays requested or caused by you, we bid as stand-by time at $12 per hour.

We will furnish a cat for road work for a minimum of 100 hours at $14.50 per hour. We would anticipate starting road work within two weeks of notification of acceptance of our bid. We will bid the job either with or without road work.

We will drill dry, non-core until ground conditions are unfavorable at which time we will convert to water. This will be done at our discretion.

This bid is given on a minimum of 5,600 feet to depths of 800 feet and 3,000 feet of drilling to 300-foot depths.

It will be a pleasure to hear from you concerning this work.

Very truly yours,

MINERALS ENGINEERING COMPANY

John B. Rigg
Drilling Division

JBR/k

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd. Crouzet
JUL 5 1955
BUREAU OF MINES
Denver, Colorado

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

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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. 3892
Metal or Mineral Uranium
Date Received 7-11-55
Estimated Cost $86,180
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: United Western Minerals Company
136 West Palace Avenue
Santa Fe, New Mexico
Alva A. Simpson, Jr., President

(*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. See attached marked 1. (b).

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See attached marked 1. (c).

(*d*) If a partnership, add to the above statement the names and addresses of all partners. Not applicable.

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.
See attached marked 2. General.

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
See attached marked 3. (a).

(*b*) State any mine name by which the property is known. None.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise United Western Minerals Company owner of unpatented federal mining claims.

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. See attached marked 3. (d)

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached marked 3. (f).

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. See attached marked 4. (a) Also describe accessibility of mine workings for examination purposes. See attached marked 4 (b).

(*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, samples, or other geologic information you may have, indicating on each whether you require its return to you. See attached marked 4 (c).

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See attached marked 4 (d).

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. See attached marked 4 (e).

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5. *The exploration project.*—(*a*) State the mineral or minerals for which you will to explore **Uranium and vanadium type ores.**

(*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. **See attached marked 5. (b).**

(*c*) The work will start within **30** days and be completed within **12** 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. **See attached marked 5. (d).**

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.). **See attached marked 6. (a) Independent contracts.**

(*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. **See attached marked 6.(b)**

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. **See attached marked 6. (c) Operating materials and supplies.**

(*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. **See attached marked 6. (d) Operating equipment.**

(*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. **See attached marked 6. (e) Rehabilitation and repairs.**

(*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. **See attached 6. (f)**

(*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. **See attached marked 6. (g).**

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above. **See attached marked 6. (h).**

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)? **Yes.**

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

[X] Money [X] Use of equipment owned by you [X] Other **All required personnel.**

Explain in detail on acompanying paper. **See attached marked 7. (b)**

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 June 30, 1955

UNITED WESTERN MINERALS COMPANY
(Applicant)

By Alva A. Simpson Jr.

Alva A. Simpson, Jr., President

Herbert A. Holt

Herbert A. Holt, Secretary

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

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

1. (b) A Delaware Corporation, qualified to do business in New Mexico, Utah, Colorado and California.

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136 W. Palace, Santa Fe, N. Mex.

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1. (c)

UNITED WESTERN MINERALS COMPANY

OFFICERS & DIRECTORS

President & Director	Alva A. Simpson, Jr. 136 West Palace Avenue Santa Fe, New Mexico
Secretary	Herbert A. Holt 136 West Palace Avenue Santa Fe, New Mexico
Treasurer	Herbert A. Holt 136 West Palace Avenue Santa Fe, New Mexico
Director (Chairman)	Patrick J. Hurley 301 Hillside Avenue Santa Fe, New Mexico
Director	Norman S. Dike c/o University Club 1 West 54th Street New York, New York
Director	Wilson Hurley Korber Building Albuquerque, New Mexico
Director	John K. Schemmer 630 Fifth Avenue New York, New York
Director	Benno C. Schmidt 630 Fifth Avenue New York, New York
Director	Anneliese A. Simpson 136 West Palace Avenue Santa Fe, New Mexico

UNITED WESTERN MINERALS COMPANY
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2. General

In accordance with DMEA Order 1, Government Aid in Defense Exploration Projects, this application and all accompanying papers in quadruplicate with name and address on each sheet of application and on all accompanying papers is being filed with the Defense Minerals Exploration Administration, 224 New Customhouse, Denver 2, Colorado.

3. (a)

Fifty-one unpatented mining claims comprising the Burr J mining claims Nos. 1 to 11 inclusive and the Twist mining claims Nos. 0 to 39 inclusive, located approximately 85 miles southwest of Hanksville, Utah, in the eastern flank of the Circle Cliffs area, Garfield County, Utah.

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UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

3. (d)

MINING DEED

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned MAX O. JERNIGAN and ALYCE K. JERNIGAN, his wife, G. R. McNARY and CLAUDIA M. McNARY, his wife, C. B. LAWRENCE and MARY J. LAWRENCE, his wife, and E. L. BAILEY and TEX M. BAILEY, his wife, all of the City of Albuquerque, County of Bernalillo, State of New Mexico, hereinafter called Grantors, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable considerations, the receipt of which is hereby acknowledged, do hereby grant, bargain, sell, convey, transfer and deliver unto UNITED WESTERN MINERALS COMPANY, a corporation, organized under the laws of the State of Delaware, and having its principal offices at 136 West Palace Avenue, City of Santa Fe, County of Santa Fe, State of New Mexico, hereinafter called Grantee, all of their right, title and interest in and to the Mining Claims hereinafter described, SAVE AND EXCEPT the royalty herein reserved unto Grantors, their heirs and assigns, forever.

Grantors reserve unto themselves, their heirs and assigns forever, and shall receive from Grantee, its successor and assigns ten percent (10%) of the gross value at the mine, in an unrefined, unconcentrated and unprocessed state, of all mineral ores produced by Grantee, its successors and assigns on the above listed claims, it being understood and agreed that such gross value at the mine shall be measured as follows:

A. No part of any development allowance shall be included in such value.

B. So long as a haulage allowance is paid by the purchaser of unrefined, unconcentrated, unprocessed ores and the haulage allowance equals between 80% and 120% of actual haulage costs, the value shall be measured by the price

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paid for such ores at the ore buying station, stock-piling station, mill or other delivery point and shall not include any part of the haulage allowance.

C. If no haulage allowance is paid by the buyer of the ores produced or if such allowance is less than 80% or more than 120% of the actual haulage costs, then such gross value at the mine shall be measured by the total consideration paid at the delivery point including the haulage allowance, if any, less the actual costs of haulage from the mine.

D. If ores produced from the mine are processed, concentrated, refined, or otherwise increased in value, at the cost or expense of Grantee, its successors and assigns, before sale, the gross value at the mine shall be measured upon whichever of the following basis Grantors may elect in writing:

(a) The gross value at the mine as calculated under Paragraphs A, B and C above less a deduction equal to the actual expenses and costs of processing, concentrating, refining or otherwise increasing the value of the raw ore as produced from the mine; or

(b) The amount of money which could be obtained for the ore in its natural state calculated as provided under Paragraphs A, B and C above.

The royalty reserved shall also include, and Grantee, its successors and assigns, shall pay to Grantors, their successors and assigns, ten percent (10%) of any bonus paid by the Atomic Energy Commission for the production of uranium bearing ore or other minerals mined from the claims listed below.

All royalty payments hereunder shall be due and payable thirty (30) days from the date of receipt of the sales price by Grantee, its successors and assigns.

Such claims being located and situated in the County of Garfield, State of Utah, to-wit:

UNITED WESTERN MINERALS COMPANY
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Not included in application

Name of Claim	Recording Date	Book	Page
Burr J No. 1	May 12, 1954	25	399
Burr J No. 2	May 12, 1954	25	400
Burr J No. 3	May 12, 1954	25	401
Burr J No. 4	May 12, 1954	25	402
Burr J No. 5	May 12, 1954	25	403
Burr J No. 6	May 12, 1954	25	404
Burr J No. 7	May 12, 1954	25	405
Burr J No. 8	May 12, 1954	25	406
Burr J No. 9	May 12, 1954	25	407
Burr J No. 10	May 12, 1954	25	408
Burr J No. 11	May 12, 1954	25	409
Conejo No. 1	May 12, 1954	25	410
Conejo No. 2	May 12, 1954	25	411
Conejo No. 3	May 12, 1954	25	412
Twist No. 0	June 18, 1954	31	207
Twist No. 1	June 18, 1954	31	208
Twist No. 2	June 18, 1954	31	209
Twist No. 3	June 18, 1954	31	210
Twist No. 4	June 18, 1954	31	211
Twist No. 5	June 18, 1954	31	212
Twist No. 6	June 18, 1954	31	213
Twist No. 7	June 18, 1954	31	214
Twist No. 8	June 18, 1954	31	215
Twist No. 9	June 18, 1954	31	216
Twist No. 10	June 18, 1954	31	217
Twist No. 11	June 18, 1954	31	218
Twist No. 12	June 18, 1954	31	219
Twist No. 13	June 18, 1954	31	220
Twist No. 14	June 18, 1954	31	221
Twist No. 15	June 18, 1954	31	222
Twist No. 16	June 18, 1954	31	223
Twist No. 17	June 18, 1954	31	224
Twist No. 18	June 18, 1954	31	225
Twist No. 19	June 18, 1954	31	226
Twist No. 20	June 24, 1954	32	267
Twist No. 21	June 24, 1954	32	268
Twist No. 22	June 24, 1954	32	269
Twist No. 23	June 24, 1954	32	270
Twist No. 24	June 24, 1954	32	271
Twist No. 25	June 24, 1954	32	272
Twist No. 26	June 24, 1954	32	273
Twist No. 27	June 24, 1954	32	274
Twist No. 28	June 24, 1954	32	275
Twist No. 29	June 24, 1954	32	276
Twist No. 30	June 24, 1954	32	277
Twist No. 31	June 24, 1954	32	278
Twist No. 32	June 24, 1954	32	279
Twist No. 33	June 24, 1954	32	280

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Name of Claim	Recording Date	Book	Page
Twist No. 34	June 24, 1954	32	281
Twist No. 35	June 24, 1954	32	282
Twist No. 36	June 24, 1954	32	283
Twist No. 37	June 24, 1954	32	284
Twist No. 38	June 24, 1954	32	285
Twist No. 39	June 24, 1954	32	286

together with all of the dips, spurs, angles and extensions thereof.

TO HAVE AND TO HOLD the above described property, together with all the rights, privileges and appurtenances thereunder belonging to the said Grantee, its successors and assigns forever.

WITNESS Our hands and seals this 8th day of April, 1955.

/s/ Max O. Jernigan
MAX O. JERNIGAN

/s/ Alyce K. Jernigan
ALYCE K. JERNIGAN

/s/ G. R. McNary
G. R. McNARY

/s/ Claudia M. McNary
CLAUDIA M. McNARY

/s/ C. B. Lawrence
C. B. LAWRENCE

/s/ Mary J. Lawrence
MARY J. LAWRENCE

/s/ E. L. Bailey
E. L. BAILEY

/s/ Tex M. Bailey
TEX M. BAILEY

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STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared MAX O. JENNIGAN and ALYCE K. JENNIGAN, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My Commission Expires:

May 12, 1956

/s/ Vera L. Mendoza
Notary Public

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared G. R. McNARY and CLAUDIA M. McNARY, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission Expires:

May 12, 1956

/s/ Vera L. Mendoza
Notary Public

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STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared C. B. LAWRENCE and MARY J. LAWRENCE, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My Commission Expires:

May 12, 1956

/s/ Vera L. Mendoza
Notary Public

STATE OF NEW MEXICO)
: SS
COUNTY OF BERNALILLO)

On this 8th day of April, 1955, before me personally appeared E. L. BAILEY and TEX M. BAILEY, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged that they executed the same as their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

My Commission expires:

May 12, 1956

/s/ Vera L. Mendoza
Notary Public

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3. (f)

Book and Page numbers of McNary claims recorded in Garfield County, Utah, Panguitch, Utah -- County Seat:

Burr J Mining Claims 1 to 11 inclusive	Recorded in Book 25, Pages 399 to 409 Inclusive Reception numbers 49,114 to 49,124 Filed for record the 12th of May, 1954 at 9:30 A.M.
Twist Mining Claims 0 to 19 inclusive	Recorded in Book 31, Pages 207 to 226 Inclusive Reception numbers 52,403 to 52,422 Filed for record the 18th of June, 1954 at 1:00 P.M.
Twist Mining Claims 20 to 39 inclusive	Recorded in Book 32, Pages 267 to 286 Inclusive Reception numbers 52,959 to 52,978 Filed for record the 24th of June, 1954 at 1:00 P.M.

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4. (a)

The Circle Cliffs, Garfield County, Utah, is a new, rapidly developing area in uranium development on the Colorado Plateau. This area, previously isolated by lack of roads, now is the location of an A. E. C. field camp and a Bureau of Land Management survey camp, as well as the location of several active producing mines and many exploration and development programs. At the present time access roads, drill roads, surveying and assessment work is being done on these claims. Three mines on adjacent properties are producing ore at present. United Western Minerals Company has no interest in these mines. The working mines are Silver Streak and Rainy Day No. 2 owned by Rocky Mountain Uranium Corporation. The other mine is Rainy Day No. 1 owned by Acme Uranium Corporation. These mines are easily accessible by dirt road up the A. E. C. Burr Trail access road.

