STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

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

DATE:

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

SUBJECT: Final Field Team Report, DMEA Docket 3211 (Uranium), J. L. Byers, et al, applicants, Dolores, Colorado; Broken Thumb claims, Sec. 19, T. 41 N., R. 17 W., Dolores, Colorado

The application for Government assistance to explore the property identified in the subject above was reviewed and denied in Region 4. I have reviewed the Field Team Report concerning the results of the exploration of that property.

Examination by members of the Field Team showed that only small masses of mineralized rock of low grade ore were exposed at the outcrop of a sandstone bed in the lower part of the Salt Wash member of the Morrison formation. No geologic relations were observed to suggest the likelihood of finding high-grade rock. For these reasons the Field Team concluded that the property does not warrant DMEA assistance.

I concur with the conclusions of the Field Team and with its action in denying the application.

Arthur P. Butler, Jr.

Copies to: E. Wm. Ellis (2)

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

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

Final Field Team Report, DMEA Docket 3211 (Uranium), J. L. Byers, et al, applicants, Dolores, Colorado; Broken Thumb claims, Sec. 19, T. 41 N., R. 17 W., Dolores, Colorado

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Final Field Team Report, DMEA Docket 3211 (Uranium), J. L. Byers, et al, applicants, Dolores, Colorado; Broken Thumb claims, Sec. 19, T. 41 N., R. 17 W., Dolores, Colorado

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I concur with the conclusions of the Field Team and with its action in denying the application.

Copies to: E. Wm. Ellis (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

January 21, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Engineering Report of Examination - DMEA Docket 3211 (Uranium), James L. Byers et al., Dolores County, Colorado.

Enclosed are eleven copies of the engineering report of examination on the subject docket.

The applicants requested $25,000.00 for road construction, rim stripping, and underground drifting. Government participation would have been $18,750.00.

The engineer examiner found the exposures of ore to be consistently small and very low in grade and he doubts that additional exploration would result in the discovery of a significant amount of ore. He recommends that the application be denied.

We concur in this recommendation.

W H King
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-1-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
January 14, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3211, Broken Thumb claims (Uranium), James L. Byers, et al., Dolores County, Colorado

Transmitted herewith are the original and ten copies of the Summary, Conclusions and Recommendations by R. R. McLellan, Bureau of Mines, and Daniel R. Shaw, Geological Survey, and of McLellan's engineering report on the subject docket.

McLellan concludes that although the area covering the requested exploration is relatively undeveloped, the surface exposures uncovered so far on both sides of the canyon indicate the amount and grade of ore in any possible small deposits discovered would be unimportant and it is unlikely that they could be mined profitably. He recommends denial of the application.

I approve his conclusions and recommendations.

The brochure transmitted with your memorandum of November 10, 1953, instructing us to prepare a suitable report, is also transmitted herewith.

W. M. Traver

W. M. Traver

enclosures

WMT/le
cc 10
Gen
Chron

Reviewed by
DMEA OPERATING COMMITTEE
2-1-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

January 18, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3211, Broken Thumb claims, Dolores County, Colorado

Enclosed are 11 copies of a geologic report by D. R. Shawe of the U. S. Geological Survey covering the above docket.

It has been recommended that the application be denied.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

Reviewed by
DMEA OPERATING COMMITTEE
2-1-54
(date)

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

January 15, 1954

Memorandum

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

From: R. P. Fischer
Colorado Plateau District Office

Subject: DMEA 3211, Broken Thumb claims, Dolores County, Colorado

Transmitted herewith are eleven copies of a geologic report on the Broken Thumb claims, Dolores County, Colo. The owners applied for assistance for road construction, rim stripping, and drifting to explore for uranium ore. The cost estimate is about $25,000.

The attached report was prepared by D. R. Shawe and is based on a joint field examination on December 3, 1953, in company with R. R. McLellan, Bureau of Mines, and two of the applicants.

Only small masses of mineralized rock are exposed at the outcrop, and these are of low grade. Furthermore, no geologic relations were observed to suggest the likelihood of finding larger bodies of higher grade. For these reasons, it is recommended that the application be denied. I concur.

R. P. Fischer

R. P. Fischer
Acting District Supervisor

Enclosures 11

RPF/mlr

Reviewed by
DMEA OPERATING COMMITTEE

2-1-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Broken Thumb claims

DMEA 3211. James L. Byers, et al.

Dolores County, Colorado

Uranium

Russell R. McLellan, Mining Engineer
Bureau of Mines

Daniel R. Shaw, Geologist
Geological Survey

December 10, 1953

Reviewed by
DMEA OPERATING COMMITTEE

2-1-54
(date)

DMRA 3211

BROKEN THUMB CLAIMS
JAMES L. MYERS, ET AL.
DOLORES COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By Russell R. McLellan
Mining Engineer
Bureau of Mines

and

Daniel R. Shaw
Geologist
Geological Survey

DMEA 3311

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By Russell H. McLellan and Daniel R. Shaw

J. L. Byers and E. B. Byers of Dolores, Colo., W. W. Byers of Mancos, Colo., and J. N. Nelson of Durango, Colo. applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the Broken Thumb claims, Nos. 1 through 10, located along the Dolores River 10.4 miles east of Dove Creek, Dolores County, Colo. The applicants proposed spending approximately $25,000.00 for road construction, rim stripping, and underground drifting. Government participation amounts to 75 percent, or $18,750.00.

The claims were inspected by a Region IV Bureau of Mines and Geological Survey examining team on December 3, 1953, in company with W. W. and E. B. Byers, representing the applicants. It was concluded that the applicants' estimate of costs is excessive and that the claims, though relatively unexplored and undeveloped, show little or no promise of containing a significant deposit of uranium ore.

On the Broken Thumb claims, uranium minerals have been found in the lower sandstone bed of the Salt Wash sandstone member of the Jurassic Morrison formation. The uranium mineral-bearing sandstone bed of the Salt Wash member in the vicinity of the claims is approximately 30 to 40 feet thick and contains numerous thin mudstone splits. The uranium minerals are near the base of the sandstone bed.

Uranium minerals have been found at the outcrop on the Broken Thumb No. 1, No. 2, and No. 3 claims. The observed minerals occur in sandstone and mudstone and form irregular masses a few inches to 2 feet thick and a few feet to as much as 10 feet long. On the basis of visual estimate as well as scintillometer readings, all of the observed uranium-bearing rock appears to be low grade, perhaps too low to be of ore grade. Furthermore, the mineralized masses are so small and scattered that they can be mined only at high cost. No geologic relations were observed to suggest that larger or higher grade masses are likely to be found.

It is recommended that the application be denied.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3211, Broken Thumb claims, Nos. 1-10

Slick Rock District

Dolores County, Colorado

Uranium

Geologic report

Daniel R. Shawe, Geologist
U.S. Geological Survey

January 15, 1954

Reviewed by
LMSA OPERATING COMMITTEE
2-1-54
(date)

DMEA 3211

BROKEN THUMB CLAIMS, NOS. 1-10
SLICK ROCK DISTRICT, DOLORES COUNTY, COLORADO

INTRODUCTION AND SUMMARY

Messrs. J. L. Byers, E. B. Byers, W. W. Byers, and J. H. Nelson, owners of the Broken Thumb claims, Nos. 1-10, have applied (Docket 3211) to the Defense Minerals Exploration Administration for a loan to explore for uranium on the Broken Thumb claims, Nos. 1-10, Slick Rock District, Dolores County, Colo. (fig. 1).

The claims were examined on December 3, 1953, in company with R. R. McLellan, engineer, U. S. Bureau of Mines, and W. W. and E. B. Byers, representing the applicants.

The applicants proposed spending approximately $25,000.00 for road construction, rim stripping, and underground drifting.

As a result of the field examination, it was concluded that the applicant's estimate of costs is excessive and that the claims, though relatively unexplored and undeveloped, show little or no promise of containing a significant deposit of uranium ore. It is recommended that the application be denied.

