DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4611

Application (Denied ✓
(~~Withdrawn~~
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
Certificate of Audit (Final)
Interim Audit(s)
Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
Contract Amendments (latest on top)
Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
Leases and assignments of leases
✓Application and attachments
(3) Envelope for maps

Right Side

✓Project summary
Work completed analysis
All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report (Tab)
Operator's Final Report
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
✓On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side

Folder No. 2: (In chron. order)
Interim Summary Reports by W. O. Engineers

Right Side

Operator's Semi-Annual Report for Certified Project, Field Team Interim Reports, Operator's Monthly Report with transmittal, narrative, maps, and Field Team review.

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 25 1957

DATE	INITIALS	CODE

224 New Customhouse
Denver 2, Colorado

January 22, 1957

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Application for DMEA Aid (Uranium) J. Ben Williford (Pack Rat and Rainy Day Claims) Dolores County, Colorado.

Enclosed are two copies of the subject application in the amount of $12,097.90. One copy of the application is being forwarded the Grand Junction Office, DMEA, and one copy is being retained in our file.

Only one copy each of the following was submitted:

1. Map of Pack Rat Claim, Exhibit A
2. Map of Rainy Day Claim, Exhibit B
3. "Map showing location of mineral claims of Ben Williford."

These three maps are enclosed for your use.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

(MR-163)
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DMEA

RECEIVED JAN 25 1957 DMEA

DEPARTMENT OF THE INTERIOR
JAN 22 1957
REGION III
DENVER, COLORADO

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. 4611
Metal or Mineral Uranium
Date Received 1-25-57
Estimated Cost $12,097.90
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: J. BEN WILLIFORD, Box 304, Cortez, Colorado

RECEIVED JAN 25 1957 DMEA

(*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 Unpatented mining claims located in Sections 14, 22, and 23, Township 41 N., R. 18 W., N.M.P.M. in Dolores County, Colorado.

(*b*) State any mine name by which the property is known. PACK RAT and RAINY DAY

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

(*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 none

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. PACK RAT-Book 57-pp.568
RAINY DAY-Book 67-pp.349

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

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

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

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

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

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

(c) The work will start within 10 days and be completed within 24 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 ATTACHMENT

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 ATTACHMENT

(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 ATTACHMENT

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

(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 ATTACHMENT

(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 ATTACHMENT

(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. SEE ATTACHMENT

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated January 16, 1957

J. Ben Ellifson
(Applicant)

By

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

4a On the Pack Rat about 35 -40 feet of drifting has been done. On the Rainy Day about 200 feet of drifting altogether has been done in two difference tunnels. At present, there are no mine buildings or other production facilities on either of these claims. A Road along the rim of the Dolores leading to other mines further downstream goes within a few hundred feet of the tunnelportal on said cliams and which can be reached by an acess raod good enough for automobile travel making them quite accessible for examination purposes.

(b) A total of approximately 25 tons of uranium and vanadium ore has been produced from the Rainy Day having a 3% V_2O_5 and .14% U_3O_8 at present the mines are close for the winter and there is therefore no current production. Status or ore reserves is not presently known since insufficient work has been done to black them out.

(c) There are threee rims on said property showing the Morrison formation to be about 100 feet thick at this point. This is more fully shown on Exhibits A & B attached hereto. The vein deposit shows several stringers, some good are which has a realtively low lime content.

The basic reason for wishing to explore these claims further is that they seem to have good possibilities and I have reason to believe that the ore is of a higher grade than is shown by reports from the mill.

(d) This property lies 7 miles Northeast of Dove Creek, Colorado, and may be reached by traveling over the road along the Dove Creek Water line. Upon reaching the rim of the Dolores River, go left along the access road about 1/8th of a mile to the mine portals of the Pack Rat Claim.

The property lies about 200 miles from Grand Junction,(Climax Uranium Co. mill). 80 miles for Durango, Colorado(VCA mill) and 30 miles from the mill at Monticello, Utah.

The nearest residential point is Dove Creek, Colorado and the nearest supply point is Monticello, Utah:

(e) Manpower is available immediately, materials are available locally, supplies and equipment are available in Monticello, Utah, Water is available in Dove Creek, Colorado, or from the Dolores Rive; it is 1 1/2 miles to the electric power line.

RECEIVED
JAN 25 1957
D.M.E.A.

5a It is intended to explore to uranium and vanadium.

(b) It is proposed to drive a drift into the Rainy Day in the manner shown on Exhibit B and to drift in the Pack Rat as shown on Exhibit A. In both of these mines there are definite ore indications sofaras drifiting has been done. Information as to contacts, veins, ore bearing beds, etc. so far as known to me, ore to be found on Exhibits A & B attached hereto.

(c) The work will start within 10 days and be completed within 24 months from the date of an exploration project contract,'

(d) The Applicant, J. Ben Williford, who will also supervise the operations has had nearly 40 years experience in prospecting and mining and is well equipped and experienced to carry out this exploration project.

6 ESTIMATE OF COST:
(a) Independent contracts; It is planned to improve the mine access road and to make a "turn around" at the Rainy Day. It is intended to contract this work and it is estimated to cost as follows:

(1) 1Access Road to Pack Rat	$1000.00
(2) Turn around at Rainy Day	100.00
	$1100.00

This is based upon an estimated charge of $14.00 per hour for a bulldozer and operator.

(b) Labor, Supervisor and consultants

(1) Approximately 300 feet of drifting is anticipated for the Rainy Day. This is anticipated to cost for labor $2112.00

timbering (2) The labor for drifing and ~~tunnking~~ on the Pack Rat is estimated at $1056.00
The labor is based on an expected labor force of 2 men working an 8 hour shift at a wage of about $2.20 per hour.