The 11 Burr J mining claims located at the top of Burr Trail have been surveyed, access and drilling roads have been laid out with a D-6 and D-8 bulldozer. Geological reports attached and geological studies indicate these claims are all approximately from 100 feet to 400 feet above the Shinarump formation which is the ore bearing formation in this area.

The Twist mining claims, 0 to 39 inclusive, separated from the Burr J mining claims by a distance of approximately two and one-half miles, have access roads and drill site roads completed by D-6 and D-8 bulldozer with diamond drilling and blasting. Geological reports attached and geological studies indicate that the surface area is some 300 to 800 feet above the known ore horizon found in this area in the Shinarump formation. These claims bound Rocky Mountain Uranium Corporation claims with a producing mine and Acme Uranium Corporation claims with production on the western side. The surface indications and geological studies with radioactive instruments indicate that proper development (drilling) gives good possibilities of uncovering a commercial ore body. All this area is accessible for examination.

4. (b)

No past or current production on these claims.

One adjacent property has produced approximately 2,000 tons of 0.40% of U_3O_8 and the other is currently producing 30 to 50 tons daily of 0.50% U_3O_8.

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4. (c)

The properties comprise fifty-one mining claims located in an unsurveyed area of Garfield County, Utah. The claims are in two groups. One group consists of eleven (11) claims, Burr J #1 through Burr J #11; the other, of forty (40) claims, Twist #0 through Twist #39. The claims lie on the eastern edge of the Circle Cliffs upwarp where the steeply turned strata of the water pocket monocline has been exposed by erosion. The whole Triassic Section is exposed on this flank with the oldest unit, the Moenkopi Formation, exposed over a large part of the elevated center of the Circle Cliffs upwarp. Above the Moenkopi base the Shinarump Conglomerate rests unconformably. The youngest Triassic Formation, the Chinle Formation, rests conformably on the Shinarump Conglomerate. Above the Chinle Formation are the three members of the Glen Canyon group of Jurassic age; namely, the Wingate Sandstone, the Kayenta Formation and the Navajo Sandstone.

The Shinarump Conglomerate has been under intensive study throughout its exposure on the entire Colorado Plateau. Most uranium ore bodies found in the Shinarump Conglomerate have been closely associated with stream channels in the underlying Moenkopi Formation.

Although there are no Moenkopi channels exposed on the claims, there are channels exposed on the properties immediately adjacent to the claims on the west. This adjacent property is controlled by Rocky Mountain Uranium Corporation and by Acme Uranium Company, who are currently mining their respective properties.

The channels that are being followed by these two companies bear a few degrees north of east which, if continued in this direction, will lie under the Twist claims which are immediately to the west.

Since the Rainy Day #1 mine operated by Acme Uranium Company has reportedly produced 2,000 tons of ore averaging 0.4% and Rocky Mountain Uranium Corporation is currently producing 30 to 50 tons daily from their Rainy Day #2 mine, the conditions for exploration seem very favorable. Conditions seem especially favorable considering the fact that Rocky Mountain Uranium Corporation is still exploring in ore back 1,000 feet in their drift which places them approximately 1,800 feet from United Western Minerals Company's Twist claims. (See accompanying sketch)

On the Burr J claims (11) the only exposure of Shinarump Conglomerate is on the two northwestern claims. From a thin feather edge of sandstone, it gradually thickens to the north where some mineralization has been found by exploring the face with a bulldozer. To the south and east, the Shinarump Conglomerate dips under the Chinle Formation with the depth increasing as it dips under the flank of the fold. Although indications of significant channels are lacking where the Shinarump is exposed there is no indication that channels do not exist. The presence of favorable channels can be detected only by drilling. Since ore bearing channels have been found to the north and to the south, conditions merit drilling.

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The depth of drilling on the 11 group will vary from a few feet to 300 feet, whereas the 40 group will require depths of from 100 feet to 800 feet. Approximately half of the 40 group can be drilled from the middle of the Chinle Formation which will probably require a depth of 250 feet to 300 feet to reach through to the Shinarump Conglomerate.

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4. (d)

The two groups of claims can be reached by a dirt road which leaves State Highway No. 24 at Notom Ranch (between Hanksville and Capitol Reef National Monument) and runs South to the Burr Trail A. E. C. access road. The 11 group (Burr J) lie immediately north of a point where the road reaches the inside edge of the flank at the top of the Burr Trail road. About a quarter of a mile beyond this point the road branches and runs south about 5½ miles to the Rainy Day mines. The 40 claims (Twist claims) lie immediately east of the Rainy Day property which places them approximately ½ mile off the road. Drill roads and access roads to the claims are now under construction.

At present both Rocky Mountain Uranium Corporation and Acme Uranium Company are hauling their ore to Marysvale, Utah, a distance of approximately 175 miles. About 45 miles of this 175 is dirt road. The condition of this dirt road varies from bad to good. The balance of the road is black top and in good condition. The nearest mine supply houses are Richfield, Utah, about 200 miles, or Green River, Utah, a distance of 123 miles where S & M Supply is erecting a building.

Due to the distance from any town it will be necessary to furnish living accommodations at the site.

4. (e)

Due to the past mining activities in the general area, trained manpower is available. Most supplies are available at Bicknell, Mandeville, or Green River, Utah.

Water is not available near the claims so must be hauled from Fruita or Torry, Utah, a distance of about 45 miles. There is a water service company operating in the area and they are currently hauling water to the Rainy Day mine, A. E. C. camp and Bureau of Land Management camp.

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5. (b)

The accompanying sketch of the Burr J claims shows that drilling will be required from a depth of 100 to 400 feet. At this depth core should be taken on all holes. A minimum of 2,500 feet of drilling from the Chinle formation is figured.

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5. (d)

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United Western Minerals Company is a company composed of several corporations and individuals (see News Release attached).

Supervising engineer will be Marlan Newell Rhodes of Santa Fe, New Mexico.

Education:

Graduate of New Mexico School of Mines, Socorro, New Mexico, in Petroleum and Mining Engineering.

Employment Experience:

New Mexico Oil Conservation Commission
New Mexico State Land Office - Mining Engineer
Private employment, Gallup, New Mexico, - Mining Engineer on the Navajo Reservation, Colorado Plateau
Magnolia Petroleum Company
Dallas Power and Light Company - Surveyor
Petty Geophysical Engineering Company

Supervision of exploration will be Mr. Max O. Jernigan, geologist-engineer.

Education:

University of New Mexico, Albuquerque, New Mexico, and New Mexico A & M, Las Cruces, New Mexico.

Employment Experience:

New Mexico State Land Office - Field Engineer
Atomic Energy Commission - Engineering and Construction Division, Los Alamos, New Mexico
Bureau of Land Management, New Mexico - Surveying Division
Independent geological exploration and development work in the Colorado Plateau area since 1952 to the present
Pueblo Southern Corporation, Santa Fe, New Mexico - Geological engineering work
Graham McNary and Associates, Albuquerque, New Mexico - Geological engineering work, 1952 and 1954
United Western Minerals Company at present - Chief of exploration and development program.

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PRESS RELEASE

April 27, 1955

United Western Minerals Company, a Delaware corporation with main offices in Santa Fe, New Mexico, announced today through its President, Alva A. Simpson, Jr. that it had completed the acquisition through merger of all of the mining and oil and gas properties of United States Uranium Corporation, and Pueblo-Southern Corporation of Santa Fe, New Mexico and Border Uranium Corporation, Pueblo, Colorado. The transaction is wholly privately financed. No public offering of stock has been made. The merger took place in the First National Bank, Santa Fe, New Mexico.

In addition to these corporations, other properties were acquired by United Western Minerals Company from Dr. Jose Maldonado, Andrew F. Mitchell, Patrick J. Hurley, Alva A. Simpson, Jr. and John Candelario, all of Santa Fe, New Mexico; Max O. Jernigan, G. R. McNary, E. L. Bailey, C. B. Laurence, Darrell C. Williams, Dr. G. F. Ohlenroth, Edward J. Mankin, Dudley Cornell, Dr. Sam Yonemato, B. V. Wood, Roy Eidal and Dewey Rivera, all of Albuquerque, New Mexico; Arthur Lyon, George D. Fehr, Earl E. Fehr, Paul F. Catterson, John A. Howell, Earl H. Perkins, Richard P. Smoot, Joe Lyon, Jr., Joe M. Lyon, Jr., Hal W. Chandler, Bernard H. Wolff, David L. Clive, Jack de Ojeda, S. Robert Gilbertson and Ralph E. Jorgenson, all of Salt Lake City, Utah; Scott R. Brown and George W. Brown of Farmington, New Mexico and Charles W. Hendel, III of Blanding, Utah and J. Ted Bonner of Moab, Utah.

United Western also obtained an option to acquire all of the properties, including mine, mill and machinery, of Western Manganese Corporation of Greenville, California.

The properties in New Mexico alone comprise approximately 500,000 acres of mineral leases, claims and permits of State federal and private lands with the major part of the holdings being in the Grant's Laguna area of McKinley and Valencia Counties. These lands have been selected on the basis of careful geological and engineering studies and are believed to represent the choicest holdings of various individuals and companies acquired over the past three years. Manganese properties in Soccoro County and Beryllium-Mica claims in Santa Fe County are among the properties.

In Utah the Company holds approximately 36,000 acres of uranium-vanadium leases, permits and claims on federal and state lands, including a producing mine in the Henry mountains. The Com-

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pany expects the former McNary claims which it has acquired in the Circle Cliffs area in Utah which will be drilled in the near future to be in production by the middle of June.

The company also has approximately 26,000 acres of unproven oil and gas leases in Utah and approximately 22,000 acres of unproven oil and gas leases in New Mexico. In addition the Company has interests of valuable manganese, mercury and calcite holdings in the Republic of Mexico.

United Western Minerals Company has also sold to J. H. Whitney & Co. and White, Weld & Co., both of New York City, 300,000 shares of its common stock at the price of $1.00 per share, as well as an option to acquire an additional 250,000 shares at the same price. Whitney and White, Weld have also taken farmout agreements from Western on approximately 62,500 acres of leases, claims and permits for the purpose of conducting exploratory operations for the discovery of uranium. Under the terms of the Uranium Farmout Agreement, Whitney and White, Weld propose to spend approximately $250,000 in the conduct of operations under that agreement. Whitney and White, Weld have also taken a farmout on certain of the oil and gas leases of United Western on which it is proposed that geological studies will shortly be commenced.

Alva A. Simpson, Jr. will be the President, General Manger and a Director of the Company. Patrick J. Hurley, of Santa Fe, New Mexico, will be Chairman of the Board of Directors. Other Directors will be Norman S. Dike of Thompson, Conn., Wilson Hurley of Albuquerque, New Mexico and Benno Schmidt and John K. Schemmer of New York City.

This is one of the most important developments in the rapidly growing uranium business in this area; the consummation by United Western of this transaction constitutes one of the largest single private uranium consolidations in history.

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5. (d)

Geological studies and exploration, as attached, from Geoprofessional Services, Inc., Salt Lake City, Utah.

Geological engineering consultation from George C. Heikes. The following is quoted from Who's Who in America, Volume 28:

"Geologist, Anaconda Copper Mining Co., Butte, Mont. 1925-26; chief geol., Giesche Sp. Akc. (subsidiary Anaconda), Katowice, Poland, 1926-30, asst. to mgr. mines, 1930-34; asst. to cons. engr. Phila. and Reading Coal and Iron Co., Phila, 1935-36; spl. agent in charge non-ferrous metal mining, study of productivity of mine labor in U. S., U. S. Bur. of Mines, 1936-37; chief mining engr., Nat. Lead Co., St. Louis, Mo., 1937-41; asst. chief copper and zinc branch, Office of Prdn. Management, Washington, D.C., 1941; dir. zinc div. W. P. B., Washington, D.C. 1942-43; resident mgr. Olin Corp., Aluminum Reduction Works, Tacoma, Washington, 1943-44; dir. aluminum-magnesium div. W.P.B., Washington, D.C., 1944-45; vice pres. Mines, Inc. (subsidiary of Ventures Lts. Toronto, Can.), 1945-48; mining geologist Kennecott Copper Corp., 1948-49; chief mining br. Industry Div. ECA mission to Greece, 1949-51; chief mining development div., Defense Materials Procurement Agy., Region III (Europe, Middle East, Africa) since 1952, Mem. Am. Inst. Mining and Metall. Engrs., Mining and Metall. Soc. Am., Soc. Econ. Geologists, Canadian Inst. Mining and Metall. Instn. Mining and Metallurgy."

Mining Engineering and consultation from Mr. Horace C. Moses, who is the former General Manager of Kennicott Mining Company and General Manager of Chino mines. He is the past president and director for many years of the New Mexico Mining Association, and a man identified with all mining in the southwest for many years.

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6. (a) Independent Contracts.