GEOLOGY

On the Broken Thumb claims, (specifically the Broken Thumb claims Nos. 1, 2, and 3) uranium minerals have been found in the lower sandstone bed of the Salt Wash sandstone member of the Jurassic Morrison formation. The uranium mineral-bearing sandstone bed of the Salt Wash member in the vicinity of the claims is approximately 30 to 40 feet thick and contains numerous thin mudstone splits. The uranium minerals are near the base of the sandstone bed.

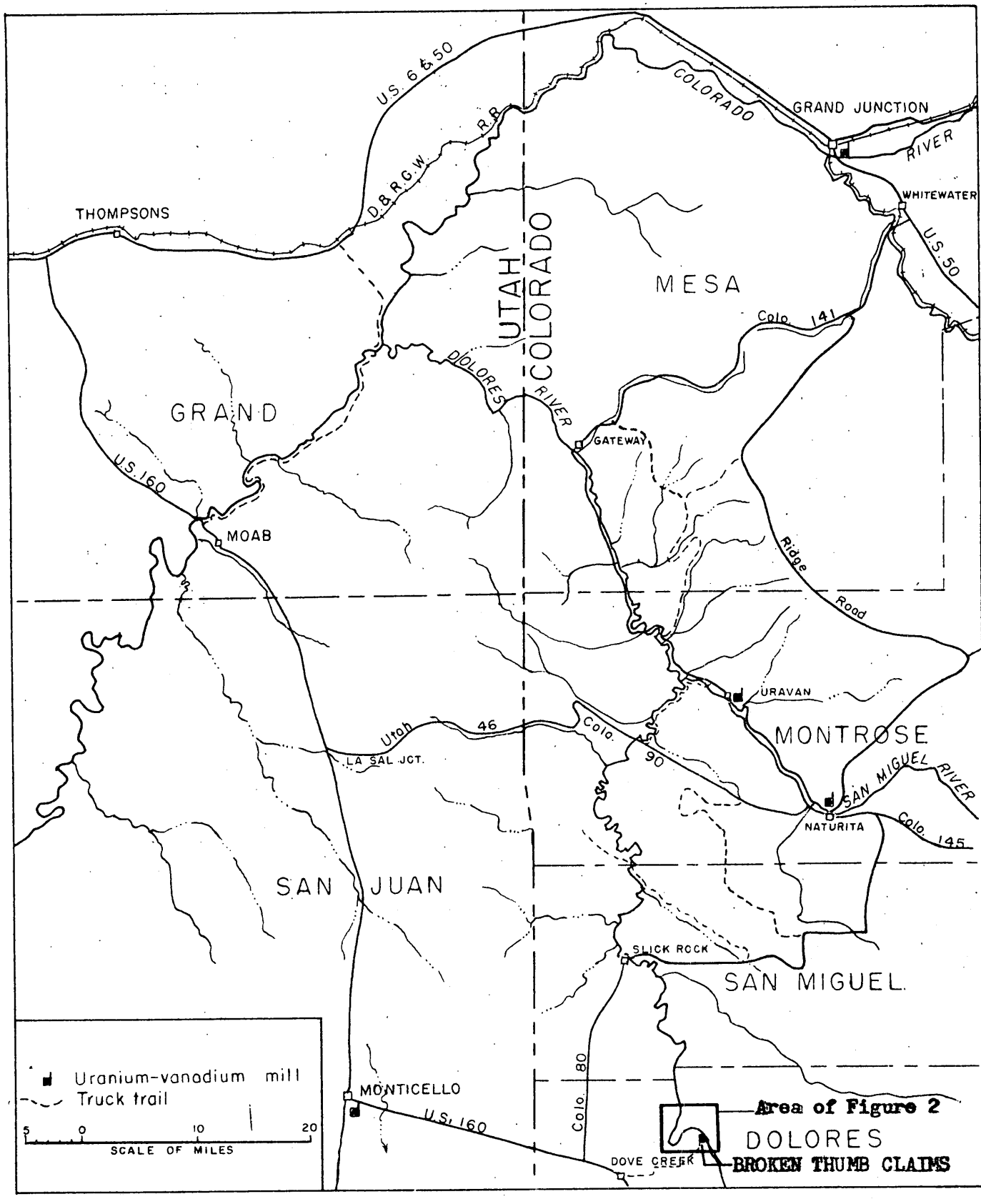

Figure 1. MAP SHOWING LOCATION OF BROKEN THUMB CLAIMS, SLICK ROCK DISTRICT, DOLORES COUNTY, COLORADO.

At the Broken Thumb No. 1 claim, radioactivity of seams up to 2" thick and 1 foot long of shale in sandstone is not more than 3 or 4 times background (background 0.015 mr/hr on a scintillometer type counter). At the Broken Thumb No. 2 claim, gray vanadium mineral shows for about 5 feet along the exposed bedding of the sandstone, and is 2 feet in maximum thickness. A few pods of carnotite-mineralized carbonaceous rock within the vanadium-mineralized sandstone (radio-activity slightly above background) have radioactivity of .15 mr/hr. At the Broken Thumb No. 3 claim, one exposure shows gray vanadium mineral in sandstone for about 10 feet along bedding, and about 1 foot in maximum thickness (radio-activity slightly above background). This mineralized rock also contains a few small nodules of carnotite-mineralized carbonaceous sandstone with radioactivity about .15 mr/hr. At another exposure on the Broken Thumb No. 3 claim, a small pod (about 4" by 12") of carnotite-mineralized carbonaceous rock has radioactivity of .4 mr/hr.

Scattered carbonaceous material was observed in the uranium mineral-bearing sandstone; there is no extensive gray-green mudstone associated with the sandstone.

North of the Broken Thumb claims, a mine in the Salt Wash member of the Morrison formation (fig. 2) has had a reported production of 15 tons of U-V ore (grade not known).