(3) Supervision of labor $1584.00
$4742.00
52

(c) Operating materials and supplies

(1) Powder-caps-fuse-bits-water for use on the Rainy Day---~~(2)~~---------- $660.00

(2) Powder-caps-fuse-bits-water for the use on the Pack Rat---------- 330.00

(3) Gas and oil for Rainy Day 125.00

(4) Gas and oil for Pack Rat 75.00

$1160.00

9

(d) OPERATING EQUIPMENT

(1) Compressor &2 Jack tanks owned and furnished---------- $800.00

(2) 150 ft. of airline and 150 ft of water line, owned and furnished---------- 100.00

(3) Jack Hammer owned and furnished---------- 300.00

(4) Wheel barrow owned and furnished---------- 35.00

(5) Scoops, owned and furnished 25.00

1260

(6) Drill steel new and reconditioned, to be purchased---------- 400.00

(7) Air and water line to be purchased---------- 200.00

$1860.00

(e) Rehabilitation and repairs NONE

(f) New buildings, improvements, installations----------

(1) Cabin for tool house 200.00

(2) Ore bin 100.00

$300.00

(g) MISCELLANEOUS

(1) Employer's liability Insurance and payroll taxes---------- 274.60

(2) Maintainence and repair or equipment---------- 158.00

(3) Estimated payroll tax	$735.30
	$1167.90
ESTIMATED TOTAL COST-------	12,697.90

7(a) yes

(b) X Money--------X Use of Equipment--------X other.

MONEY ----------	7,000.00
value of equipment ----------	1,260.00
other supervising of labor ----------	1,500.00
by applicant ----------	

Government Messenger Envelope

n No. 65 (Rev. 1/46)

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2. Void previous block.
3. Write clearly.

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Udall Banding Office Kent Refuge	RUN STOP		RUN STOP
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~~K. F. Timer~~ [illegible] Tolsville	RUN STOP		RUN STOP

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DMEA Form 7
(12-56)

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Date	Surname	Code
4-30	Murphy (E)	700
5-3 ~~4-30~~	Ellis	700
5/3	Selbridge	130
5/3	Kamp	130
5/3	Nelson	130
"	Johnson	110
"	Mittendorf	100
		220

26-24

MAY - 3 1957

Mr. J. Ben Williford
Box 304
Cortez, Colorado

Re: Docket No. DMEA-4611 (Uranium)
Pack Rat and Rainy Day Claims
Dolores County, Colorado

Dear Mr. Williford:

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

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

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

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

Sincerely yours,

C. O. Mittendorf (for)

Administrator

FMMurphy/ dlm 4-30-57
cc to Mr. Murphy
Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
DMEA Region 3 (2)

8623

Murphy (E)

April 30, 1957

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-4611

Commodity: Uranium

Applicant: J. Ben Williford
Box 304
Cortez, Colorado

Property: 8 claims, Pack Rat, Bluebird, Summer Day, Rainy Day, etc., claims, in secs. 14, 22, and 23, T. 41 N., R. 18 W., N. M. P. M., Dolores County, Colorado

Date of application: January 16, 1957

Amount of application: $12,097.90 (not correctly added)

Referred to Region III: February 13, 1957

Field Examination made: March 19

Field Team report received: April 19

Work proposed: Complete access road to the Pack Rat and Rainy Day claims, and drifting 300 feet on Rainy Day claim and 150 feet on the Pack Rat claim.

Estimated costs:

Roads	$1,100.00
Labor Supervision	4,752.00
Operating Material	1,190.00
Operating Equipment	600.00
Tool House and Ore Bin	300.00
Miscellaneous	1,167.90
Total	$9,109.90
Equipment owned by Applicant	$1,260.00
	$10,369.90

Excerpts from Field Team Reports: The claims lie on the southwest side of

Dolores River Canyon. The Salt Wash member of the Morrison exposed on the claims contains six or seven sandstone rims or lenses separated by mudstone. The thickness of the sandstone rims range from eleven feet to possibly as much as forty feet in the case of the uppermost rim. The sandstone is reddish and all the rims are judged as unfavorable for the occurrence of significant uranium deposits.

Exposures of mineralized sandstone were observed only on the Rainy Day and Pack Rat claims. On the Rainy Day claim 21.5 tons of 0.12 percent U_3O_8 ore was mined from two adits about 50 feet apart in the lower part of the second sandstone rim. In all there are three adits having 23, 119, and 144 feet of workings on the Rainy Day claim and three adits having 10, 12, and 85 feet of workings on the Pack Rat claims. The other six claims have shallow cuts.

The ore occurs in small thin ore lenses with a maximum thickness of six inches and appear to be controlled by log replacement and thin mudstone crossbeds, According to the Applicant, who accompanied the field examiners, the largest ore pod mined was about two tons. A number of thin layers of weakly radioactive carbonaceous siltstone, ranging from one-half inch to three inches in thickness were noted in the three adits on the Pack Rat claim. Gieger counter readings indicated that the lenses might contain as much as 0.08 percent U_3O_8.

There are no ore reserves on the property and it is not expected that substantial ore reserves will be found by further exploration. There are no producing mines within two miles of the subject property.

The field examiners and Field Team recommend that the application be denied as they believe the proposed work would not discover ore deposits in excess of ten tons.

Commodity Members' comments:

Bureau of Mines - James Paone, April 24, 1957

Mr. Paone agrees with the Field Team's recommendation.

Geological Survey - W. P. Williams, April 26, 1957

Mr. Williams concurs in the Field Team's

recommendation to deny the application. Mr. Williams notes the unfavorable geologic conditions existing on the property and adjacent areas.

Rare and Miscellaneous Metals Division - F. M. Murphy, April 30,1957

The Applicant has completed about 400 feet of adits on two claims, resulting in the production of 21.5 tons of low-grade ore. Judging from the past work, it does not appear that the additional proposed 450 feet of drifting would be more successful in discovering ore deposits.

Conclusions and Recommendations:

This Division agrees with the conclusions of the field examiners regarding the possibilities of the subject claims, and concurs in the recommendation that application DMEA-4611 should be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous Metals Division

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

IN REPLY REFER TO:

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DATE	INITIALS	CODE
4/29	C	220
completed "	Murphy	700

April 26, 1957

Memorandum

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

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

Subject: Review of field examination report, DMEA 4611 (uranium) J. Ben Williford, Pack Rat and Rainy Day claims, Dolores County, Colorado

The examining team report that geologic conditions on the applicant's property are not favorable for the presence of significant ore bodies. Color of the sandstone rims is one of the chief unfavorable criteria used. Deposits in the general area are known to be small and scattered.

Although six adits exist on the claims only 22.5 tons of low-grade ore has been produced.