Work can be contracted at the following costs:

DRILLING

Depth	Non-Core Drilling	Non-Core Wet	Core Drilling
0 to 200'	$1.25 per foot	$2.00 per foot	$2.50 per foot
200 to 400'	1.75 " "	2.50 " "	3.00 " "
400 to 600'	2.75 " "	3.50 " "	4.00 " "
600 to 800'	3.75 " "	4.75 " "	5.00 " "

Contract on drilling the 40 claim group
(Twist Nos. 0 - 39)

800 ft. holes - 9,600 feet

9,240 feet @ $3.75 (Non-core)	$33,950.00		
360 feet @ 5.00 (Core)	1,800.00		
400 ft. holes - 9,600 feet			
9,600 feet @ $1.75 (Non-core)	16,800.00	52,550.00	
Contract on drilling the 11 claim group (Burr J Nos. 1 - 11)			
200 ft. holes - 1,000 feet			
1,000 feet @ $1.25 (Non-core)	1,250.00		
400 ft. holes - 2,000 feet			
2,000 feet @ $1.75 (Non-core)	3,500.00	4,750.00	$57,300.00
Caterpillar and bulldozer work constructing additional roads to drill sites:			
300 hours at $15.00 per hour with equipment and operator		4,500.00	4,500.00
			$61,800.00

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6. (b) Labor, supervision, consultants.

LABOR

Blasting crew (3 men) for road and drill sites. Combination powder man and jackhammer operator.		
3 men @ $20.00 per day - 60 days	$3,600.00	

SUPERVISION

Geologic and engineering supervision		
1 man @ $25.00 per day - 84 days	2,100.00	

CONSULTANTS

Geological and engineering consultants	1,000.00	
		$6,700.00

6. (c) Operating materials and supplies.

Powder, fuse and caps	800.00	
Camp equipment and supplies,		
House trailer rental @ $65.00 per month	195.00	
Miscellaneous camp equipment @$25.00 per month	75.00	
Fuel and oil @ $6.00 per day	360.00	
		$1,430.00

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6. (d) Operating equipment.

Homalite drill complete	$1,800.00
215 CFM 1R compressor (used)	1,500.00
2 Cleveland drills	125.00
Hose and fittings	50.00
Steel and bits	100.00
1941 ½-Ton Ford pickup truck	300.00
1940 3/4-Ton Ford pickup truck	300.00
1951 1-Ton Jeep pickup truck	800.00
Babble Geiger counter 600 B	350.00
Realmaster reel	125.00
500 ft. cable	125.00
Probe	75.00
	$5,650.00

The above equipment is owned by the operator and the following figures are based on use allowance:

2 months @ $250.00 per month $500.00

6. (e) Rehabilitation and repairs.

None. - - -

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6 (f) New buildings, improvements, installations.

The construction of the following buildings will be necessary to carry out the exploration and development program:

Temporary portable building constructed of pine lumber, cook shack and dining hall, 16' x 30'	$ 750.00	
Tool equipment shed, 16' x 30'	750.00	
Pine construction sleeping quarters, 16' x 30'	750.00	
Flooring for tent houses; lumber and other necessary items for trailer houses	500.00	$ 2,750.00

6. (g) Miscellaneous

Cost of repairs to and maintenance of operating equipment (This estimate is based upon repairs only to the company vehicles, drills and equipment and the cost of gasoline, oil, grease and repairs for 3 months. The drilling and bulldozer cost of repairs and maintenance are not estimated as it is anticipated that these will be contracted.)	$3,000.00	
Accounting, analytical work, workmen's compensation, employer's liability insurance and payroll taxes (This estimate does not include workmen's compensation, employer's liability insurance and payroll taxes for the contractors or their employees)	5,000.00	$8,000.00

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6. (h) Contingencies.

It is estimated that an additional $5,000.00 may be necessary for the construction of drill roads and drill sites due to the difficult terrain in this area. Also included in this amount are certain funds that may be necessary along with the Rocky Mountain Uranium Corporation, Anne Uranium Company, Blue Goose Mining Company, Atomic Energy Commission, Carpenter Drilling Company and other interested parties in this area in the improvement of the road from the bottom of Burr Trail to Moten joining the state highway. This might be a pro-rated cost to each operator in this area.

$5,000.00

RECAP 6. Estimate of costs

6. (a)	$41,800.00
(b)	6,700.00
(c)	1,430.00
(d)	500.00
(e)	- -
(f)	2,750.00
(g)	8,000.00
(h)	5,000.00
	$86,180.00

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7. (b).

United Western Minerals Company is prepared to furnish its share of the cost in the proposed project in accordance with government regulations on government participation, Section 7, DMEA #1.

(1) Money

United Western Minerals Company has funds in cash bank deposits available for this purpose.

(2) Equipment

United Western Minerals Company has certain mining equipment and vehicles available for use in the exploration and development program outlined for the Circle Cliffs area.

(3) United Western Minerals Company has qualified personnel, engineers, geologists, experienced miners, drillers and field men that will be furnished for the Circle Cliffs project.

The foregoing statements, geological reports, maps and plans are attached to and make a part of the United Western Minerals Company's application for aid in an exploration and development project pursuant to DMEA Order 1, under the Defense Production Act of 1950 as amended.

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GEOLOGIC APPRAISAL OF THE McNABY CLAIMS

GARFIELD COUNTY, UTAH

INTRODUCTION

The property comprises fifty-one mining claims located in an unsurveyed area of Garfield County, Utah. The claims are in two groups: One group consists of eleven claims, the other of forty claims. The claims lie on the eastern side of the Circle Cliffs upwarp in a region of steeply dipping strata.

The area can be reached by a dirt road extending from Hanksville, Utah west to Notom Ranch and southward through Circle Cliffs. The road is graded regularly and is in good condition. The one group of claims lies adjacent to this road at the point where the road traverses Burr Canyon. The group of forty claims lies farther south and is bordered on the west and south by property under the control of the Rocky Mountain Uranium Corporation.

GEOLOGY

In the course of dissecting the steeply upturned strata of the Waterpocket monocline, erosion has exposed the whole Triassic section of geologic formations normal to this region. The oldest exposed Triassic rock unit is the Moenkopi formation. It outcrops over a large part of the elevated core of the Circle Cliffs upwarp. The next formation, the Shinarump conglomerate, rests unconformably upon the Moenkopi formation. The Shinarump conglomerate has been the object of intensive study over the entire Colorado Plateau since uranium mineralization in commercial quantities was discovered. Most uranium ore bodies found in the Shinarump conglomerate have been closely associated with channels that were carved into Moenkopi surface during the time of Shinarump deposition. Sands, gravels, and plant remains accumulated in these channels and became consolidated. At other points on the Moenkopi surface only a thin veneer of gravel and sands was deposited. Thus the Shinarump has a wide range of the thickness if measured at different points. In the Circle Cliffs area the Shinarump remains as a resistant cap atop buttes of the Moenkopi formation throughout the center of the upwarp and forms a ledge in the rims that flank the core. The youngest Triassic formation in the area is the Chinle formation, which lies upon the Shinarump conglomerate. For mapping purposes the Chinle formation has been divided into an upper and lower unit. The lower unit forms a slope that steepens near its top, the upper unit erodes to produce a more vertical slope, steepest near the top.

Above the Chinle formation the formations of the Glen Canyon group of Jurassic age are exposed. This group consists of a great thickness of resistant sandstone.

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

RECEIVED JUL 11 1955

THE ELEVEN CLAIM GROUP

The only exposure of the Shinarump formation on the group of eleven claims is on the two westernmost claims. Here it is a thin feather edge of sandstone gradually thickening to the north. Indications of significant channels are lacking. The remainder of this group lies over the Chinle formation with the distance from the surface to the Shinarump conglomerate increasing from west to east. There is a lack of evidence that a channel exists within this area bounded by these claims. If a channel is present under the claims it is buried farther east and will only be discovered by drilling.

THE FORTY CLAIM GROUP

This group of claims begins at the eastern boundary of the Rocky Mountain Uranium Corporation property and extends eastward to the Mule Twist Draw. The westernmost claim rests upon the lower part of the Chinle formation. The rest of the group covers an area in which the upper Chinle and Wingate formations are present. No access to the claims is presently available.

No means exists of predicting the presence of favorable conditions for uranium deposition beyond information deciphered from outcrops of the ore-bearing horizon or by drilling. Thus this group must be considered as a completely untested area.

RECOMMENDATIONS

It is recommended that these properties be held pending further work on adjacent properties. Conditions appear quite unfavorable for uranium deposition on the group of eleven claims, and in the writer's opinion they do not warrant drilling at present.

The group of forty claims is located in such an inaccessible position that unless large ore bodies are developed on adjacent properties where exploration conditions are more favorable, the calculated risks are far too great to justify the cost of exploration. Should a major find be made on adjacent claims, then the economic factors which play such a large part in determining the feasibility of exploring a property should be re-evaluated.

Submitted by,
GEOPROFESSIONAL SERVICES, INC.

/s/ Robert G. Goucher

A. J. Hardley
President 8-9448

F. W. Christiansen
Vice-President 7-4980

H. C. Williams
Vice-President 87-1812

W. L. Stokes
Vice-President 6-5614

A. W. Rogers
Sec. Treas. 84-1748

C. L. Ashton
Director 9-1115

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

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JUL 1 1955

GEOPROFESSIONAL Services, Inc.
141 East Second South-Suite 203-
Salt Lake City 1, Utah

April 25, 1955

P. O. Box 918
Albuquerque, New Mexico

SUPPLEMENTAL REPORT TO
GEOLOGIC APPRAISAL
OF THE McNARY PROPERTY

Since this report was written the Rocky Mountain Uranium Corporation has discovered ore on claims adjacent to those discussed in the report.

Production has been maintained at about fifty tons per day for a number of months. The total production to date is not available but must be considered to be quite large.

In view of this production, it is now believed that a limited amount of exploration is justified on the McNary claims. It is recommended that drilling be conducted on the claim that overlies the lower unit of the Chinle formation. If ore is encountered it may then be feasible to drill portions of the group where depths will be greater.

At present there is no evidence that the mineralization on the Rocky Mountain property will pass under claims of the McNary group, but there is also no evidence that their's is the only mineralized zone behind the outcrops, and for this reason a limited exploration program seems justified.

Submitted by,

GEOPROFESSIONAL SERVICES, Inc.

Robert G. Coucher

RGC:cj

MINERALS ENGINEERING COMPANY
P. O. BOX 1951
GRAND JUNCTION, COLORADO

RECEIVED
JUL 11 1955

June 6, 1955

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

Mr. Alva A. Simpson, Jr.
President
United Western Minerals Company
Santa Fe, New Mexico

Dear Mr. Simpson:

In reply to your letter of May 20 regarding a drilling program in the Circle Cliffs area, we hereby submit the following bid:

Depth	Price per Foot Non Core Dry	Non Core Wet	Core
0-200 feet	$ 1.25	$ 2.00	$ 2.50
200-400 feet	1.75	2.50	3.00
400-600 feet	2.75	3.50	4.00
600-800 feet	3.75	4.75	5.00

Any delays requested or caused by you, we bid as stand-by time at $12 per hour.

We will furnish a cat for road work for a minimum of 100 hours at $14.50 per hour. We would anticipate starting road work within two weeks of notification of acceptance of our bid. We will bid the job either with or without road work.

We will drill dry, non-core until ground conditions are unfavorable at which time we will convert to water. This will be done at our discretion.

This bid is given on a minimum of 5,600 feet to depths of 800 feet and 3,000 feet of drilling to 100-foot depths.

It will be a pleasure to hear from you concerning this work.