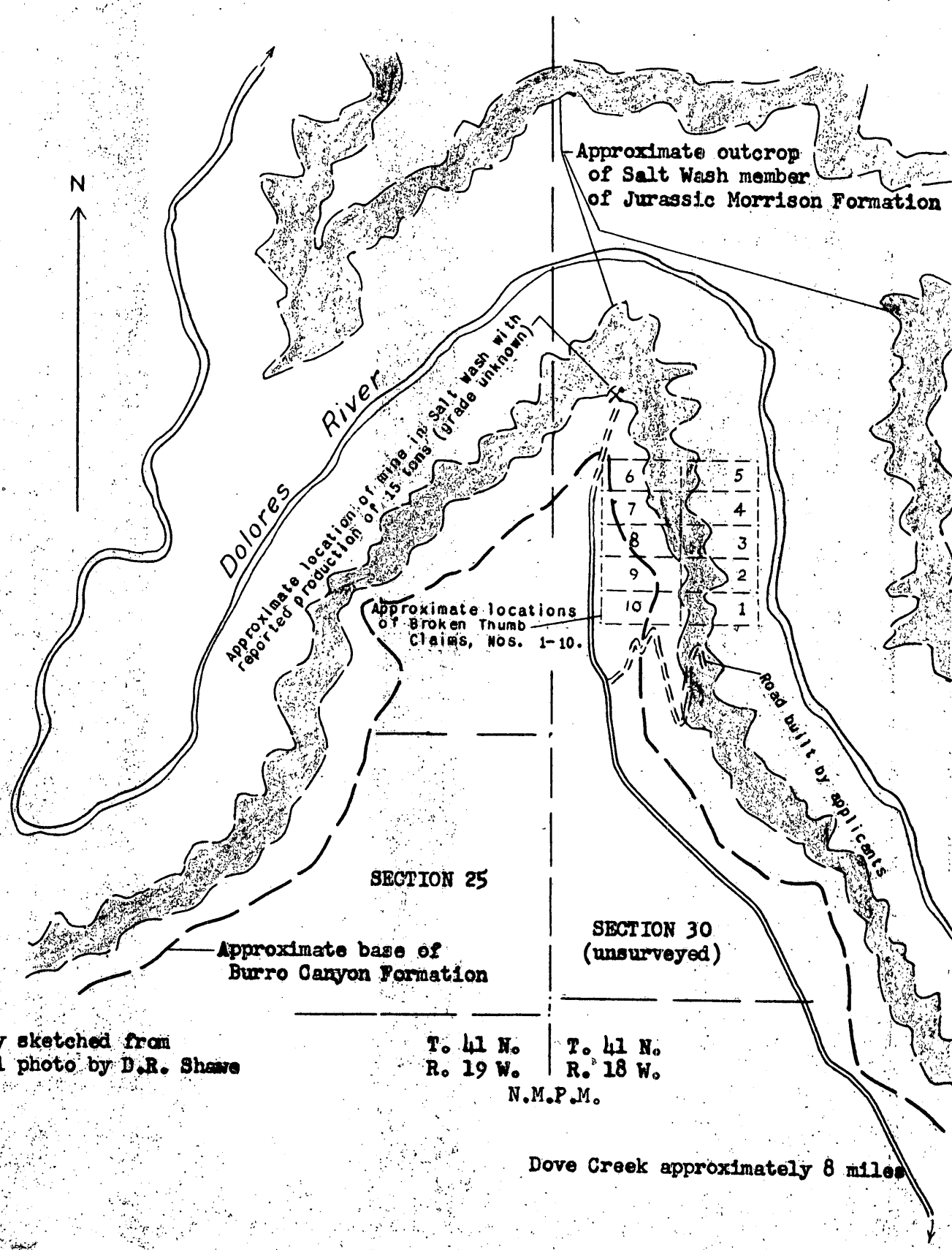

Figure 2. SIMPLIFIED GEOLOGIC MAP OF BROKEN THUMB CLAIMS, AND VICINITY.

2500 0 7500 FEET

Approximate scale

CONCLUSIONS AND RECOMMENDATIONS

Mineralized showings on the Broken Thumb claims are not of ore grade, and enclosing rock lacks ore favorability criteria. Production from the only mine in the immediate area has been negligible. These facts suggest that there is little possibility of the discovery of significant deposits of uranium ore with further exploration, and it is recommended that the application be denied.

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

Engineering Report

By Russell R. McLellan
Mining Engineer
Bureau of Mines

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. MYERS, ET AL.
DOLORES COUNTY, COLORADO

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ILLUSTRATIONS

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1. Location map, Broken Thumb claims, J. L. Myers, Dolores County, Colo.	2

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

ENGINEERING REPORT

by

Russell R. McLellan

INTRODUCTION

James L. Byers and E. B. Byers of Dolores, Colo., W. W. Byers of Mancos, Colo., and J. H. Nelson of Durango, Colo. have applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the Broken Thumb claims, Nos. 1 through 10, Dolores County, Colo. The applicants propose to spend $25,000.00 for drifting and for combined road building and rim stripping along the ore horizon. The claims were inspected on December 3, 1953 by a Region IV Bureau of Mines, Geological Survey examining team, accompanied by E. B. and W. W. Byers.

It was concluded that although the area is relatively unexplored and undeveloped, the indications of uranium mineralization on the Broken Thumb claims are so weak that there is little reason to believe that a significant discovery would result from the proposed exploration. The application is recommended for denial.

ACKNOWLEDGMENTS

W. W. and E. B. Byers guided the examining team over the property and provided all necessary general information. Daniel R. Shaw represented the Geological Survey on the examining team.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The claims are along the west wall of the Dolores River Canyon, 10.4 miles by dirt road east of Dove Creek, Dolores County, Colo. They are reported to be in sec. 19, T. 41 N., R. 17 W., New Mexico principal meridian (fig. 1).

The most favorable exposures of uranium mineralization are in a sandstone rim that is inaccessible from below and is accessible from above only by scaling precipitous slopes and several cliffs formed by sandstone beds of the Morrison formation. The applicants have completed 1.4 miles of steep access road into the canyon but lack about 0.5 mile to reach the most favorable exposures.

Supplies and equipment are available at Dove Creek or at Cortez, Colo., distances of 10-1/2 and 51 miles respectively from the claims. Manpower is available in the area, and living accommodations may be obtained in Dove Creek. Electricity is not available on the claims, and water for mining purposes will have to be hauled a distance of approximately 2 miles.

Snow conditions probably would interrupt mining operations from December through March. The spring thaw and rains will hinder transportation considerably during April and May. Milling facilities are available at Monticello, Utah--a distance of 35 miles.

HISTORY AND PRODUCTION

The claims were located during June of 1953 by the Byers brothers. A limited amount of hand work has been done along the ore horizon but has resulted in no production.

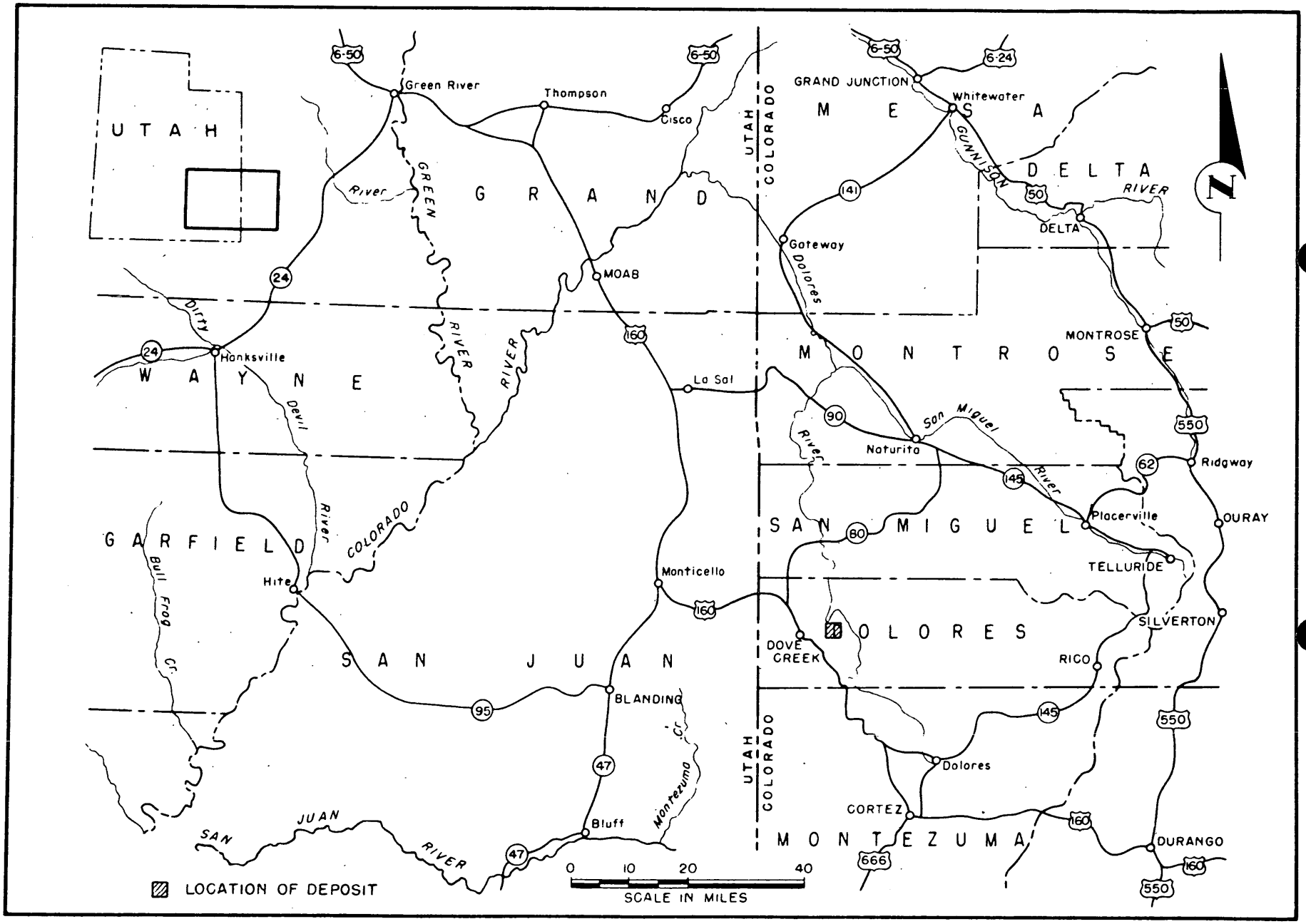

FIGURE 1. - LOCATION MAP, BROKEN THUMB CLAIMS, J. L. BYERS, DOLORES COUNTY, COLO. (DMEA 3211)