DMEA participation in exploration expenditures on the property does not seem warranted. I am, therefore, in agreement with the examining team's recommendation for denial of the application.

W. P. Williams

W. P. Williams

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DATE	INITIALS	CODE
4/25	JWA	220
4/25	Murphy	700

Date April 24, 1957

DMEA Project No. 4611
Field Project No.
Commodity Uranium
Name of applicant J. Ben Williford
Name of property Pack Rat and Rainy Day Claims
Location of property Dolores Co., Colo.
Estimated cost of project $12,097.90

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
James Paone, Bureau of Mines Alternate Member
Uranium Commodity Committee

Subject: Report of Field Team Report
(Application, Field Team Report, etc.)

1. Date of original document: 4/15/57. 2. Date received by DMEA: 4/23/57

3. Prior reports on this property have to reviewer: Yes [ ] No [ ]

4. Prior reports on nearby properties known to reviewer: Yes [ ] No [ ]

5. Other maps available on this production: Yes [ ] No [ ]

6. Other pertinent factors known to reviewer: Yes [ ] No [ ]

7. Explain items marked yes above:

8. Items requiring special consideration:
- a. Location [ ]
- b. Geology [ ]
- c. Evidence of mineralization [ ]
- d. Policy [ ]
- e. Proposed exploration method [ ]
- f. Alternate exploration method [ ]
- g. Costs [ ]
- h. _____ [ ]

9. Action advised:
- a. Obtain information from applicant [ ]
- b. Refer to Field Team [ ]
- c. Cancel [X]
- d. Proceed with Field Team [X]
  - f. Consult with Mr. _____ at _____ AEC office.
- e. Disagree with Field Team [ ]
- f. Support alternate plan [ ]
- g. Request another examination [ ]
- h. Approval [ ]

10. Remarks: (Use back of page if necessary)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

April 17, 1957

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DATE	INITIALS	CODE
4/19	C	220
		1303
4/25	C	220
4/25	Murphy	700

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA-4611 (Uranium) J. Ben Williford (Pack Rat and Rainy Day Claims) Dolores County, Colorado

Enclosed are the original and three copies of a Joint Report of Examination by Carl Belser, USBM, and Frank B. Byers, USGS.

The field examiners conclude that the probability for making a significant discovery is not sufficiently promising to justify Government participation. Accordingly, they recommend that the application be denied, to which the Field Team concurs.

E. N. Harshman

By E. N. Harshman
Acting Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
4-24-57
(date)

ON-SITE EXAM. REPORT

IN REPLY REFER TO:

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

DMEA
DEPARTMENT OF THE INTERIOR
APR 16 1957
REGION III
DENVER, COLORADO

TRANSMITTED
APR 17 1957

April 16, 1957

Memorandum

To: Acting Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 4611 (Uranium), J. Ben Williford (Pack Rat and Rainy Day claims), Dolores County, Colorado

Enclosed are the original and nine copies of a joint report of examination by Frank B. Byers, U. S. Geological Survey, and Carl Belser, U. S. Bureau of Mines, covering their examination of the subject property.

The applicant proposed to explore a group of eight claims by 450 feet of drift at a total estimated cost of $12,097.90.

Small low grade pods of uranium ore occur on the applicant's property in the Salt Wash member of the Morrison formation, but the sandstones are unfavorable for significant ore deposits.

The examiners conclude that the proposed exploration will not result in a significant discovery and recommend denial of the subject application.

We concur with the conclusions and recommendations in the enclosed report.

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DMEA
RECEIVED APR 19 1957

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		130
		220

Enclosures (10)

ENHarshman:arh

John F. Shaw
Supervising Mining Engineer

E. N. Harshman
Member, Field Team

Reviewed by
DMEA OPERATING COMMITTEE
4-24-57
(date)

FOR UNITED STATES GOVERNMENT USE ONLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

TRANSMITTED

APR 17 1957

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

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RECEIVED APR 19 1957

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		220

DMEA 4611

J. Ben Williford

Pack Rat and Rainy Day claims

Dolores County, Colorado

Uranium

Joint Engineering and Geological Report

by

Frank B. Byers, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

April 15, 1957

Reviewed by
DMEA OPERATING COMMITTEE
4-24-57
(date)

CONTENTS

Page

Introduction and summary..... 1

Acknowledgments..... 2

Location, topography, and climate..... 2

History and production..... 4

Ownership and extent..... 4

Present status..... 5

Exploration and development..... 5

Mining and milling equipment and other facilities..... 6

Geology..... 6

Ore Deposits..... 7

Rainy Day claim..... 8

Pack Rat claim..... 9

Sampling and ore reserves..... 10

Applicant's estimated cost of project..... 10

Conclusions and recommendations..... 13

ILLUSTRATIONS

Figure — Follows page

1. Location map, Pack Rat and Rainy Day claims, J. Ben Williford, Dolores County, Colorado..... 3

DMEA 4611

J. BEN WILLIFORD
PACK RAT AND RAINY DAY CLAIMS
DOLORES COUNTY, COLORADO

INTRODUCTION AND SUMMARY

J. Ben Williford, Box 304, Cortez, Colorado, on January 10, 1957, applied to the Defense Minerals Exploration Administration for aid in exploring for uranium on a group of eight unpatented claims in secs. 14, 22, and 23, T. 41 N., R. 18 W., N.M.P.M., Dolores County, Colorado. The applicant's exploration proposal consisted of completing the access road to the Pack Rat and the Rainy Day claims, and driving 450 feet of drift at a total estimated cost of $12,097.90.

The property was examined on March 19, 1957, by a DMEA examining team composed of Carl Belser, U. S. Bureau of Mines, and Frank B. Byers, U. S. Geological Survey.

Small, low-grade carnotite-type uranium deposits are present on the claims in the Salt Wash member of the Jurassic Morrison formation. They are in the second and third sandstone rims above the top of the Summerville formation and they range from a knife-edge to 3 feet in thickness. A production of 22.5 tons, averaging

0.12 percent U_3O_8 and 3.01 percent V_2O_5, was made from the Rainy Day claim in 1956.

The Rainy Day claim is developed by 3 adits, having 23, 119, and 144 feet of workings and the Pack Rat is developed by 3 adits having 10, 12, and 85 feet of workings. The other six claims have only shallow cuts.