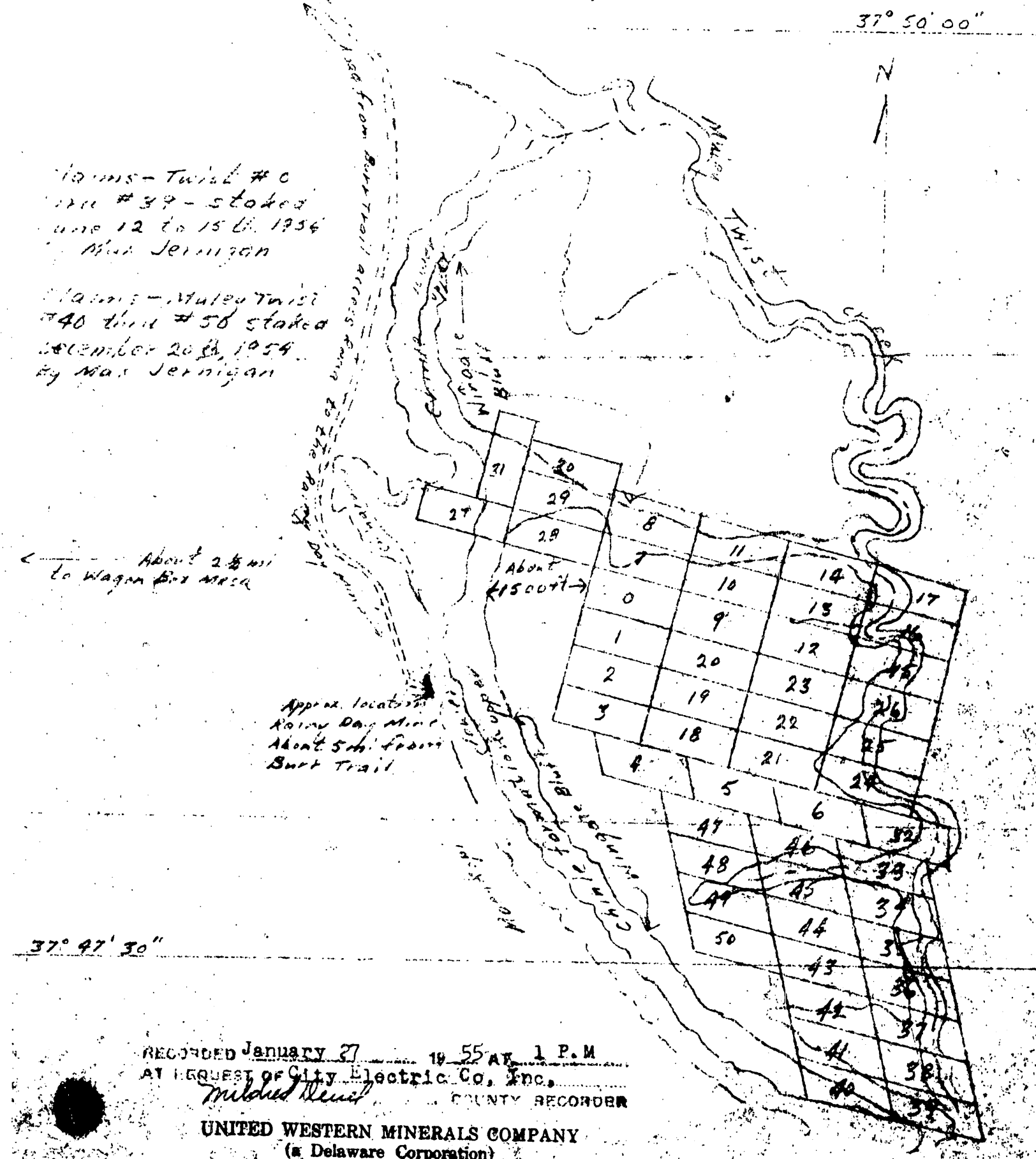
Very truly yours,

MINERALS ENGINEERING COMPANY

John B. Rigg
Drilling Division

JBR/k

Circle Cliff Area
Garfield County, Utah BOOK 63 PAGE 359



Claims - Twist #0 thru #39 - staked June 12 to 15th, 1954 Max Jernigan

Claims - Twist #40 thru #50 staked December 20th, 1954 by Max Jernigan

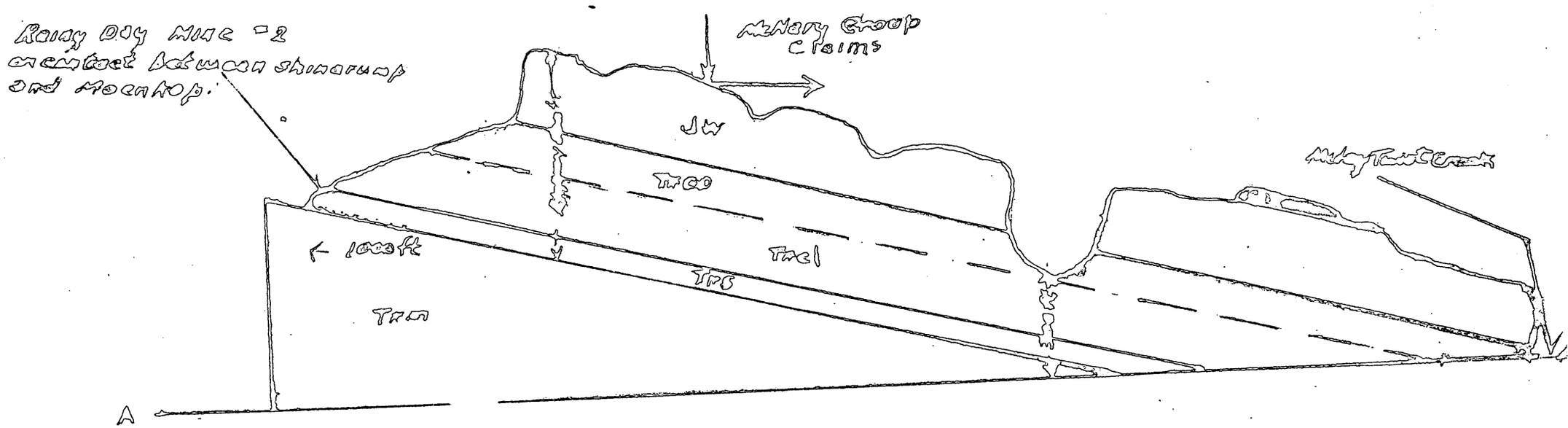
RECORDED January 27 19 55 AT 1 P.M.
AT REQUEST OF City Electric Co, Inc.
Mildred Deuel COUNTY RECORDER

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.
1/24/55

Max A Jernigan

UNITED WESTERN MINERALS COMP.
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.
6/24/55

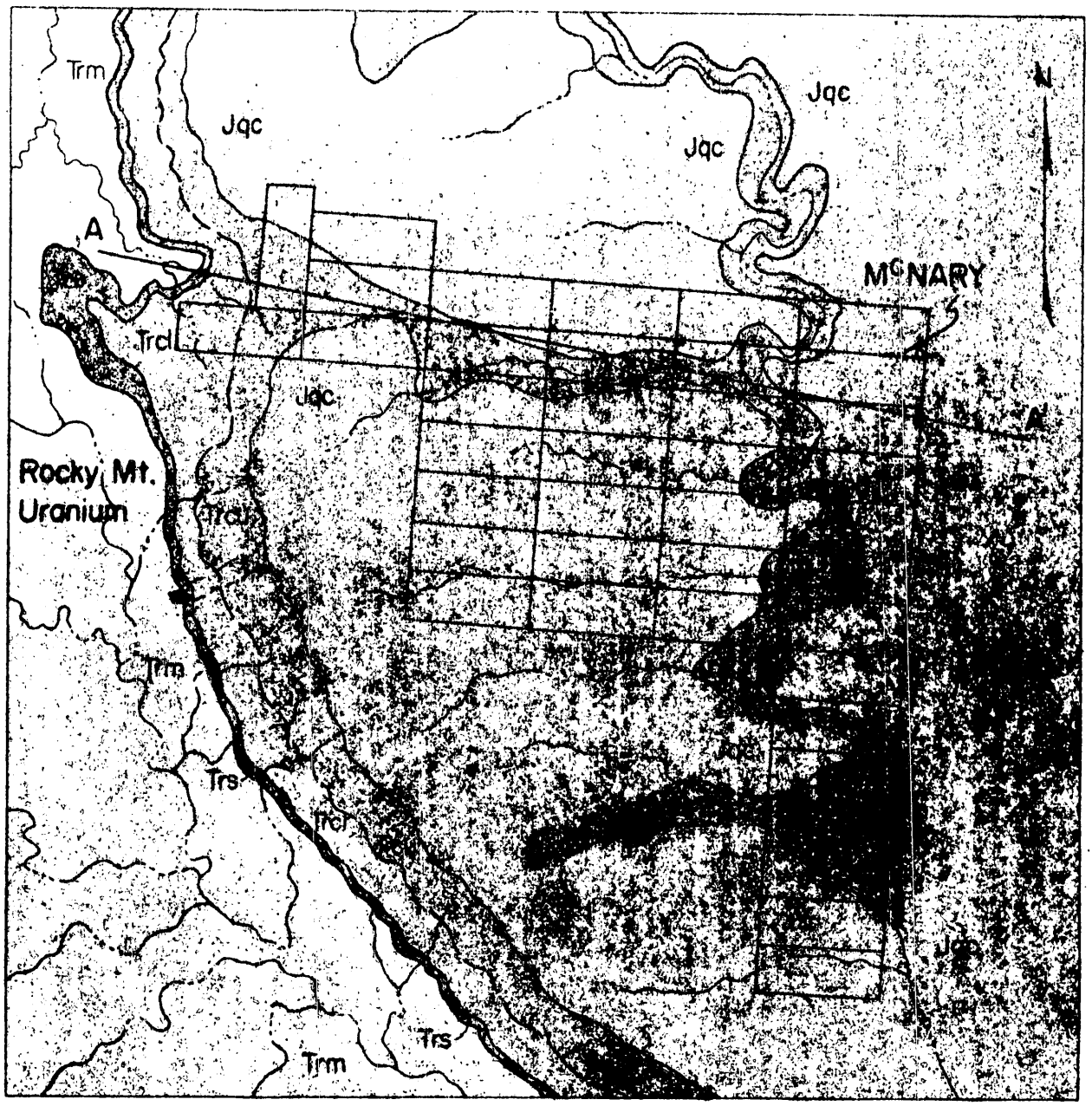
UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

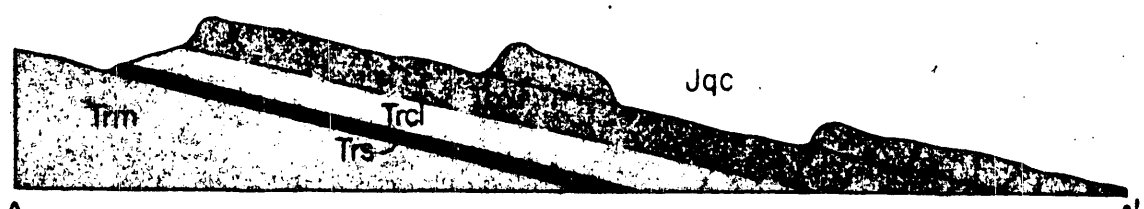


- JK - Koyota
- JW - Wagonite
- Trcu - Chinle Upper
- Trcl - Chinle Lower
- Trs - Shinarump
- Trm - Moenkopi.

No scale

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex. 6/24/55





GEOLOGIC MAP OF McNARY PROPERTY

CIRCLE CLIFFS,
GARFIELD CO., UTAH

SCALE 1/24,000

EXPLANATION

- Jqc — Glen Canyon
- Trcu — Chinle, Upper
- Trcl — Chinle, Lower
- Shinarump
- Moenkopi

GEOPROFESSIONAL SERVICES, INC.

August, 1954

August 11, 1955

Mr. Ernest William Ellis, Chief
Rare and Miscellaneous Metals Division
Defense Minerals Exploration Administration
U. S. Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3892 (Uranium)
Burr J. and Twist groups
Garfield County, Utah

Dear Mr. Ellis:

Reference is made to your letter of July 21, 1955 in which you requested further information regarding the above-captioned application. The information you requested in this letter is submitted herewith.

(a) Maps of the individual claim groups showing the number of each claim are contained in the accompanying exhibits.

(b) The approximate location of each proposed drill hole is shown on Exhibit A for each individual claim group. It will be necessary to alter the location of many holes on the Twist claim group due to the extremely unfavorable topography.

Drill holes on the Burr J group can be located as proposed due to the low relief common to the area.

Please regard the accuracy of the depths submitted herein to be questionable due again, to the unfavorable topography and inaccessibility of portions of the Twist claim group.

(c) The location of existing and proposed access roads is shown on Exhibit B for the individual claim groups. Here again the topographic situation on the Twist group makes the accurate location of the roads impossible at this time.

(d) Exhibit C submitted herewith indicates the inferred trend of indicated ore channels in the vicinity of the Twist claim group. A very small amount of information

RECEIVED
AUG 15 1955

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE Aug 15, 1955

REFERRED TO: 1. J. E. Crawford, Rm. 4361
2.
3.
4.

FOR:

- ____ Action
- ____ Approval
- ____ Comment
- ____ Conference
- ____ Consideration
- ____ Filing
- ____ Instructions
- ____ Investigation
- ____ Initials
- ____ Mailing
- ____ Previous correspondence
- ____ Recommendation
- ____ Record of ____
- ____ Referring to ____
- ____ Reply for signature of ____
- ____ Rewriting
- ____ Signature
- ____ Suggestions
- ____ Your information

REMARKS: For your information.

Check (X) before the items needing attention.

Ernest Wm. Ellis

(F. Murphy) *Initials of sender.*
am

GPO 16—63815-1

on the location of these Shinarump channels is available to us at this time.

To my knowledge only the Rainy Day mine, owned by the Rocky Mountain Uranium Corporation, is being worked at this time.

There are no indicated ore channels on the Burr J claim group; however, it is possible to follow a channel in the Shinarump formation from the vicinity of the Rainy Day mine to a point slightly south of the Burr J group. This channel may continue under the Burr J claims. Only drilling can answer that question.

(e) To my knowledge no assays have been run on samples cut from the Burr J or Twist claim groups. Further, no formal radiometric surveys have been made on subject claims. The dozer cut on Burr J Claim No. 11 shows no abnormal radioactivity. However, an area of above normal radioactivity is found in a Shinarump remnant approximately 1,000 feet northwest of the Burr J Claim No. 10.

In the course of United Western Minerals Company's operations on the Burr J and Twist groups, the investigation of these properties for possible anomalies was considered of secondary importance. Your attention is directed to Exhibit C, which exhibit displays the information available on the present trend of ore-bearing Shinarump channels. It is seen that there is a very good possibility that the ore channel currently being mined by the Rocky Mountain Uranium Corporation at the Rainy Day mine will extend under the Twist group. Further, a channel is indicated on Twist Claim No. 27, and slight radioactivity is noted to the west of the claim itself on adjacent property.