OWNERSHIP

The ten Broken Thumb claims are owned by the applicants by right of location, and are recorded in book 58, pages 279, 280, 281, 282, and 283, Dolores County Courthouse, Dove Creek, Colo.

DESCRIPTION OF THE DEPOSIT

The main ore horizon is a sandstone bed near the base of the Salt Wash member of the Morrison formation. The Entrada sandstone is visible less than 50 feet below. Uranium mineralization was observed in four or five shallow cuts on the Broken Thumb claims, Nos. 1, 2, and 3. All of the cuts showed weak uranium and vanadium mineralization in a zone ranging from 1 inch to 15 inches in thickness. The maximum thickness was observed in two of the cuts that appeared to intersect small rolls. High-grade material was noted only in several small fragments of replaced wood, the largest of which did not exceed 3 inches in diameter. None of the cuts contained material of sufficient quantity and grade to be produced at a profit.

The applicants submitted the results of three samples containing from 0.52 percent to 1.06 percent U_3O_8, and from 5.06 percent to 8.45 percent V_2O_5. During the examination it was observed that these samples were selected from very limited spots containing the most favorable mineralization.

MINEABLE ORE RESERVES

Development work has not progressed sufficiently to establish any type of ore reserve. The material observed during the examination could not be classified as ore.

PRESENT STATUS

Exploration and Development

Exploration and development to date consists of four or five shallow cuts along the ore horizon. Blasting was necessary on no more than two of the cuts in which a few holes were drilled by hand. As previously mentioned, about 1.4 miles of road have been completed with about 0.5 mile remaining to be completed to give access to the claims.

Mining and Milling Equipment and Other Facilities

The applicants own, and have available for use, two jackhammers with hoses; a water tank; one International tractor; one Ford tractor; and one trailer house.

There are no buildings on the property and any ore produced would have to be transported by truck to Monticello, Utah for treatment--a distance of 35 miles.

PROJECT PROPOSALS, WITH COSTS

The applicants submitted no specific plan of exploration but indicated that underground drifting and rim stripping would be favored. Diamond drilling will be extremely costly in the area as the ore horizon probably is in excess of 500 feet vertically below the rim of the canyon. To drill from lower sites along the precipitous wall of the canyon would entail considerable road work at a prohibitive cost. Since the claims obviously would not qualify for Defense Minerals Exploration Administration assistance, no attempt was made in the field to establish a definite exploration program, however, the applicants submitted the

following estimate of costs for an undetermined footage of drifting and for about 1 mile of road building and rim stripping:

Labor and Supervision:	
Supervision at $2.00 per hour, and 3 miners at $1.75 per hour, plus Insurance, etc.,	$ 9,350.00
Operating Materials and Supplies:	
Drill steel and bits	150.00
Power, water, powder	1,000.00
Fuel oil and gas	1,000.00
Operating Equipment:	
Payments on Caterpillar tractor	6,500.00
Purchase of compressor and drill	4,000.00
Purchase of truck to haul supplies	2,000.00
Total	$25,000.00
Government participation 75 percent, or	$18,750.00

A logical program of exploration for the property would be to complete the road to the ore horizon, strip the overburden from the unexposed portions of the horizon, and drift on any favorable zones of mineralization. The overall cost for road construction and rim stripping should not exceed $4,000.00. A total of 200 feet of short drifts at $30.00 overall cost per foot should be sufficient to explore favorable exposures of mineralization. The cost of the entire project should not exceed $10,000.00; however, the possibility of making a significant discovery is so remote that Government participation is not recommended. The applicants apparently will continue with the road work and rim stripping regardless of the final decision concerning their application.

CONCLUSIONS

The Dolores Canyon area east of Dove Creek is relatively undeveloped but surface exposures of uranium mineralization, thus far encountered on both sides of the canyon, indicate that the amount and grade of ore for any single deposit probably will be low.

Uranium mineralization thus far encountered on the Broken Thumb claims occurs in small isolated rolls or lenses that cannot be mined profitably. Since the exposures appear to be consistently small and very low in grade, it is doubtful that additional exploration will result in the discovery of a significant deposit of ore.

RECOMMENDATIONS

It is recommended that the application be denied.

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

COPY

224 New Customhouse
Denver 2, Colorado

January 21, 1954.

Mr. James L. Byers, et al.
Dolores
Colorado

Re: Docket No. DMEA-3211

Gentlemen:

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

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

A careful study of your property and data available to this agency, reveals that the probability of disclosing mineable reserves of Uranium is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

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

/s/ E. N. Harshman for
A. H. Koschmann
Field Team, Region IV

HMC:cwm

cc: Docket
Administrator, DMEA
WMTraver
RPFischer
ERGordon
AHKoschmann (2)
Chron.

Reviewed by
DMEA OPERATING COMMITTEE

2-1-54
(date)

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

COPY

224 New Customhouse
Denver 2, Colorado

January 20, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3211 (Uranium), James L. Byers, et al., Dolores County, Colorado.

Enclosed are four copies of the report of examination on the subject property, a copy of the letter of denial to the applicants, and two copies of Form 3b.

/s/ W. H. King

/s/ E. N. Harshman
for A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-1-54
(date)

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

224 New Customhouse
Denver 2, Colorado

January 21, 1954.

Mr. James L. Byers, et al.
Dolores
Colorado

Re: Docket No. DMEA-3211

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Very truly yours,

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

HMC:cwm

cc: Docket
Administrator, DMEA
WMTraver
RPFischer
ERGordon
AHKoschmann (2)
Chron.

E. N. Koschmann
for A. H. Koschmann
Field Team, Region IV

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

224 New Customhouse
Denver 2, Colorado

January 20, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
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W H King
W. H. King

E. M. Hawkinson
for A. H. Koschmann

Enclosures

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

224 New Customhouse
Denver 2, Colorado

January 20, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

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W. H. King

W. H. King

E. H. Koschmann

for A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

January 21, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Engineering Report of Examination - DMEA Docket 3211 (Uranium), James L. Byers et al., Dolores County, Colorado.

Enclosed are eleven copies of the engineering report of examination on the subject docket.

The applicants requested $25,000.00 for road construction, rim stripping, and underground drifting. Government participation would have been $18,750.00.

The engineer examiner found the exposures of ore to be consistently small and very low in grade and he doubts that additional exploration would result in the discovery of a significant amount of ore. He recommends that the application be denied.

We concur in this recommendation.

W H King
W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
January 14, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3211, Broken Thumb claims (Uranium), James L. Byers, et al., Dolores County, Colorado

Transmitted herewith are the original and ten copies of the Summary, Conclusions and Recommendations by R. R. McLellan, Bureau of Mines, and Daniel R. Shaw, Geological Survey, and of McLellan's engineering report on the subject docket.

McLellan concludes that although the area covering the requested exploration is relatively undeveloped, the surface exposures uncovered so far on both sides of the canyon indicate the amount and grade of ore in any possible small deposits discovered would be unimportant and it is unlikely that they could be mined profitably. He recommends denial of the application.