The small, low-grade nature of the deposits, plus the unfavorable lithologic nature of the Salt Wash sandstones does not appear to justify further exploration and the examining team recommends that the application be denied.

ACKNOWLEDGMENTS

J. Ben Williford, owner of the claims, accompanied the examining team during the examination.

Memoranda of George C. Selfridge, J. E. Crawford, and N. E. Nelson were noted.

The Atomic Energy Commission was consulted before the examination was made.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Pack Rat and Rainy Day claims are in secs. 13, 22, and 23, T. 41 N., R. 18 W., N.M.P.M., Dolores County, Colorado, on the northwest side of the Dolores River. They lie at an altitude of

about 6,000 feet (fig. 1). The claims cover the Morrison rim which is exposed on a very steep hillside, about 700 feet above the Dolores River. The winters are not severe, and work could be carried on throughout the year, except at times when wet weather makes the roads impassable.

The property is reached over the Big Canyon road, a fair dirt road; it is 8.7 miles northeast of Dove Creek, Colorado. From Dove Creek, Durango is 78 miles east over paved U. S. Highway 160. Monticello, Utah, is 27 miles to the west over the same road, and Thompson, Utah, is 111 miles to the northwest over U. S. Highways 160 and 50. The nearest railroads are the Denver and Rio Grande Western narrow-gauge at Durango, and the Denver and Rio Grande Western main line at Thompson.

Labor and supplies can be obtained at Dove Creek, Durango and Monticello. Ore-buying depots are at Monticello and Durango.

Cedar and pinon grow on the claims and can be used for some mining purposes. Water can be obtained from the Dolores River, which is 3 miles away, by road, and electric power can be obtained from an REA line in Big Canyon by building a connecting line about one-half mile long.

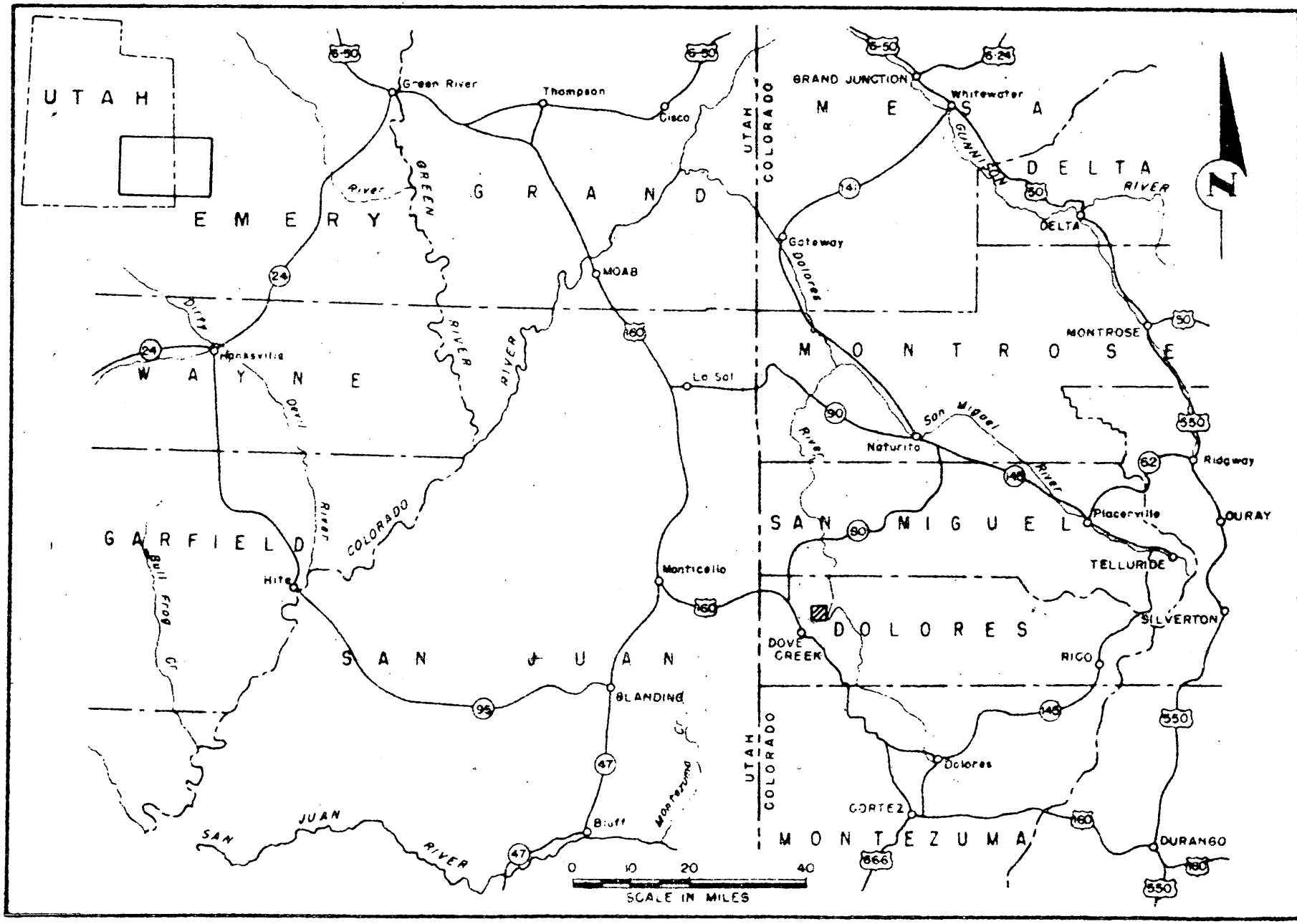


FIGURE 1 - LOCATION MAP, PACK RAT AND RAINY DAY CLAIMS, J. BEN WILLIFORD, DOLORES COUNTY, COLO.
DMEA 4611

HISTORY AND PRODUCTION

Some prospecting has been done along the Salt Wash rims during the past 50 years. The only workings in the nearby area are on the Rainy Day and Pack Rat claims, which were located in 1953 and 1951, respectively, by Ed Baird, Jr. Later, the applicant obtained these claims and built an access road. Two small mines owned by Byers, Risenhover, and Tanner are on the opposite side of the Dolores River, and another small mine owned by Lewis and Risenhover is said to be 3 miles to the north.