It will be noted on Exhibit B that United Western Minerals Company has expended a considerable amount of money in building an access facility from the road running to the Rainy Day mine down through Blue Jay Canyon to a point just short of Muley Twist draw. United Western Minerals Company feels that the $15,000 expenditure made thus far on the Twist claim group was money well spent on an above-average uranium prospect.

I trust the above information will completely answer your questions and that the application of United Western Minerals Company can be processed promptly.

Sincerely yours,

H. N. Rhodes

H. N. Rhodes
Engineer

HNR:la

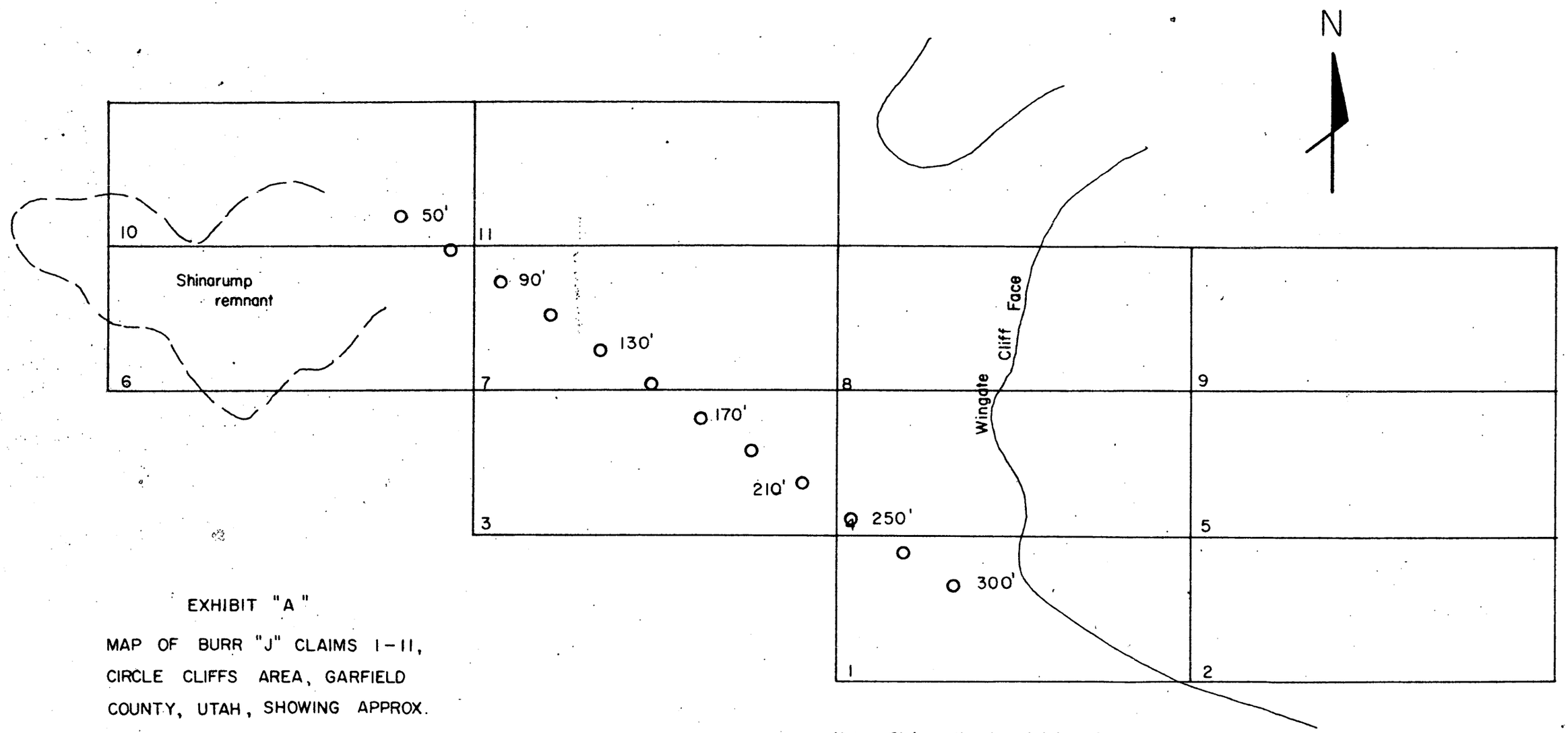


EXHIBIT "A"

MAP OF BURR "J" CLAIMS I-II, CIRCLE CLIFFS AREA, GARFIELD COUNTY, UTAH, SHOWING APPROX. LOCATION AND DEPTHS OF PROPOSED DRILL HOLES

Note: Claims lie in vicinity of Secs. 8, 9, 16 & 17, T 34 S, R 7 E.

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

SCALE: 1 in. = 500 ft. 8-9-55 HNR

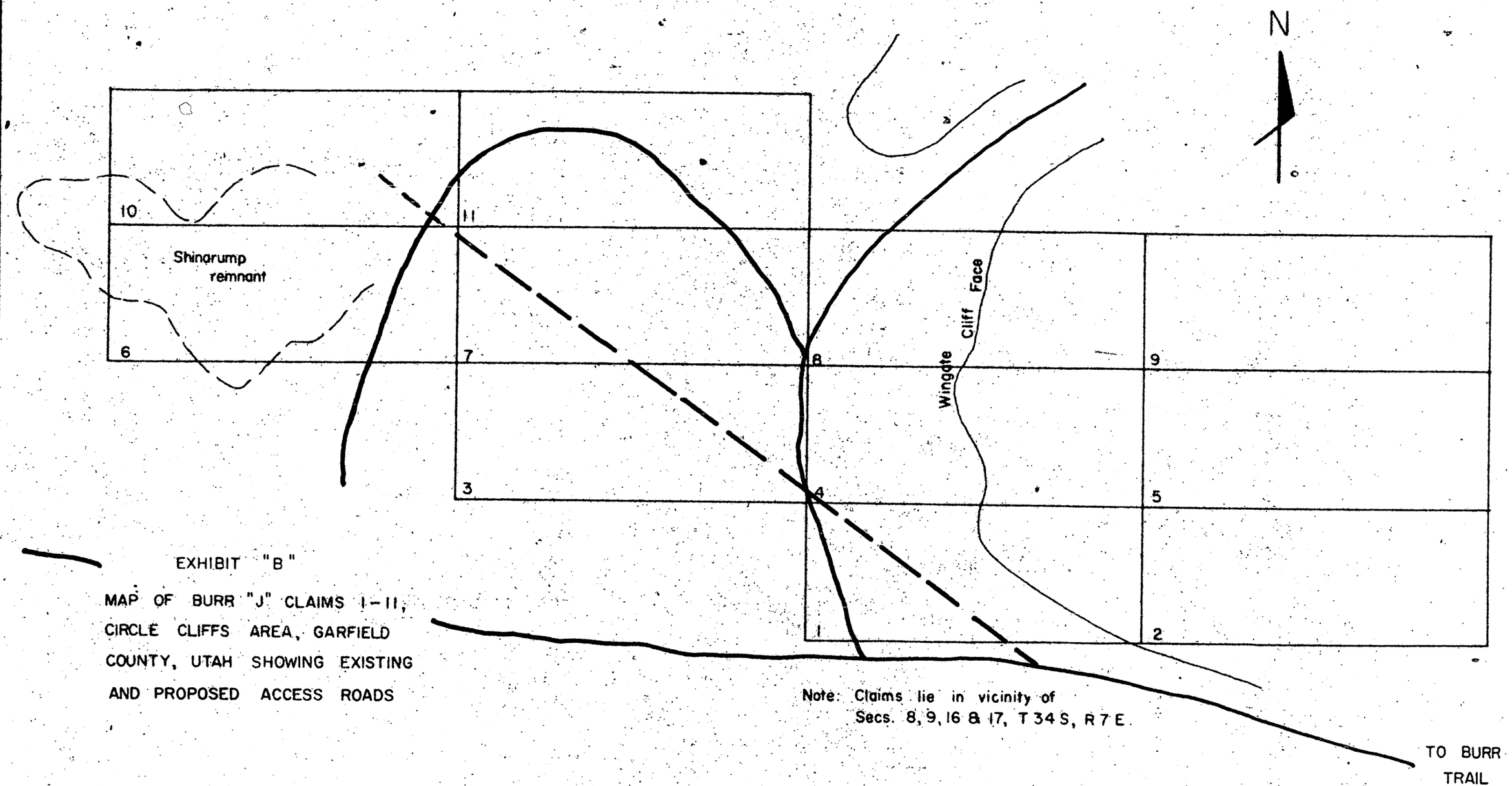


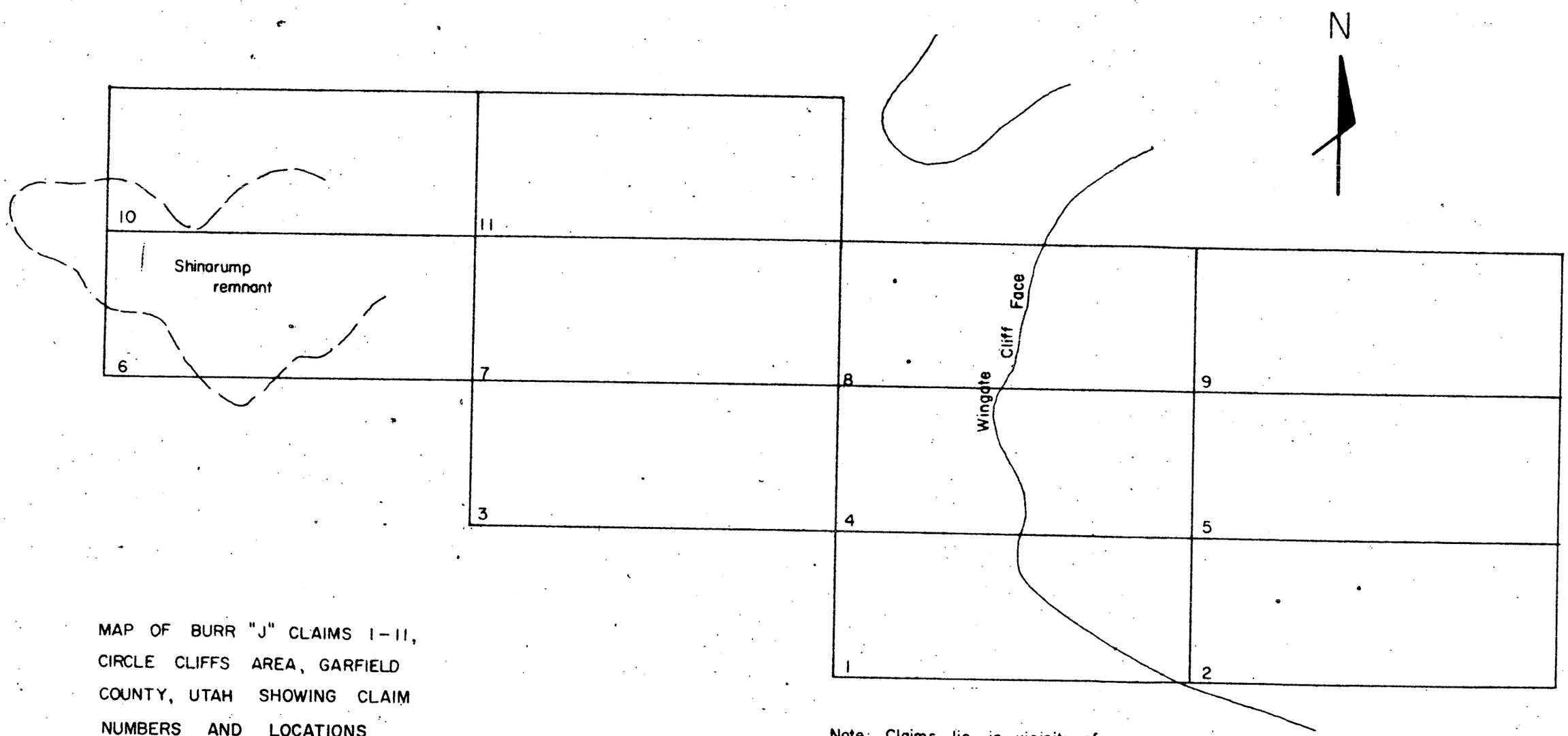
EXHIBIT "B"

MAP OF BURR "J" CLAIMS 1-11, CIRCLE CLIFFS AREA, GARFIELD COUNTY, UTAH SHOWING EXISTING AND PROPOSED ACCESS ROADS

Note: Claims lie in vicinity of Secs. 8, 9, 16 & 17, T 34 S, R 7 E.