I approve his conclusions and recommendations.

The brochure transmitted with your memorandum of November 10, 1953, instructing us to prepare a suitable report, is also transmitted herewith.

W. M. Traver

W. M. Traver

enclosures

WMT/le
cc 10
Gen
Chron

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

January 18, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3211, Broken Thumb claims, Dolores County, Colorado

Enclosed are 11 copies of a geologic report by D. R. Shawe of the U. S. Geological Survey covering the above docket.

It has been recommended that the application be denied.

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

Enclosures (11)

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

January 15, 1954

Memorandum

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

From: R. P. Fischer
Colorado Plateau District Office

Subject: DMEA 3211, Broken Thumb claims, Dolores County, Colorado

Transmitted herewith are eleven copies of a geologic report on the Broken Thumb claims, Dolores County, Colo. The owners applied for assistance for road construction, rim stripping, and drifting to explore for uranium ore. The cost estimate is about $25,000.

The attached report was prepared by D. R. Shawe and is based on a joint field examination on December 3, 1953, in company with R. R. McLellan, Bureau of Mines, and two of the applicants.

Only small masses of mineralized rock are exposed at the outcrop, and these are of low grade. Furthermore, no geologic relations were observed to suggest the likelihood of finding larger bodies of higher grade. For these reasons, it is recommended that the application be denied. I concur.

R. P. Fischer

R. P. Fischer
Acting District Supervisor

Enclosures 11

RPF/mlr

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Broken Thumb claims

DMEA 3211, James L. Byers, et al.

Dolores County, Colorado

Uranium

Russell R. McLellan, Mining Engineer
Bureau of Mines

Daniel R. Shaw, Geologist
Geological Survey

December 10, 1953

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By Russell R. McLellan
Mining Engineer
Bureau of Mines

and

Daniel R. Shaw
Geologist
Geological Survey

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By Russell R. McLellan and Daniel R. Shaw

J. L. Byers and E. B. Byers of Dolores, Colo., W. W. Byers of Mancos, Colo., and J. H. Nelson of Durango, Colo. applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the Broken Thumb claims, Nos. 1 through 10, located along the Dolores River 10.4 miles east of Dove Creek, Dolores County, Colo. The applicants proposed spending approximately $25,000.00 for road construction, rim stripping, and underground drifting. Government participation amounts to 75 percent, or $18,750.00.

The claims were inspected by a Region IV Bureau of Mines and Geological Survey examining team on December 3, 1953, in company with W. W. and E. B. Byers, representing the applicants. It was concluded that the applicants' estimate of costs is excessive and that the claims, though relatively unexplored and undeveloped, show little or no promise of containing a significant deposit of uranium ore.

On the Broken Thumb claims, uranium minerals have been found in the lower sandstone bed of the Salt Wash sandstone member of the Jurassic Morrison formation. The uranium mineral-bearing sandstone bed of the Salt Wash member in the vicinity of the claims is approximately 30 to 40 feet thick and contains numerous thin mudstone splits. The uranium minerals are near the base of the sandstone bed.

Uranium minerals have been found at the outcrop on the Broken Thumb No. 1, No. 2, and No. 3 claims. The observed minerals occur in sandstone and mudstone and form irregular masses a few inches to 2 feet thick and a few feet to as much as 10 feet long. On the basis of visual estimate as well as scintillometer readings, all of the observed uranium-bearing rock appears to be low grade, perhaps too low to be of ore grade. Furthermore, the mineralized masses are so small and scattered that they can be mined only at high cost. No geologic relations were observed to suggest that larger or higher grade masses are likely to be found.

It is recommended that the application be denied.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3211, Broken Thumb claims, Nos. 1-10

Slick Rock District

Dolores County, Colorado

Uranium

Geologic report

Daniel R. Shawe, Geologist
U.S. Geological Survey

January 15, 1954

DMEA 3211

BROKEN THUMB CLAIMS, NOS. 1-10
SLICK ROCK DISTRICT, DOLORES COUNTY, COLORADO

INTRODUCTION AND SUMMARY

Messrs. J. L. Byers, E. B. Byers, W. W. Byers, and J. H. Nelson, owners of the Broken Thumb claims, Nos. 1-10, have applied (Docket 3211) to the Defense Minerals Exploration Administration for a loan to explore for uranium on the Broken Thumb claims, Nos. 1-10, Slick Rock District, Dolores County, Colo. (fig. 1).

The claims were examined on December 3, 1953, in company with R. R. McLellan, engineer, U. S. Bureau of Mines, and W. W. and E. B. Byers, representing the applicants.

The applicants proposed spending approximately $25,000.00 for road construction, rim stripping, and underground drifting.

As a result of the field examination, it was concluded that the applicant's estimate of costs is excessive and that the claims, though relatively unexplored and undeveloped, show little or no promise of containing a significant deposit of uranium ore. It is recommended that the application be denied.

GEOLOGY

On the Broken Thumb claims, (specifically the Broken Thumb claims Nos. 1, 2, and 3) uranium minerals have been found in the lower sandstone bed of the Salt Wash sandstone member of the Jurassic Morrison formation. The uranium mineral-bearing sandstone bed of the Salt Wash member in the vicinity of the claims is approximately 30 to 40 feet thick and contains numerous thin mudstone splits. The uranium minerals are near the base of the sandstone bed.

At the Broken Thumb No. 1 claim, radioactivity of seams up to 2" thick and 1 foot long of shale in sandstone is not more than 3 or 4 times background (background 0.015 mr/hr on a scintillometer type counter). At the Broken Thumb No. 2 claim, gray vanadium mineral shows for about 5 feet along the exposed bedding of the sandstone, and is 2 feet in maximum thickness. A few pods of carnotite-mineralized carbonaceous rock within the vanadium-mineralized sandstone (radio-activity slightly above background) have radioactivity of .15 mr/hr. At the Broken Thumb No. 3 claim, one exposure shows gray vanadium mineral in sandstone for about 10 feet along bedding, and about 1 foot in maximum thickness (radio-activity slightly above background). This mineralized rock also contains a few small nodules of carnotite-mineralized carbonaceous sandstone with radioactivity about .15 mr/hr. At another exposure on the Broken Thumb No. 3 claim, a small pod (about 4" by 12") of carnotite-mineralized carbonaceous rock has radioactivity of .4 mr/hr.

Scattered carbonaceous material was observed in the uranium mineral-bearing sandstone; there is no extensive gray-green mudstone associated with the sandstone.

North of the Broken Thumb claims, a mine in the Salt Wash member of the Morrison formation (fig. 2) has had a reported production of 15 tons of U-V ore (grade not known).

CONCLUSIONS AND RECOMMENDATIONS

Mineralized showings on the Broken Thumb claims are not of ore grade, and enclosing rock lacks ore favorability criteria. Production from the only mine in the immediate area has been negligible. These facts suggest that there is little possibility of the discovery of significant deposits of uranium ore with further exploration, and it is recommended that the application be denied.

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

Engineering Report

By Russell R. McLellan
Mining Engineer
Bureau of Mines

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

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ILLUSTRATIONS

Figure	Follows page
1. Location map, Broken Thumb claims, J. L. Byers, Dolores County, Colo.	2

DMEA 3211

BROKEN THUMB CLAIMS
JAMES L. BYERS, ET AL.
DOLORES COUNTY, COLORADO

ENGINEERING REPORT

by

Russell R. McLellan

INTRODUCTION

James L. Byers and E. B. Byers of Dolores, Colo., W. W. Byers of Mancos, Colo., and J. H. Nelson of Durango, Colo. have applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the Broken Thumb claims, Nos. 1 through 10, Dolores County, Colo. The applicants propose to spend $25,000.00 for drifting and for combined road building and rim stripping along the ore horizon. The claims were inspected on December 3, 1953 by a Region IV Bureau of Mines, Geological Survey examining team, accompanied by E. B. and W. W. Byers.