According to the A.E.C., 21.5 tons of ore, averaging 3.10 percent V_2O_5 and 0.12 percent U_3O_8, was shipped from the Rainy Day claim during 1956. No ore has been shipped from the Pack Rat claim.

OWNERSHIP AND EXTENT

The eight unpatented claims are recorded in the office of the County Clerk and Recorder of Dolores County, at Dove Creek, as follows:

Claim	Book	Page	Date Recorded	Locator
Pack Rat	57	568	6/25/51	Ed Baird, Jr. & Cloe J. Weese
Pack Rat No. 1	76	221	4/10/54	Wm. Barlow and J. Choba
Blue Bird	76	171	9/7/54	J.B. & Charlote Williford
Blue Bird No. 1	76	172	9/7/54	" " " " "
Summer Day	73	220	4/10/54	" " " " "
Rainy Day	67	349	8/1/53	Ed Baird, Jr.
Rainy Day No. 1	72	576	2/15/54	J.B. & Elizabeth Williford
Rainy Day No. 2	72	577	3/18/54	J.B. & Charlote Williford

The filings appear to be in good order. However, the transfers from the six locators, other than J. Ben Williford, to the applicant were not found. Mr. Williford had returned to Cortez and no effort was made to contact him, because the claims are without sufficient promise to be recommended for DMEA assistance.

PRESENT STATUS

Exploration and development

Outside of a few small surface cuts all work has been confined to the Rainy Day and the Pack Rat claims. The Pack Rat is developed by 3 adits 10, 12, and 75 feet long. The 75-foot adit has a 10-foot raise at its far end. No stoping has been done. The Rainy Day

claim has also been developed by 3 adits, 23, 119, and 144 feet long. A small amount of stoping was done in the 144-foot adit.

Mining and milling equipment and other facilities

Mining equipment consists of a Ford 4-cylinder motor converted to a compressor and driven by a Ford V-8 engine, 1-inch air line, a wheelbarrow and other hand tools, and an I.R. Jackhammer with jackleg. Facilities consist of a fair access road to the Rainy Day claim. This road lacks an adequate turnaround at the Rainy Day. Although the access road crosses the Pack Rat claim, the Pack Rat workings are about 80 feet above the road, on a steep, rocky hillside.

GEOLOGY

The Rainy Day, Pack Rat, et al. claims are on the southwest side of Dolores River Canyon, on the northeastern edge of the Great Sage Plains subprovince of the Colorado Plateau. The beds are nearly horizontal. The oldest rocks exposed are the upper 150 feet of Triassic Chinle formation seen in the bottom of the Dolores River Canyon. The Chinle is overlain by about 600 feet of reddish-brown sandstone comprising the Triassic and Jurassic Wingate, Kayenta, and Entrada formations, which form near-vertical cliffs. The next

younger formation, the Summerville, is about 50 feet thick and consists of red mudstone and siltstone. The Jurassic Morrison formation, overlying the Summerville, is subdivided into the Salt Wash and Brushy Basin members, each about 300 feet thick. The uppermost exposed unit comprising the rim of the canyon is the Lower Cretaceous Burro Canyon formation.

The Salt Wash member on the applicant's property contains 6 or 7 sandstone rims or lenses separated by mudstone. The maximum thickness of the sandstone rims ranges from about 11 feet, to possibly as much as 40 feet in the case of the uppermost rim. All sandstone rims are reddish except in the immediate area of uranium deposits and all are judged unfavorable for the occurrence of economically significant uranium deposits. Small uraniferous sandstone pods or lenses occur in the lower few feet of the second and third sandstone rims, about 40 and 80 feet above the base of the Salt Wash member, respectively.

ORE DEPOSITS

Exposures of mineralized sandstone were observed only on the Rainy Day and Pack Rat claims, where the applicant has proposed drifting with DMEA assistance.

Rainy Day claim

On the Rainy Day claim, small pods of uranium- and vanadium-bearing sandstone were mined from two adits about 50 feet apart. Both adits were driven westerly in the lower part of the second sandstone rim, which is about 11 feet thick. Adit 1 begins southwesterly and, by stages, turns northwesterly to the face about 95 feet from the portal. Several tons of low-grade ore were mined from two short laterals, north and south of the main adit and about 25 feet in from the portal. About 60 feet in from the portal, two lenses of corvusite-carnotite-bearing sandstone measure about 10 inches in maximum thickness and several feet in length. They are separated by about 2 feet of barren sandstone.

Two green mudstone layers, each a few inches thick, appear to be the primary structural or stratigraphic controls. One layer lies below the lower ore lens and the other lies above the upper ore lens. Adit 2 is about 50 feet north of adit 1 and extends about 125 feet WSW. into the canyon wall. A few thin ore lenses similar in size to those in adit 1 are controlled by log replacement and thin mudstone crossbeds. According to Mr. Williford, the applicant, the largest ore pod mined was about 2 tons. Only 21-1/2 tons of ore containing 0.12 percent U_3O_8 have been produced from both adits.

The second sandstone rim is exposed for about 150 feet northerly from adit 2. A green mudstone bed, 2 feet thick, occurs beneath the

rim and 2 to 3 green mudstone splits occur in the lower few feet of the rim. The color of the mudstone is probably a primary feature rather than an alteration related to the ore deposits. The sandstone rim itself is reddish brown and has no white or light-gray color, characteristic of a good ore-bearing sandstone, except within a few feet of mineralized logs. About 150 feet northerly from adit 2 at the end of the stripped area is a third short adit 20 feet long. This adit was started on a mineralized log, part of which is still exposed on the north side of the portal.

The faces of all three adits are barren and contain no radiometric count above background.

Pack Rat claim

Three short adits, ranging from 10 to 40 feet in length, were driven about N. 60° W. into the west wall of the Dolores River Canyon. The adits are about 75 feet apart. The northerly two adits are driven in the lower part of the third rim of the Salt Wash, the most southerly adit was driven into the middle, more massive part of the third rim, which is about 30 feet thick at the adits. The lower 10 feet of the third rim is well exposed in a cut between the 2 northerly adits. A number of thin layers of weakly radioactive carbonaceous siltstone, ranging from one-half inch to 3 inches in thickness, make up less than 10 percent of the lower 10 feet of the

third rim. The carbonaceous lenses might contain as much as 0.08 percent eU_3O_8 as indicated by Geiger counter.