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

SCALE: 1 in. = 500 ft. 8-9-55 HNR

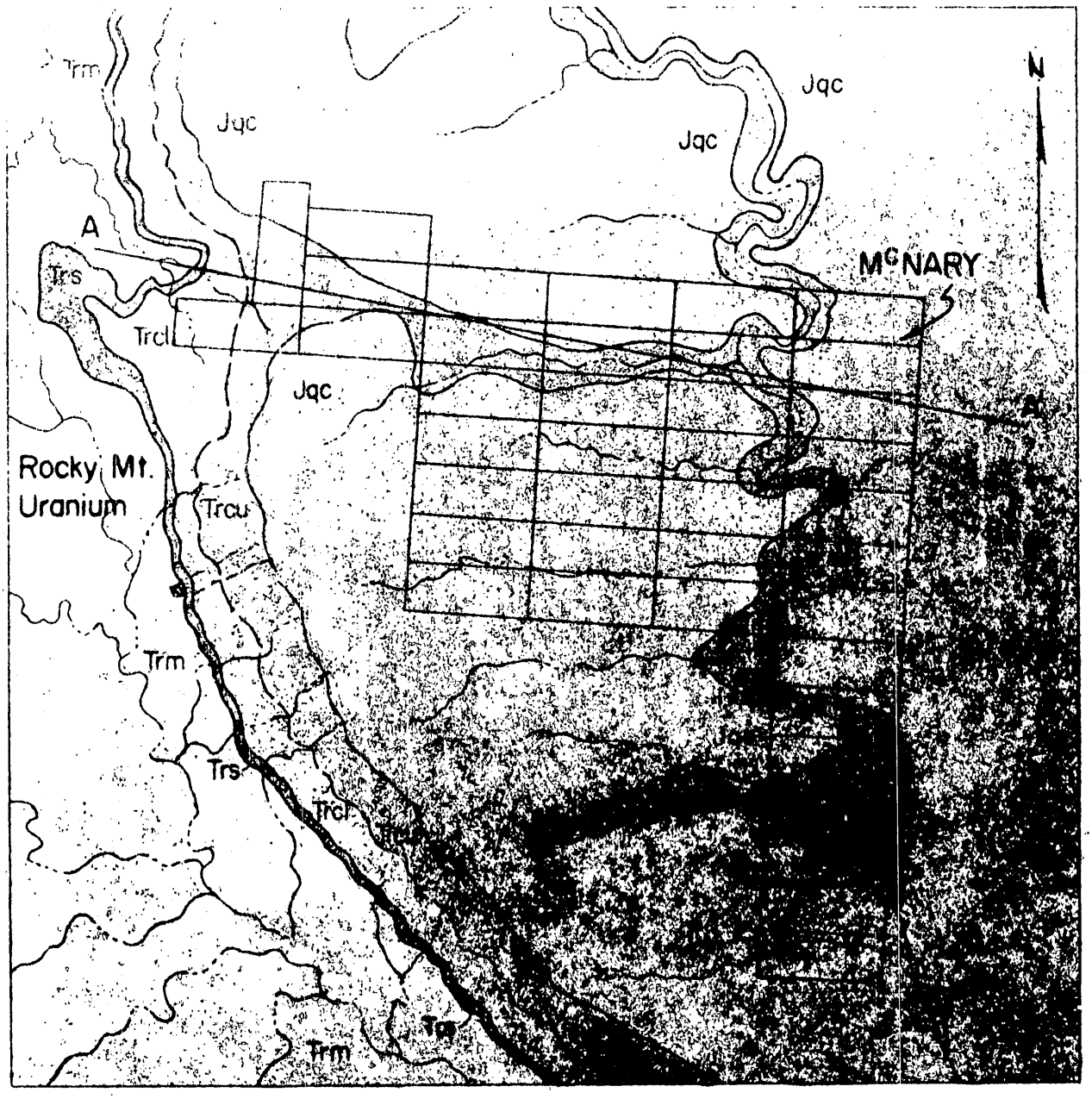


MAP OF BURR "J" CLAIMS 1-11, CIRCLE CLIFFS AREA, GARFIELD COUNTY, UTAH SHOWING CLAIM NUMBERS AND LOCATIONS

Note: Claims lie in vicinity of Secs. 8, 9, 16 & 17, T 34 S, R 7 E.

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

SCALE: 1 in. = 500 ft. 8-9-55 HNR



GEOLOGIC MAP OF MCNARY PROPERTY

CIRCLE CLIFFS,
GARFIELD CO., UTAH

SCALE 1/24,000

EXPLANATION

- Jqc — Glen Canyon
- Trcu — Chinle, Upper
- Trcl — Chinle, Lower
- Trs — Shinarump
- Trm — Moenkopi

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
126 W. Palace, Santa Fe, N. Mex.

GEOPROFESSIONAL SERVICES, INC.

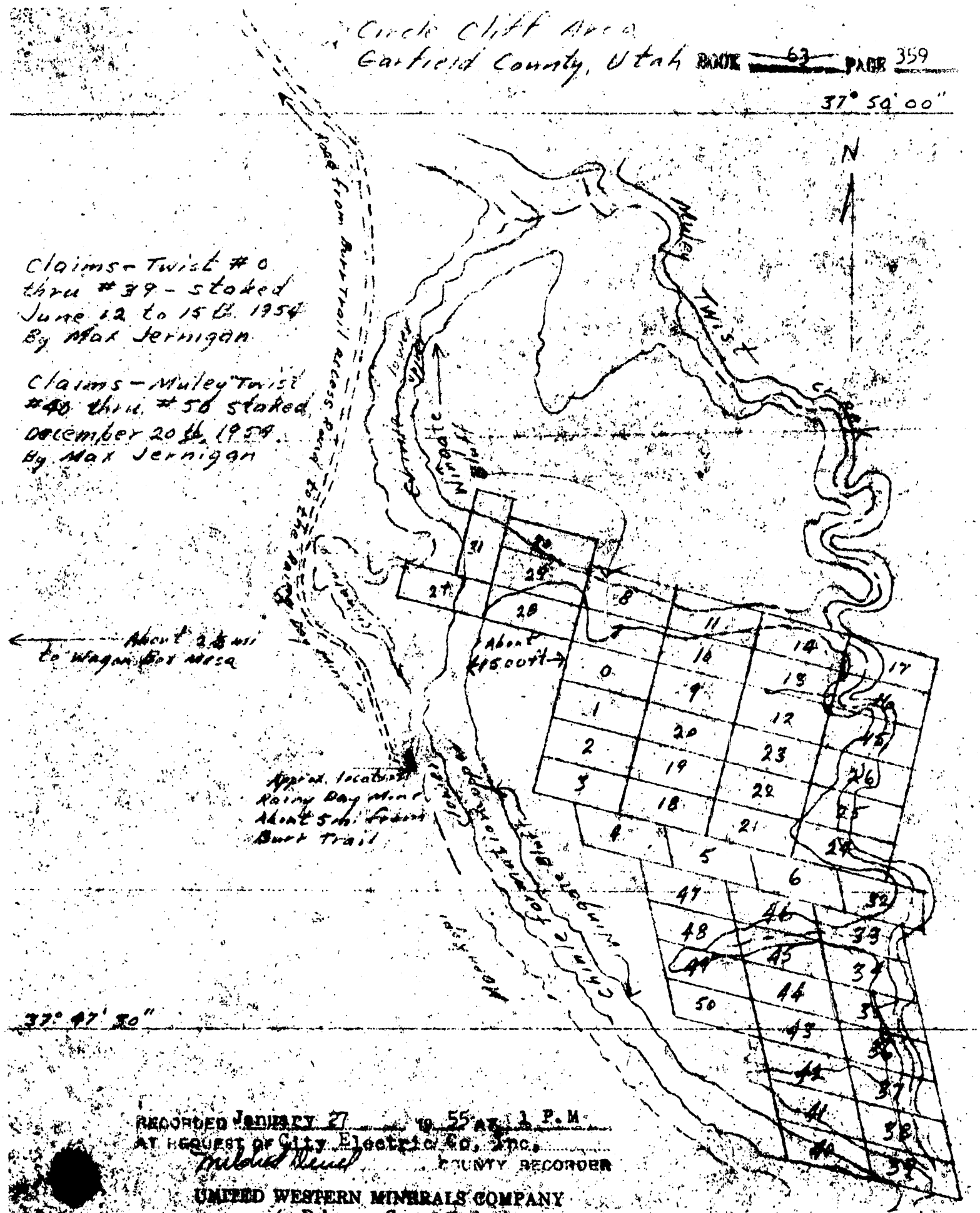
August 1954

Circle Cliff Area
Garfield County, Utah BOOK 63 PAGE 359

37° 50' 00"

Claims - Twist #0 thru #39 - staked June 12 to 15th 1954 By Max Jernigan

Claims - Muley Twist #40 thru #56 staked December 20th 1954. By Max Jernigan



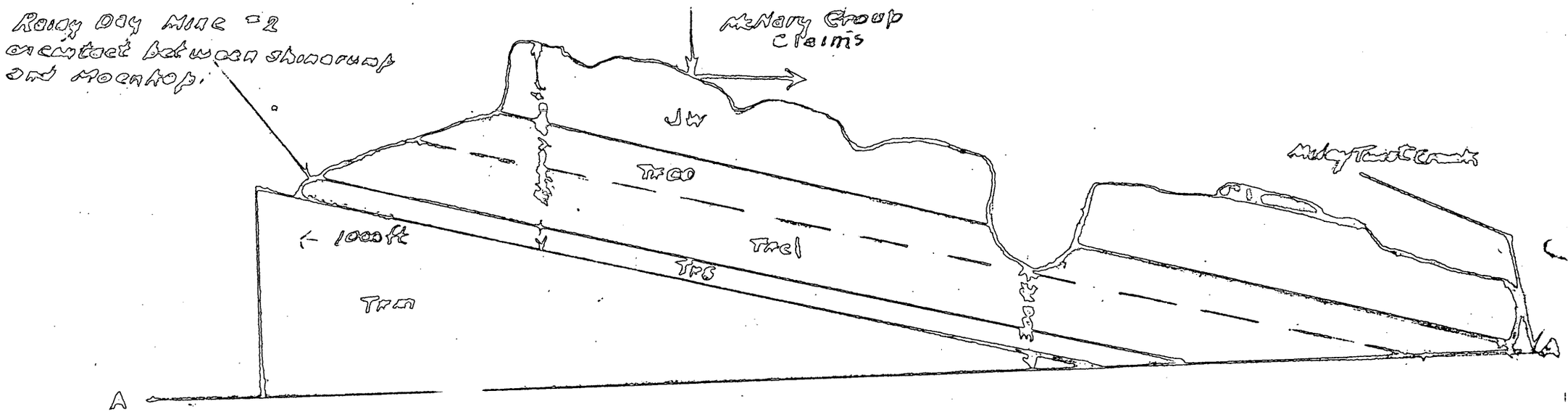
RECORDED January 27 19 55 AT 1 P.M.
AT REQUEST OF City Electric Co., Inc.
Mildred Hunt COUNTY RECORDER

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.
1/24/58

Max A Jernigan

UNITED WESTERN MINERALS COMP...
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.
6/24/55

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.



- JK - Kayenta
- JW - Wingate
- Trcu - Chinle Upper
- Trcl - Chinle Lower
- Trs - Shinarump
- Trm - MOENKOPI.

No Scale

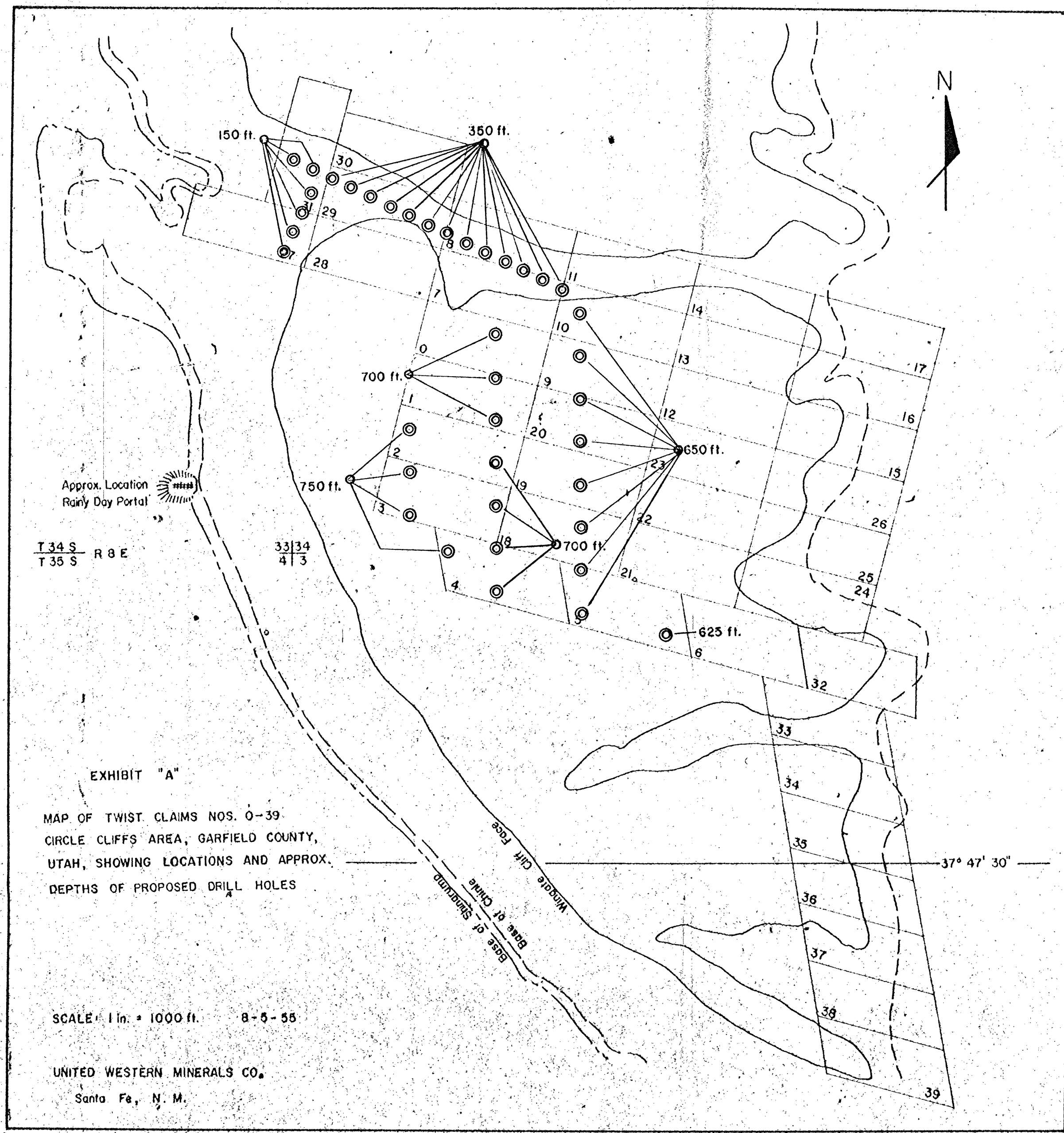


EXHIBIT "A"