It was concluded that although the area is relatively unexplored and undeveloped, the indications of uranium mineralization on the Broken Thumb claims are so weak that there is little reason to believe that a significant discovery would result from the proposed exploration. The application is recommended for denial.

ACKNOWLEDGMENTS

W. W. and E. B. Byers guided the examining team over the property and provided all necessary general information. Daniel R. Shaw represented the Geological Survey on the examining team.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The claims are along the west wall of the Dolores River Canyon, 10.4 miles by dirt road east of Dove Creek, Dolores County, Colo. They are reported to be in sec. 19, T. 41 N., R. 17 W., New Mexico principal meridian (fig. 1).

The most favorable exposures of uranium mineralization are in a sandstone rim that is inaccessible from below and is accessible from above only by scaling precipitous slopes and several cliffs formed by sandstone beds of the Morrison formation. The applicants have completed 1.4 miles of steep access road into the canyon but lack about 0.5 mile to reach the most favorable exposures.

Supplies and equipment are available at Dove Creek or at Cortez, Colo., distances of 10-1/2 and 51 miles respectively from the claims. Manpower is available in the area, and living accommodations may be obtained in Dove Creek. Electricity is not available on the claims, and water for mining purposes will have to be hauled a distance of approximately 2 miles.

Snow conditions probably would interrupt mining operations from December through March. The spring thaw and rains will hinder transportation considerably during April and May. Milling facilities are available at Monticello, Utah--a distance of 35 miles.

HISTORY AND PRODUCTION

The claims were located during June of 1953 by the Byers brothers. A limited amount of hand work has been done along the ore horizon but has resulted in no production.

OWNERSHIP

The ten Broken Thumb claims are owned by the applicants by right of location, and are recorded in book 58, pages 279, 280, 281, 282, and 283, Dolores County Courthouse, Dove Creek, Colo.

DESCRIPTION OF THE DEPOSIT

The main ore horizon is a sandstone bed near the base of the Salt Wash member of the Morrison formation. The Entrada sandstone is visible less than 50 feet below. Uranium mineralization was observed in four or five shallow cuts on the Broken Thumb claims, Nos. 1, 2, and 3. All of the cuts showed weak uranium and vanadium mineralization in a zone ranging from 1 inch to 15 inches in thickness. The maximum thickness was observed in two of the cuts that appeared to intersect small rolls. High-grade material was noted only in several small fragments of replaced wood, the largest of which did not exceed 3 inches in diameter. None of the cuts contained material of sufficient quantity and grade to be produced at a profit.

The applicants submitted the results of three samples containing from 0.52 percent to 1.06 percent U_3O_8, and from 5.06 percent to 8.45 percent V_2O_5. During the examination it was observed that these samples were selected from very limited spots containing the most favorable mineralization.

MINEABLE ORE RESERVES

Development work has not progressed sufficiently to establish any type of ore reserve. The material observed during the examination could not be classified as ore.

PRESENT STATUS

Exploration and Development

Exploration and development to date consists of four or five shallow cuts along the ore horizon. Blasting was necessary on no more than two of the cuts in which a few holes were drilled by hand. As previously mentioned, about 1.4 miles of road have been completed with about 0.5 mile remaining to be completed to give access to the claims.

Mining and Milling Equipment and Other Facilities

The applicants own, and have available for use, two jackhammers with hoses; a water tank; one International tractor; one Ford tractor; and one trailer house.

There are no buildings on the property and any ore produced would have to be transported by truck to Monticello, Utah for treatment--a distance of 35 miles.

PROJECT PROPOSALS, WITH COSTS

The applicants submitted no specific plan of exploration but indicated that underground drifting and rim stripping would be favored. Diamond drilling will be extremely costly in the area as the ore horizon probably is in excess of 500 feet vertically below the rim of the canyon. To drill from lower sites along the precipitous wall of the canyon would entail considerable road work at a prohibitive cost. Since the claims obviously would not qualify for Defense Minerals Exploration Administration assistance, no attempt was made in the field to establish a definite exploration program, however, the applicants submitted the

following estimate of costs for an undetermined footage of drifting and for about 1 mile of road building and rim stripping:

Labor and Supervision:	
Supervision at $2.00 per hour, and 3 miners at $1.75 per hour, plus Insurance, etc.	$ 9,350.00
Operating Materials and Supplies:	
Drill steel and bits	150.00
Power, water, powder	1,000.00
Fuel oil and gas	1,000.00
Operating Equipment:	
Payments on Caterpillar tractor	6,500.00
Purchase of compressor and drill	4,000.00
Purchase of truck to haul supplies	3,000.00
Total	$25,000.00
Government participation 75 percent, or	$18,750.00

A logical program of exploration for the property would be to complete the road to the ore horizon, strip the overburden from the unexposed portions of the horizon, and drift on any favorable zones of mineralization. The overall cost for road construction and rim stripping should not exceed $4,000.00. A total of 200 feet of short drifts at $30.00 overall cost per foot should be sufficient to explore favorable exposures of mineralization. The cost of the entire project should not exceed $10,000.00; however, the possibility of making a significant discovery is so remote that Government participation is not recommended. The applicants apparently will continue the road work and rim stripping regardless of the final decision concerning their application.

CONCLUSIONS

The Dolores Canyon area east of Dove Creek is relatively undeveloped but surface exposures of uranium mineralization, thus far encountered on both sides of the canyon, indicate that the amount and grade of ore for any single deposit probably will be low.

Uranium mineralization thus far encountered on the Broken Thumb claims occurs in small isolated rolls or lenses that cannot be mined profitably. Since the exposures appear to be consistently small and very low in grade, it is doubtful that additional exploration will result in the discovery of a significant deposit of ore.

RECOMMENDATIONS

It is recommended that the application be denied.

le

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

November 16, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number DMEA-3211

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

DMEA - 3211 James L. Byers, et al.

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

3

MF-100-1
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 16 1953

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

Not to be filled in by applicant

Docket No. DMEA-3211
Metal or Mineral
Date Received 11-16-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: James L. Byers, Dolores Colo.
Walter W. Byers, Mancos Colo.
E Blaine Byers, Dolores, Colo.
J. H. Nelson, Durango, Colo.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

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

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Approximately Sec. 19, Twp 41, Range 17W. NMPM. 3000 X6000 feet. Broken Thumb Claims Nos. 1,2,3,4,5,6,7,8,9,10. Unsurveyed and unorganized Mining District, Dolores County, Colorado.

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Book 56, Pages 279, 280, 281, 282, 283, Dolores County courthouse Dove Creek, Colorado.

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. We have built 1.4 mile road

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. none

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

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. 10.4 miles to Dovecreek, County road. 75 miles to mills, oiled roads

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

16—66551-1

Have manpower we need, materials & supplies available, 34 miles to Monticello, 94 to Durango, Grand Junction and Naturita not far

Can get water nearby and REA line not for.

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

(*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. To finish road to claims and across them and explore for ore as we go. Want to drift on 1 2 3

(*c*) The work will start within 120 days and be completed within 24 months from the date of an exploration project contract Soon as money is available and weather permits.