SAMPLING AND ORE RESERVES

No samples were taken by the examiners, but the radioactive lenses were tested with a scintillometer. Some anomalus radioactivity was noted, particularly in the Rainy Day workings. There are no ore reserves at the present time, and it is not expected that substantial ore reserves will be found by further development. There are no producing mines within 2 miles of the subject property.

APPLICANT'S ESTIMATED COST OF PROJECT

The applicant requested aid in making a turnaround at the end of the access road on the Rainy Day claim, connecting the access road with the Pack Rat workings, drifting 300 feet on the Rainy Day claim, drifting 150 feet on the Pack Rat claim, and constructing a tool house and an ore bin. The applicant's estimated costs are as follows:

Independent Contracts:

Access road to Pack Rat at $14.00/hr.	$1,000.00	
Rainy Day turnaround at $14.00/hr.	100.00	
Total Independent Contracts		$1,100.00

Labor and Supervision:

Labor for drifting 450 feet, 2 men 90 days at $35.20/day	$ 3,168.00	
Supervision	1,584.00	
Total Labor and Supervision (should be $4,752.00)		$ 4,742.00

Operating Materials and Supplies:

Powder, fuse, bits, water	$ 990.00	
Gas and oil	200.00	
Total Operating Materials and Supplies (should be $1,190.00)		$ 1,160.00

Operating Equipment (owned):

* Compressor and two small tanks	$ 800.00	
* 150 ft. air line and 150 ft. water line	100.00	
* Jackhammer	300.00	
* Wheelbarrow	35.00	
* Scoops	25.00	
Drill steel	400.00	
Air and water lines	200.00	
Total Operating Equipment		$ 1,860.00

* Owned by applicant

Rehabilitation and Repairs:

None

New Buildings, Improvements, Installations:		
Cabin for tool house	$ 200.00	
Ore bin	100.00	
Total New Buildings, Improvements, Installations		$ 300.00
Miscellaneous:		
Employer's liability insurance and payroll taxes	$ 274.60	
Repairs	158.00	
Estimated payroll tax	735.30	
Total Miscellaneous		$ 1,167.90
Total Estimated Cost: (should be $10,329.90)		$12,097.90
Estimated Cost per foot of drifting (including road, shack, and bin)		$ 26.88

Three mathematical mistakes were noted in the applicant's cost figures.

The applicant proposes to drive 450 feet of drift using 1,440 hours of labor, or ninety 2-man shifts, a converted 4-cylinder Ford engine for a compressor, and a wheelbarrow for tramming.

CONCLUSIONS AND RECOMMENDATIONS

The sandstone rims on and in the vicinity of the applicant's property are judged unfavorable for significant uranium ore deposits. This fact coupled with the small size and sparse distribution of the known ore lenses precludes the chance that the applicant's proposed exploration will discover significant amounts of ore or individual lenses containing over 10 tons. The examining team therefore recommends that the application, DMEA Docket 4611, be denied.

February 21, 1957

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA-4611 (Uranium), J. Ben Williford (Pack Rat and Rainy Day claims) Dolores County, Colo.

The application for J. Ben Williford, Docket DMEA 4611, in the amount of $12,097.90 was received in this office on February 20, 1957.

A field examination will be made and suitable report prepared by an engineer from the Denver or Grand Junction office.

W. H. KING
W. H. King

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 28 1957

DATE	INITIALS	CODE
3/1	C	220
"	Murphy	~~700~~

DMEA
DEPARTMENT OF THE INTERIOR
FEB 21 1957
REGION III
DENVER, COLORADO

cc: W. M. Traver(2)
E. N. Harshman
J. W. Hasler
M. M. Salsbury
J. F. Shaw

Sec(2)

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 25 1957

DATE	INITIALS	CODE
2/25	C	220
~~2/25~~	~~Murphy~~ C	~~700~~

224 New Customhouse
Denver 2, Colorado

February 20, 1957

Memorandum

To: W. H. King (2) - w/copy Appln., Chmn's Let. and Memoranda
J. W. Hasler - w/copy Chairman's ~~Letter and Memoranda~~

From: DMEA Field Team, Region III

Subject: Docket DMEA-4611 (Uranium), J. Ben Williford
(Pack Rat and Rainy Day claims) Dolores County, Colorado

Enclosed are copies of the subject application in the amount of $12,097.90, a transmittal letter from the Chairman of the Operating Committee to the Executive Officer, and memoranda of review by J. S. Crawford, USBM, and N. E. Nelson, USGS. A field examination and suitable covering joint Report of Examination are requested.

A copy of the application was furnished J. W. Hasler by Field Team memorandum of January 21, 1957, and herewith is transmitted a copy of three maps to be incorporated with that application.

Your special attention is directed to the last paragraph of the Chairman's transmittal letter regarding inclusion of all claims to be benefited, in the event a project appears to be warranted. This office should also be advised in advance in order that we may obtain Owner's Consent to Lien and Subordination Agreement forms.

Please return the Bureau of Mines' copy of the application with your Report of Examination.

DMEA Field Team, Region III

Original signed by
W. M. TRAVER

By W. M. Traver
Executive Officer

WMT:bh

cc-Sec. Op. Comm. (2)
Harshman) w/copy Chmn's let-
DMEA-4611) ter and memoranda
Chron.

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
2/12	Murphy	700
"	Ellis	700
2/13	Selbridge	130
"	Johnson	110
"	Chittenden	100
2/14	C	220

700

Lamb
Nelson

FEB 13 1957

Mr. J. Ben Williford
Box 304
Cortez, Colorado

Re: Docket No. DMEA-4611 (Uranium)
Pack Rat and Rainy Day Claims
Dolores County, Colorado

Dear Mr. Williford:

The application for assistance in exploring your claims, 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:

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/gla
2-12-57
cc to: Admr.'s Reading File
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

R.C.L.