MAP OF TWIST CLAIMS NOS. 0-39
CIRCLE CLIFFS AREA, GARFIELD COUNTY,
UTAH, SHOWING LOCATIONS AND APPROX.
DEPTHS OF PROPOSED DRILL HOLES

SCALE: 1 in. = 1000 ft. 8-5-55

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

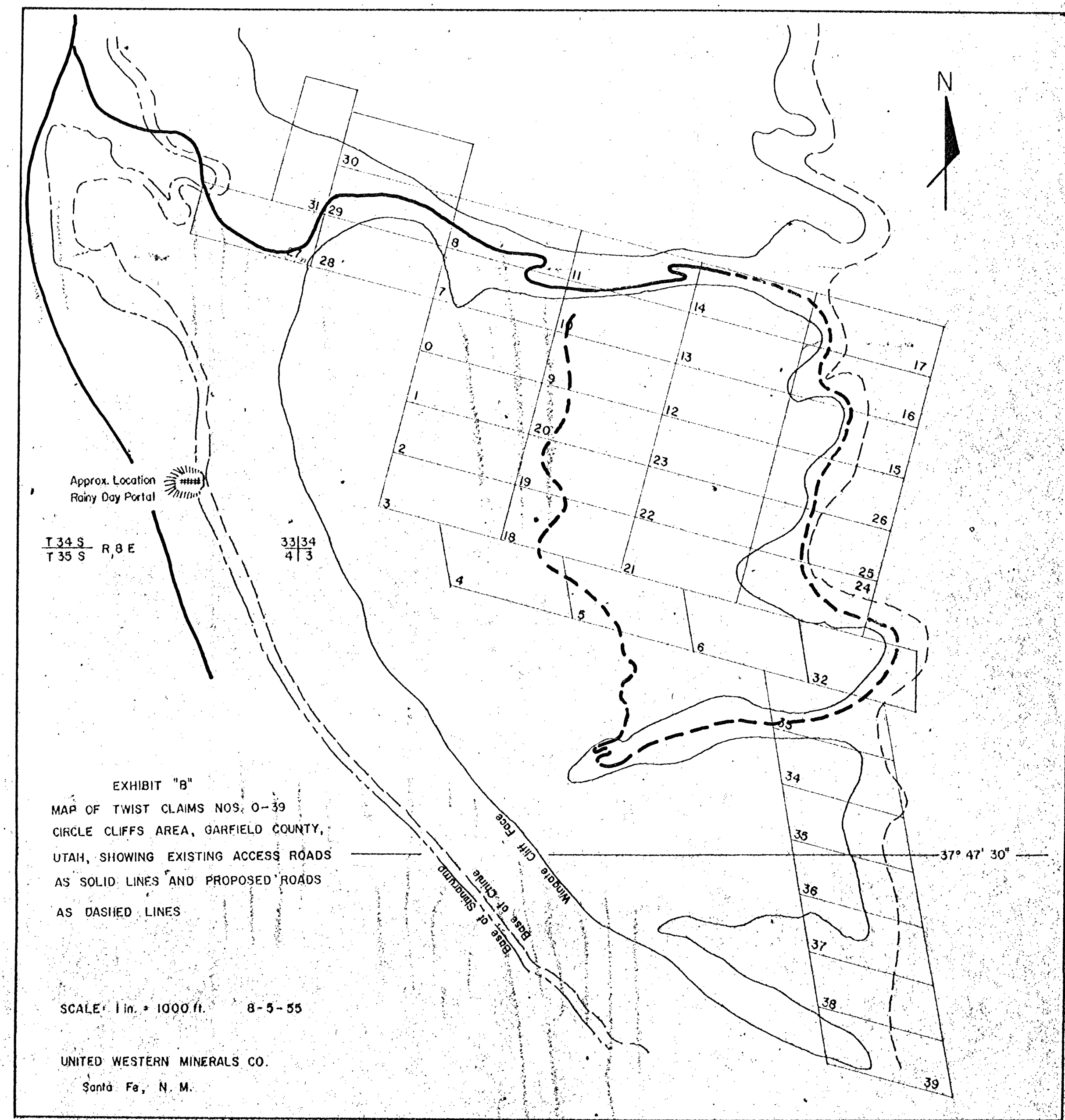


EXHIBIT "B"

MAP OF TWIST CLAIMS NOS. 0-39
CIRCLE CLIFFS AREA, GARFIELD COUNTY,
UTAH, SHOWING EXISTING ACCESS ROADS
AS SOLID LINES AND PROPOSED ROADS
AS DASHED LINES

SCALE: 1 in. = 1000 ft. 8-5-55

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

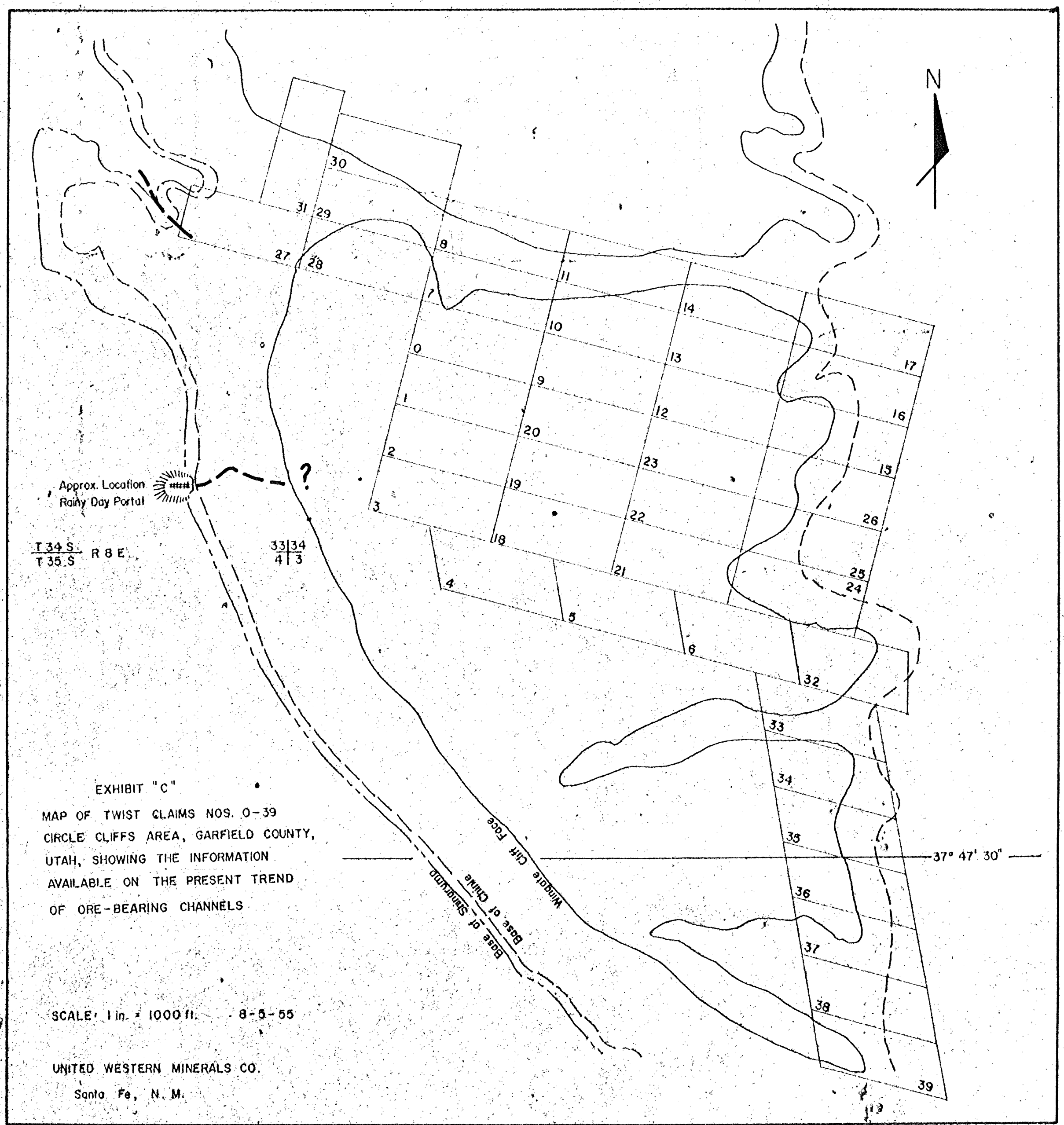
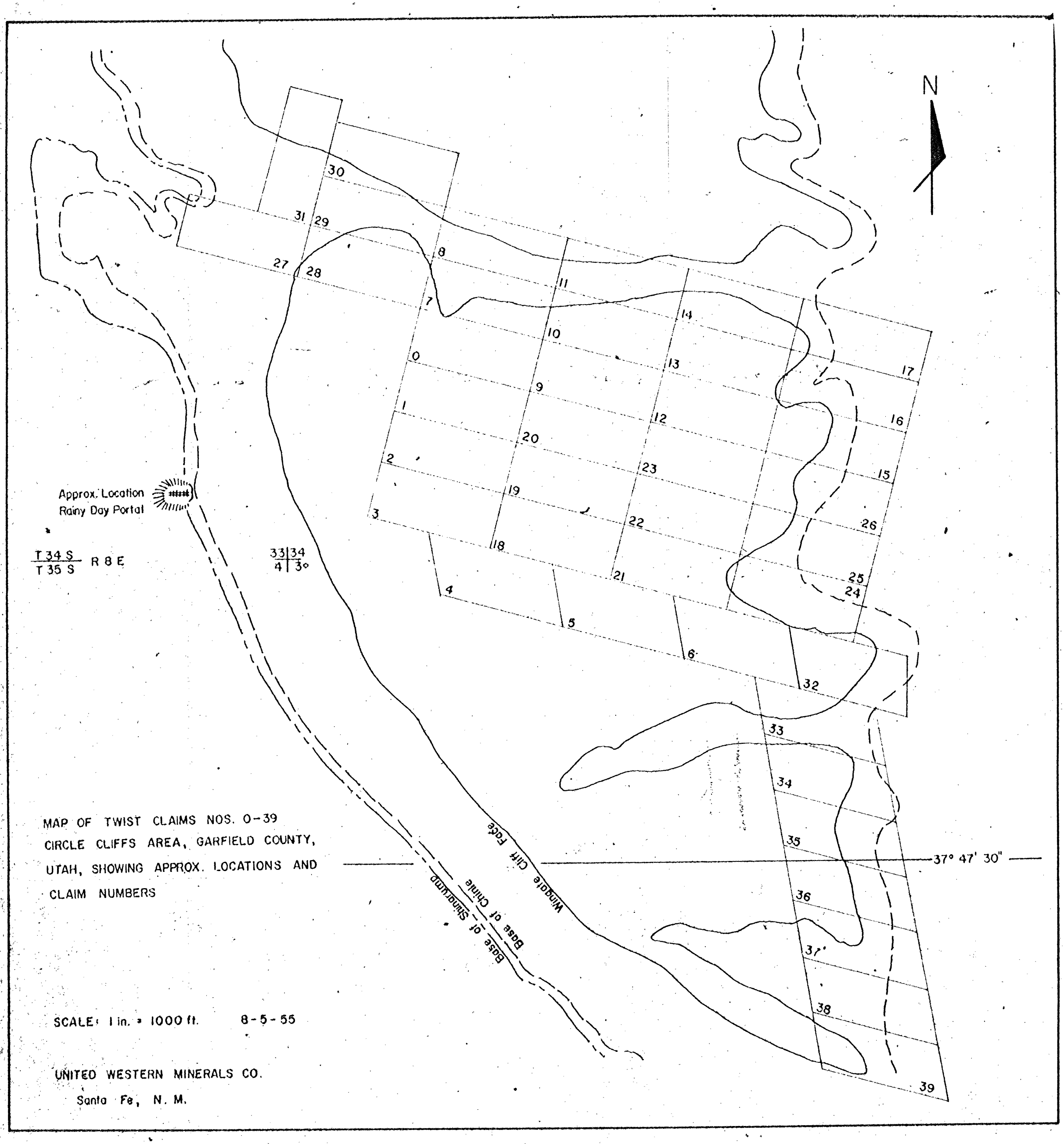