(*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 Supervisor with 15 yrs. experience

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

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

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

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

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

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

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

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

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

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

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

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

Some [X] Money [X] Use of equipment owned by you [X] Other labor

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated Oct. 30. 1953, 195-

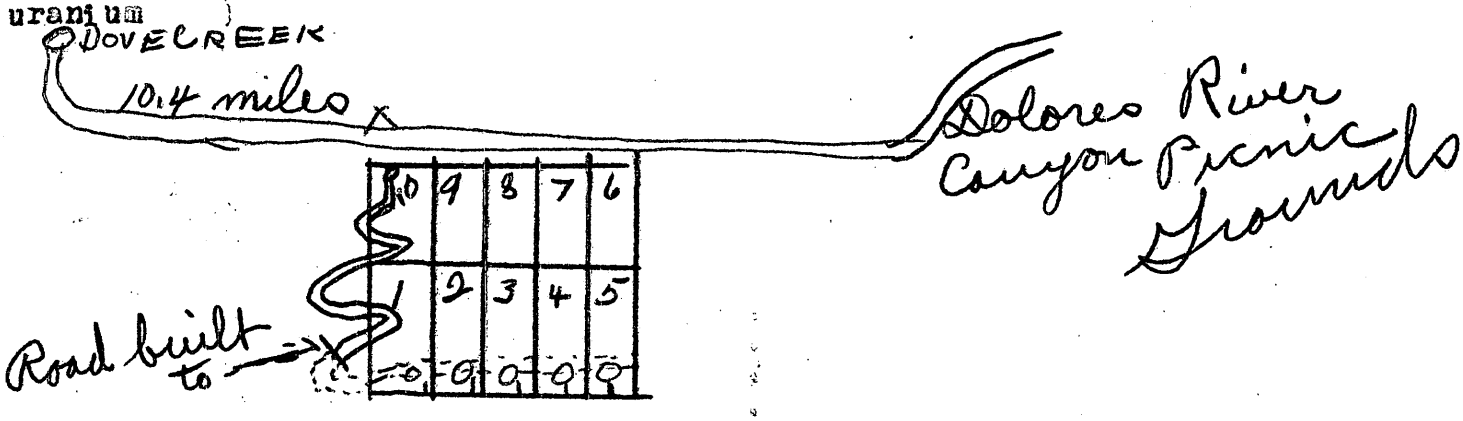
James L Byers
(Applicant)

By Leita Byers
Walter W Byers
E Blaine Byers

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

4. (c) The ore we have found is in Morrison formation , in vein which shows on four of the face claims 1,2,3,4, With an assay report of vanadium content running from 5.06 percent to 8.45 on three of the claims. Geiger readings on uranium range from 1.06 down to 0.52 per cent. The vanadium assay includes 6.22 on the second claim with geiger reading of 0.74 uranium



6 Estimate of costs:

(a) None	
(b) One supervisor at $2.00 per hour	
three miners at $1.75 " " plus insurance etc.	$9350.00
(c) Drill steel and bits etc est.	1150.00
Power, water powder,	1000.00
Fuel oil and gas	1000.00
(d) Purchases:	
Caterpillar tractor, purchased but owe Bank for it	6500;00
Compressor and machine	4000.00
Truck to haul supplies to workings	3000.00
	25000.00

(d) Owned by us
Two hammers and hoses
Water tank
International tractor new M
Ford tractor
Automobiles going to project. prospect
Trailer house for living quarters at mining project.

(e) Will have to finish about 3/8 mile of road to reach first claim and expect to prospect for ore as we build road to others, which will be included in labor item. And use of machinery.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 16 1953

224 New Customhouse
Denver 2, Colorado

November 13, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: Code 200

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMA ~~Form 3~~a and MF-103 and supporting data pertaining to the following application for Government assistance in exploration work:

James L. Byers, Dolores, Colorado
Walter W. Byers, Mancos, Colorado
E. Blaine Byers, Dolores, Colorado
J. H. Nelson, Durango, Colorado

W. H. King

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 16 1953

224 New Customhouse
Denver 2, Colorado

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To: Administrator, Defense Minerals Exploration Administration
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Walter W. Byers, Mancos, Colorado
E. Blaine Byers, Dolores, Colorado
J. H. Nelson, Durango, Colorado

W. H. King

W. H. King

Enclosures

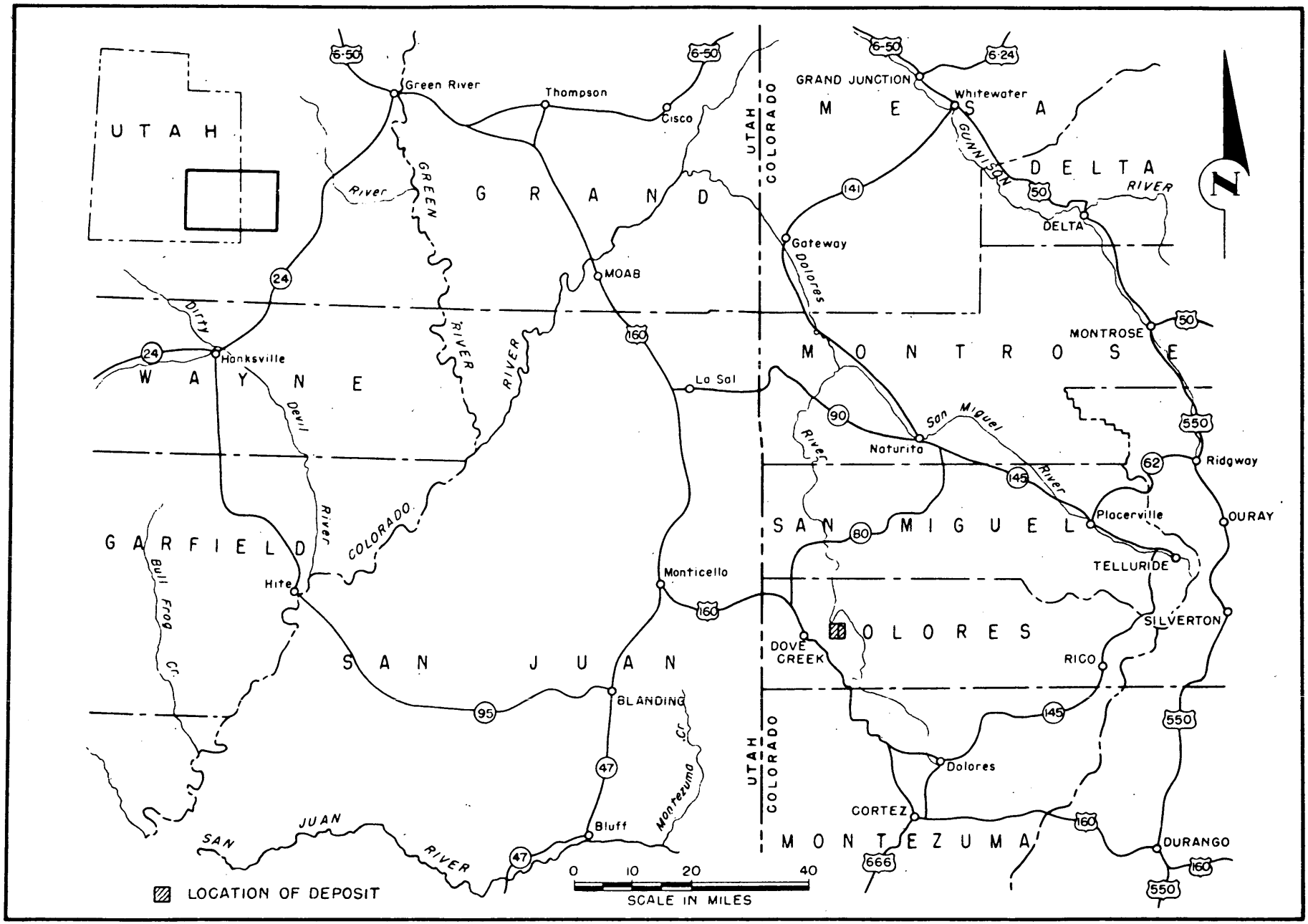


FIGURE 1. - LOCATION MAP, BROKEN THUMB CLAIMS, J. L. BYERS, DOLORES COUNTY, COLO. (DMEA 3211)