8623

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
2/12	Murphy	700
"	Ellis	700
2/13	Selfridge	130
"	Johnson	110
"	Gottschalk	100
		220

700

FEB 13 1957

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

Re: Docket No. DMEA-4611 (Uranium)
J. Ben Williford
Pack Rat and Rainy Day Claims
Dolores County, Colorado

Dear Mr. Traver:

The captioned application is referred to Region III Field Team for investigation, a field examination if deemed advisable, and recommendations.

Enclosed are copies of memoranda, dated January 30 and February 1, 1957, by J. E. Crawford, USBM, and N. E. Nelson, USGS, respectively, relating to the application. Also enclosed for Field Team use are one copy of the application and two extra sets of the three maps needed to complete the two copies of the application retained by the Field Team.

On Form MF-103 submitted by the Applicant, the recording data is given for only the Pack Rat and Rainy Day claims. However, on the location map submitted, eight contiguous claims are shown as belonging to the Applicant. It is possible that all the eight claims would benefit by the proposed work. If a field examination indicates that a project is warranted, the Field Team should request the inclusion of any claims, owned by the Applicant, which would benefit by the project.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

FMMurphy/gla 2-12-57
cc to: Admr.'s Reading File
Operating Committee
Code 700
Mr. Murphy
T. H. Kiilsgaard, 5224
Jack Kratchman - AEC

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

N. E. Nelson
Member, Geological Survey

8623

IN REPLY REFER TO:

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

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 5 1957

DATE	INITIALS	CODE
2-5	C	220
2-5	~~[illegible]~~	700
	Murphy	
	✓	

comments complete

February 1, 1957

Re: DMEA 4611
J. Ben Williford
Pack Rat and Rainy Day Claims
Dolores County, Colorado
$12,097.90 - Uranium

Memorandum

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

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

The applicant requests assistance in further exploration by drifting of claims underlain by the Morrison formation. Underground work has been done at two locations and a total of 25 tons of 0.14% U_3O_8 has been produced from 200 feet of work in the Rainy Day Mine. The 35-40 feet of work at the Pack Rat prospect appears to have produced no ore, but in 2 adits the background count is high. A sketch map of the Rainy Day shows 2 tunnels, 75 and 125 feet long. The 75-foot tunnel, No. 1 is said to show 3 feet of good ore and the 125-foot tunnel, 2 feet, but the faces of the tunnels seem to be in low grade, hence the request for assistance. Field Office may have information concerning the property.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

OFFICIAL FILE COPY DMEA RECEIVED JAN 31 1957		
DATE	INITIALS	CODE
1-31	C	220
1-31	Ellis	700

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

Date January 30, 1957

DMEA Docket No. 4611
DMEA Contract No.
Commodity Uranium
Name of applicant J. Ben Williford
Name of property Pack Rat and Rainy Day
Location of property Dolores Co., Colorado
Estimated cost of project $12,097.90

Memorandum

To: Ernest William Ellist, DMEA Member
Uranium Commodity Committee

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

Subject: Review of Application
(Application, Field Team Report, etc.)

1. Date of subject document: 1/10/57. 2. Date received by reviewer: 1/25/57.

3. Prior reports on this property known to reviewer: Yes [ ] No [x]

4. Prior reports on nearby properties known to reviewer: Yes [ ] No [x]

5. Information available on past production: Yes [ ] No [x]

6. Other pertinent factors known to reviewer: Yes [ ] No [x]

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location [ ]
   b. Ownership [ ]
   c. Evidence of mineralization [ ]
   d. Geology [x]
   e. Proposed exploration method [x]
   f. Alternate exploration method [ ]
   g. Costs [ ]
   h. Mineralogy [x]

9. Action advised:
   a. Obtain information from applicant [a]
   b. Refer to Field Team [ ]
   c. Denial [ ]
   d. Agree with Field Team [ ]
      1. Consult with Mr. _____ at _____ AEC office.
   e. Disagree with Field Team [ ]
   f. Support alternate plan [ ]
   g. Request another consultation [ ]
   h. Approval [ ]

10. Remarks: (Use back of page if necessary)

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

January 25, 1957

Mr. J. Ben Williford
P. O. Box 304
Cortez, Colorado

Subject: DMEA-4611

Dear Mr. Williford

Your application for exploration assistance, dated January 10, 1957 submitted to our office at Denver, has been assigned Docket Number DMEA-4611 and referred to the Rare and Miscellaneous Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