EXHIBIT "C"

MAP OF TWIST CLAIMS NOS. 0-39
CIRCLE CLIFFS AREA, GARFIELD COUNTY,
UTAH, SHOWING THE INFORMATION
AVAILABLE ON THE PRESENT TREND
OF ORE-BEARING CHANNELS

SCALE: 1 in. = 1000 ft. 8-5-55

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.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Approx. Location
Rainy Day Portal
T 34 S
T 35 S
R 8 E
33 34
4 3
Base of Shinarump
Base of Chinle
Windate Cliff Face
37° 47' 30"
MAP OF TWIST CLAIMS NOS. 0-39
CIRCLE CLIFFS AREA, GARFIELD COUNTY,
UTAH, SHOWING APPROX. LOCATIONS AND
CLAIM NUMBERS
SCALE: 1 in. = 1000 ft.
8-5-55
UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

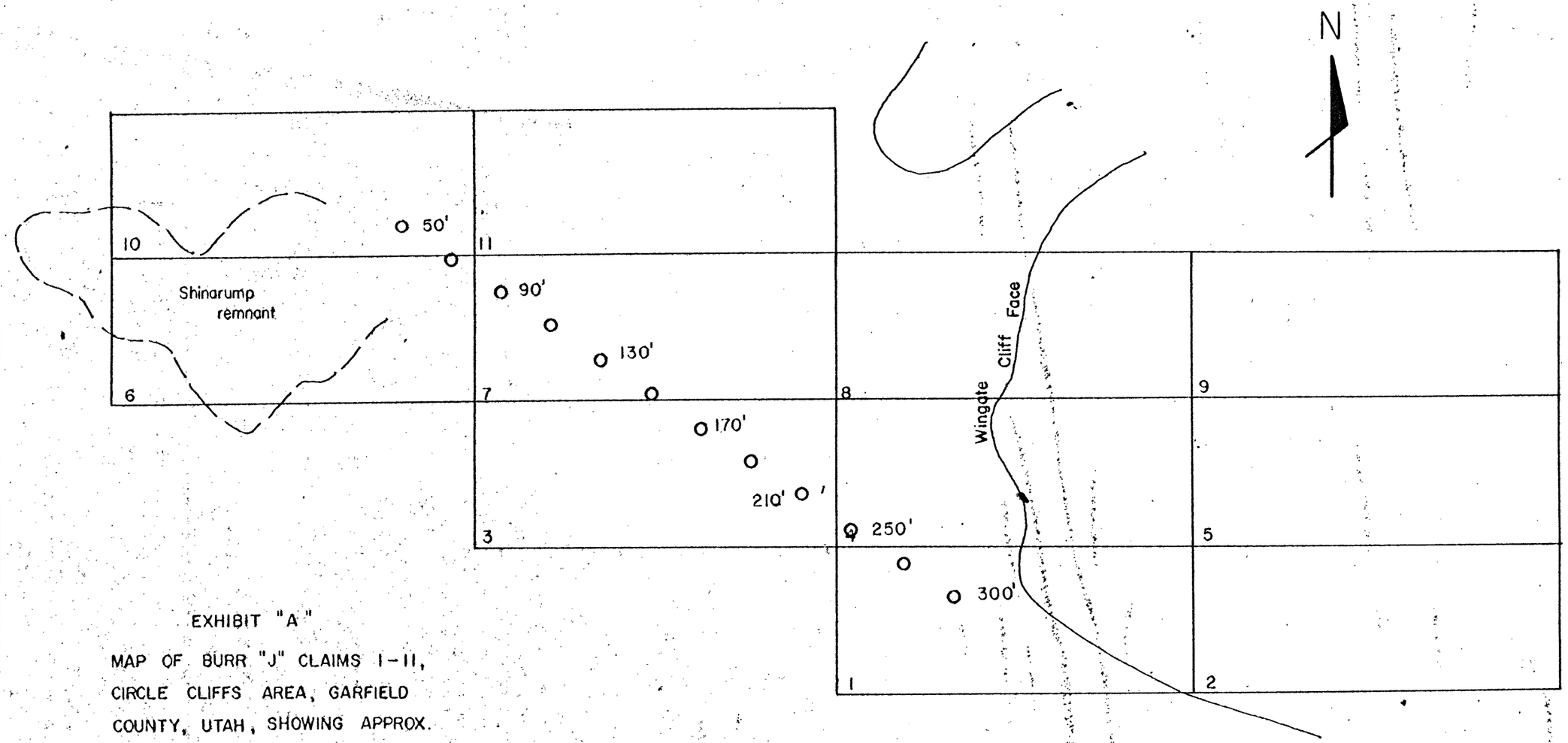

EXHIBIT "A"

MAP OF BURR "J" CLAIMS I-II, CIRCLE CLIFFS AREA, GARFIELD COUNTY, UTAH, SHOWING APPROX. LOCATION AND DEPTHS OF PROPOSED DRILL HOLES

Note: Claims lie in vicinity of Secs. 8, 9, 16 & 17, T.34 S, R 7 E.

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

SCALE: 1 in. = 500 ft. 8-9-55 HR

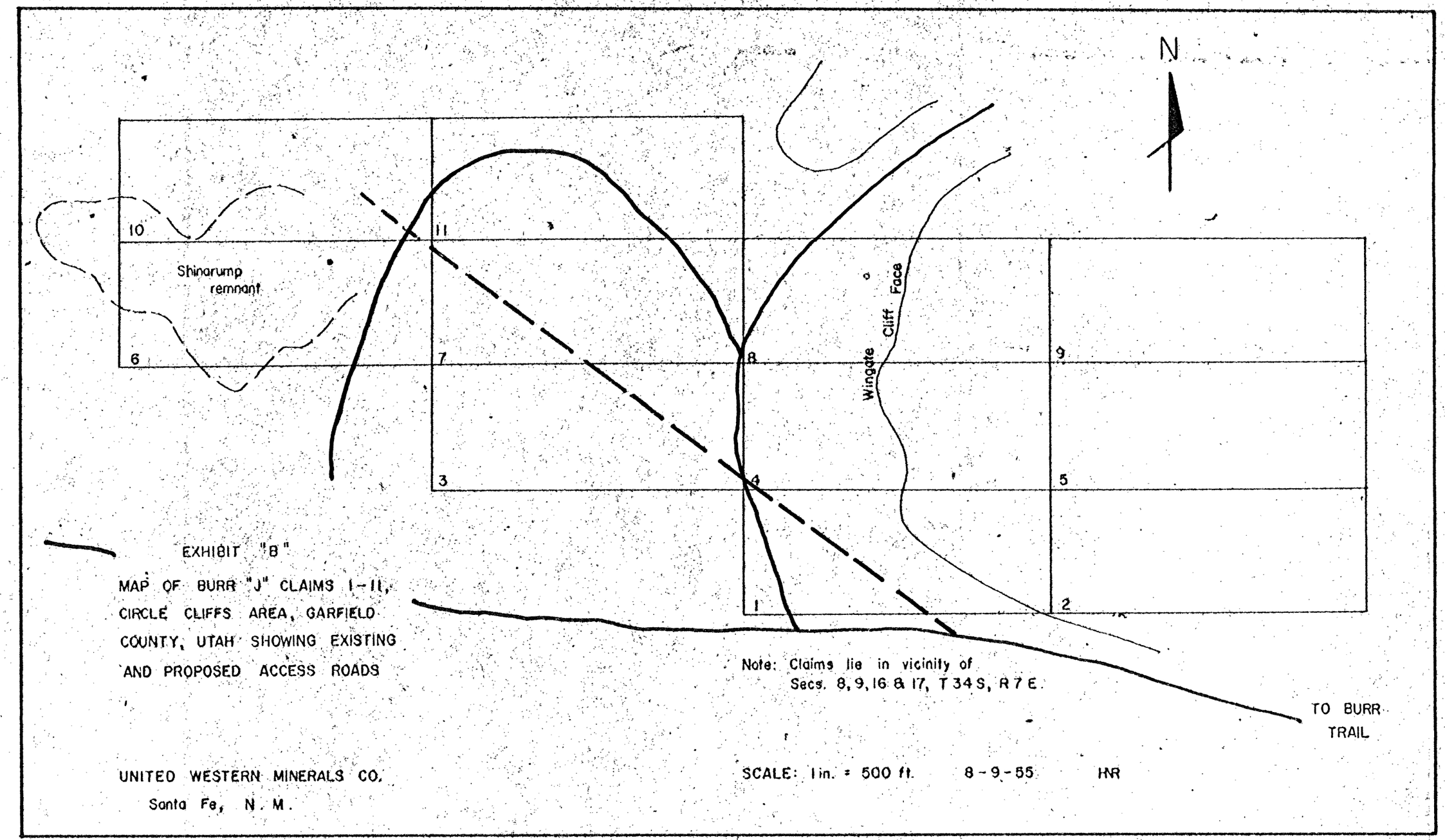

EXHIBIT "B"

MAP OF BURR "J" CLAIMS 1-11, CIRCLE CLIFFS AREA, GARFIELD COUNTY, UTAH SHOWING EXISTING AND PROPOSED ACCESS ROADS

UNITED WESTERN MINERALS CO.
Santa Fe, N. M.

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
ATOMIC ENERGY COMMISSION

COMPILATION OF PHOTOGEOLOGY AND SURFACE GEOLOGY
COLORADO PLATEAU AREA, UNITED STATES

TRACE ELEMENTS MEMORANDUM REPORT 595

EXPLANATION

CRETACEOUS

Upper — Kmm, Kme, Kmb, Kmt, Kmt

Mancos shale
Masuk member, Kmm
Emery sandstone member, Kme
Blue Gate shale member, Kmb
Ferron sandstone member, Kmf
Tununk shale member, Kmt

Lower and Upper — Kd

Dakota sandstone

JURASSIC

Upper — Jmbb, Jms

Morrison formation
Brushy Basin shale member, Jmbb
Salt Wash sandstone member, Jms

Upper — Js

Summerville formation

Middle and Upper — Je

Entrada sandstone

Jc

Carmel formation

Jn

Navajo sandstone

JURASSIC (?) — Jk

Kayenta formation

Jw

Wingate sandstone

TRIASSIC

Upper — Ic, Ic

Chinle formation
Upper unit, Ic
lower unit, Ic

Rs

Shinarump conglomerate

Lower — Rm, Rm, Rm, Rm

Moenkopi formation, Rm
Upper unit, Rmu; middle unit, Rmm; lower unit, Rml; middle and lower units undifferentiated, Rm

PERMIAN

Kaibab limestone and Coconino sandstone, undifferentiated

Approx outline of McNary Group Claims

X Drill Areas

Contact
(Can be accurately located within 30 feet horizontally)

Contact
(Can be approximately located within 30 to 200 feet horizontally)

Contact
(Cannot be located accurately; probable error greater than 200 feet)

Probable or doubtful contact

40 Claims Twist a Chro #39

Fault
(U, upthrown side, D, downthrown side, questioned where inferred)

Anticline
Showing trace of axial plane and direction of plunge
(Dashed where approximately located)

Strike and dip of beds
(Based on photo-interpretation)

Horizontal beds

Conspicuous resistant bed within a formation
(May be traceable only locally)

Strike of approximately vertical joints
(Based on photo-interpretation)

Dry hole

Secondary road

UNITED WESTERN MINERALS COMPANY
(a Delaware Corporation)
136 W. Palace, Santa Fe, N. Mex.

Planimetric base map compiled by the Special Maps Branch of the U.S. Geological Survey.

This map is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey standards and nomenclature.

4	3	2	1
5	6	7	8
12	11	10	9
13	14	15	16

CIRCLE CLIFFS QUADRANGLE

TRUE NORTH
MAGNETIC NORTH
15°30'

PHOTOGEOLOGIC MAP
CIRCLE CLIFFS-8
GARFIELD COUNTY, UTAH

PHOTOGEOLOGY BY J. M. SCOTT
PHOTOGEOLOGY UNIT, ALASKAN GEOLOGY BRANCH
SCALE 1:24,000
0 — 1 MILE
MARCH 1953

Roads are classified on this map based on the ease with which they may be used and guided transportation by four-wheel-drive vehicles. Secondary roads are traversable by two-wheel-drive vehicles; trails are not traversable by four-wheel-drive vehicles except locally. When other information is lacking, roads are classified by their appearance on aerial photographs.

Stratigraphic column modified from U.S. Geol. Survey Oil and Gas Inv. Map OM 131, 1952; U.S. Geol. Survey Prof. Paper 164, 1931; and Am. Assoc. Petroleum Geologists Bull., vol. 6, no. 3, May-June, 1922.

United WESTERN Minerals Company Properties.

U 300 SE

Note: On this map the Chinle formation is divided into two units. The upper, an even-toned "shaly" unit, is divided from the lower "mottled" unit by a break in slope and tone.

In the southern part of the Circle Cliffs area three units of the Moenkopi formation are recognizable on aerial photographs, the relationship of these units to those mapped in the field is not certain. These three units can be differentiated only in the southern part of the quadrangle.