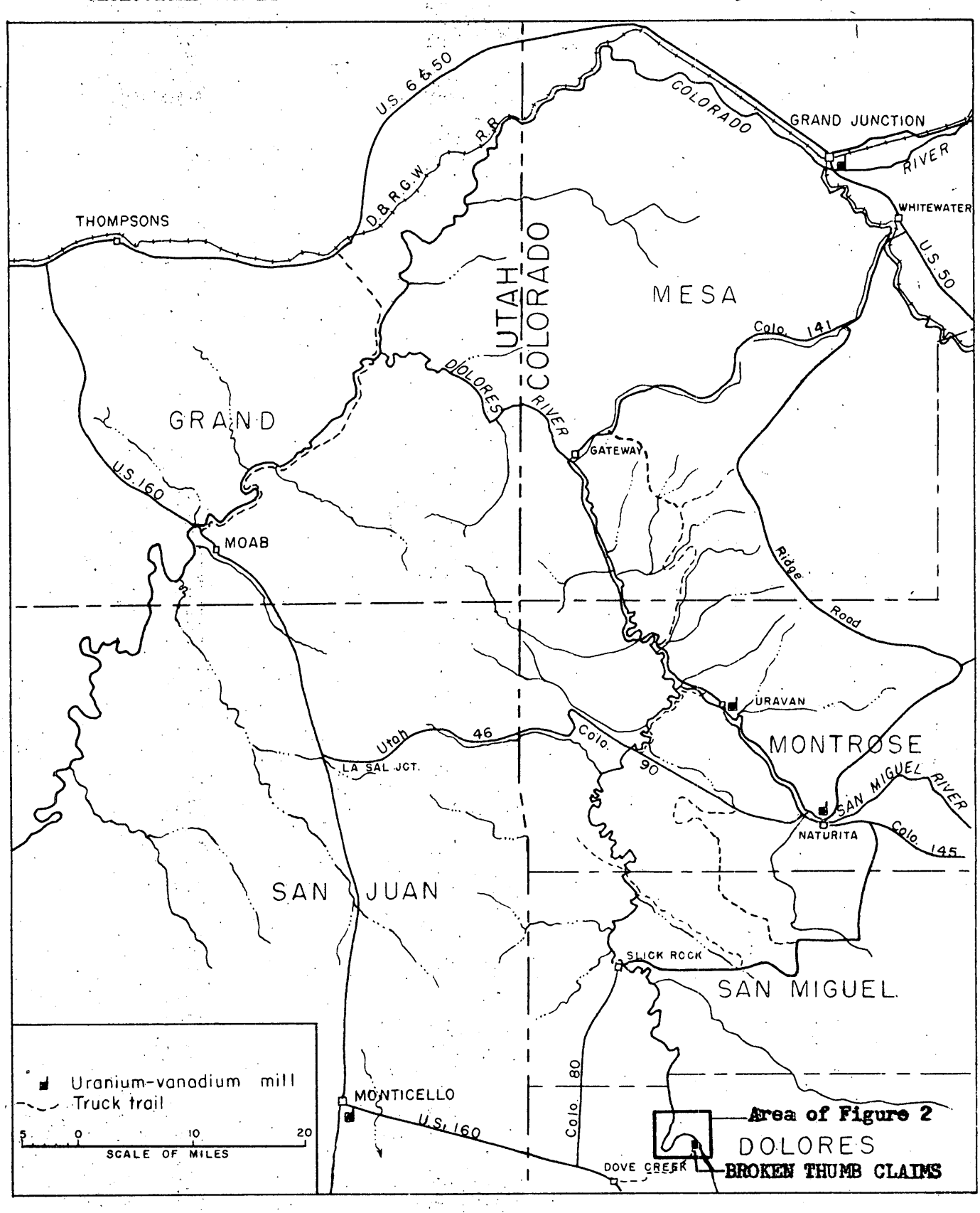
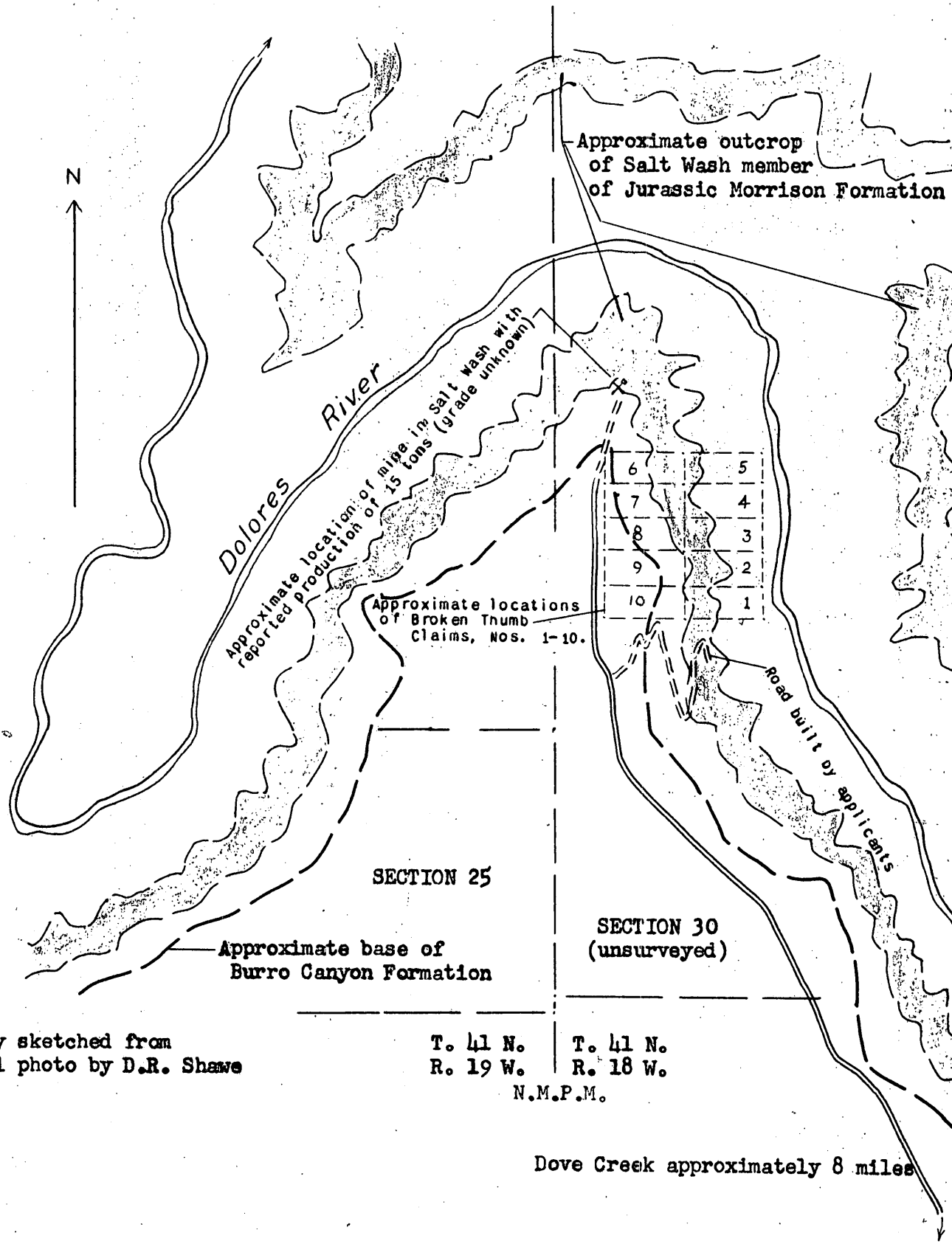


Figure 1. MAP SHOWING LOCATION OF BROKEN THUMB CLAIMS, SLICK ROCK DISTRICT, DOLORES COUNTY, COLORADO.



Geology sketched from aerial photo by D.R. Shawe

Figure 2. SIMPLIFIED GEOLOGIC MAP OF BROKEN THUMB CLAIMS, AND VICINITY.

2500 0 7500 FEET

Approximate scale