(Sgd) Allen S. Dakan (cw)
Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

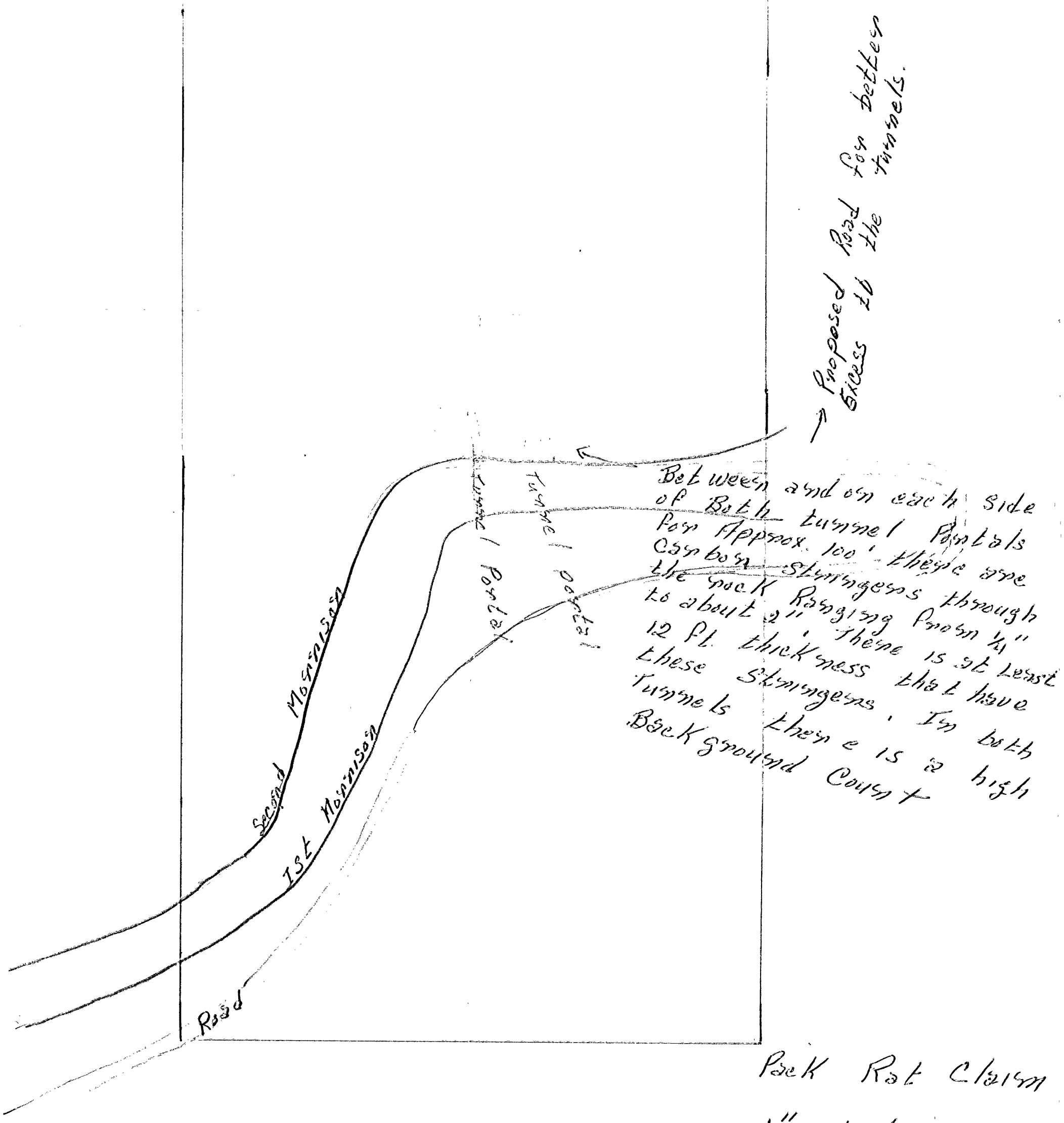
Code 700

Region III. Denver 2, Colorado

6816

Exhibit "A"

The Morrison Formation on this claim is Approx 100' thick.
The slope of the Hill here probably Runs close to 50° to the top.

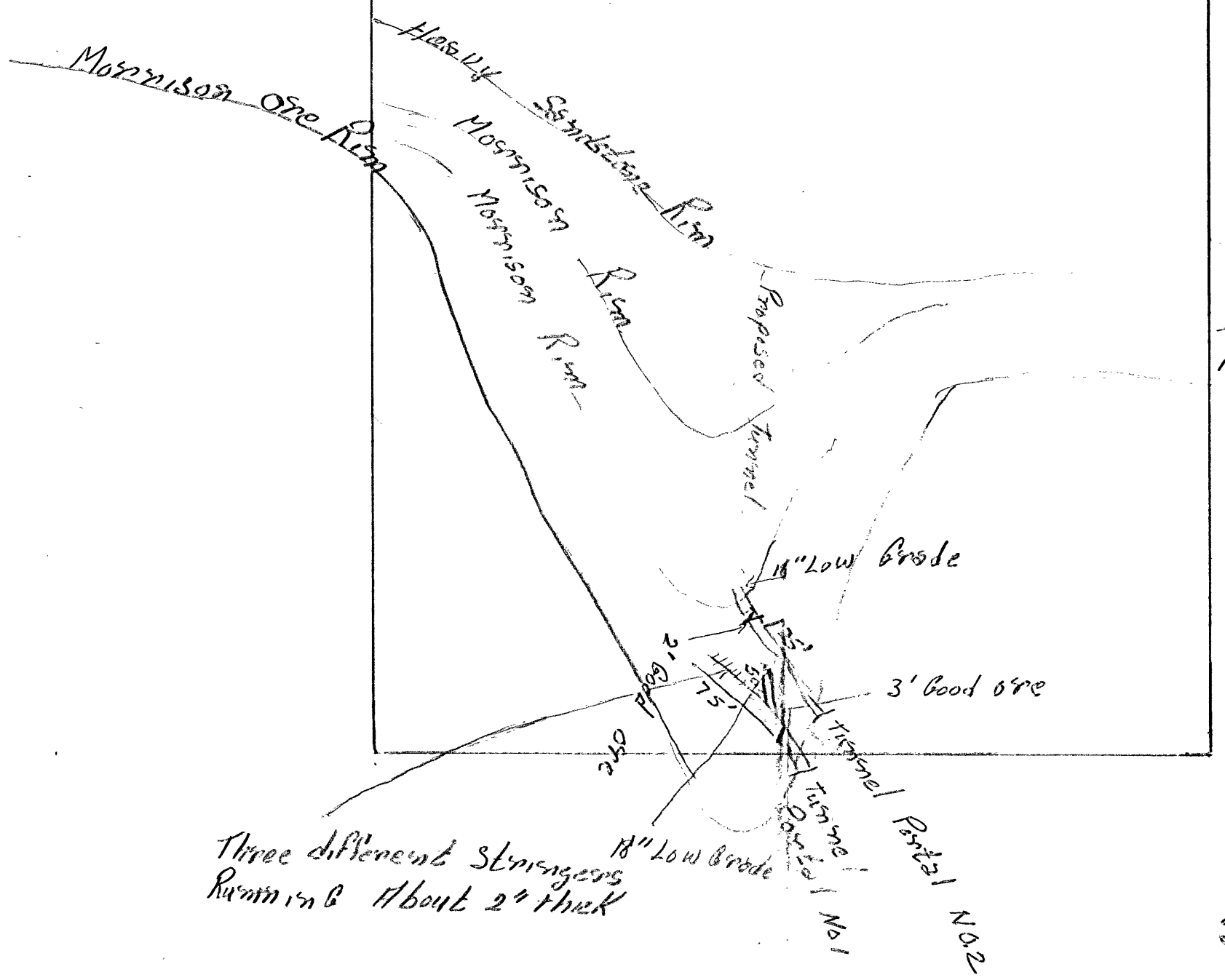


Pack Rat Claim
1" = 100'

Exhibit "B"

On the tunnel floor of both tunnels there is Shale. Above the Shale there is Approx. 10' that there is one indications. The Morrison formation on this Claim is Approx. 100' thick.

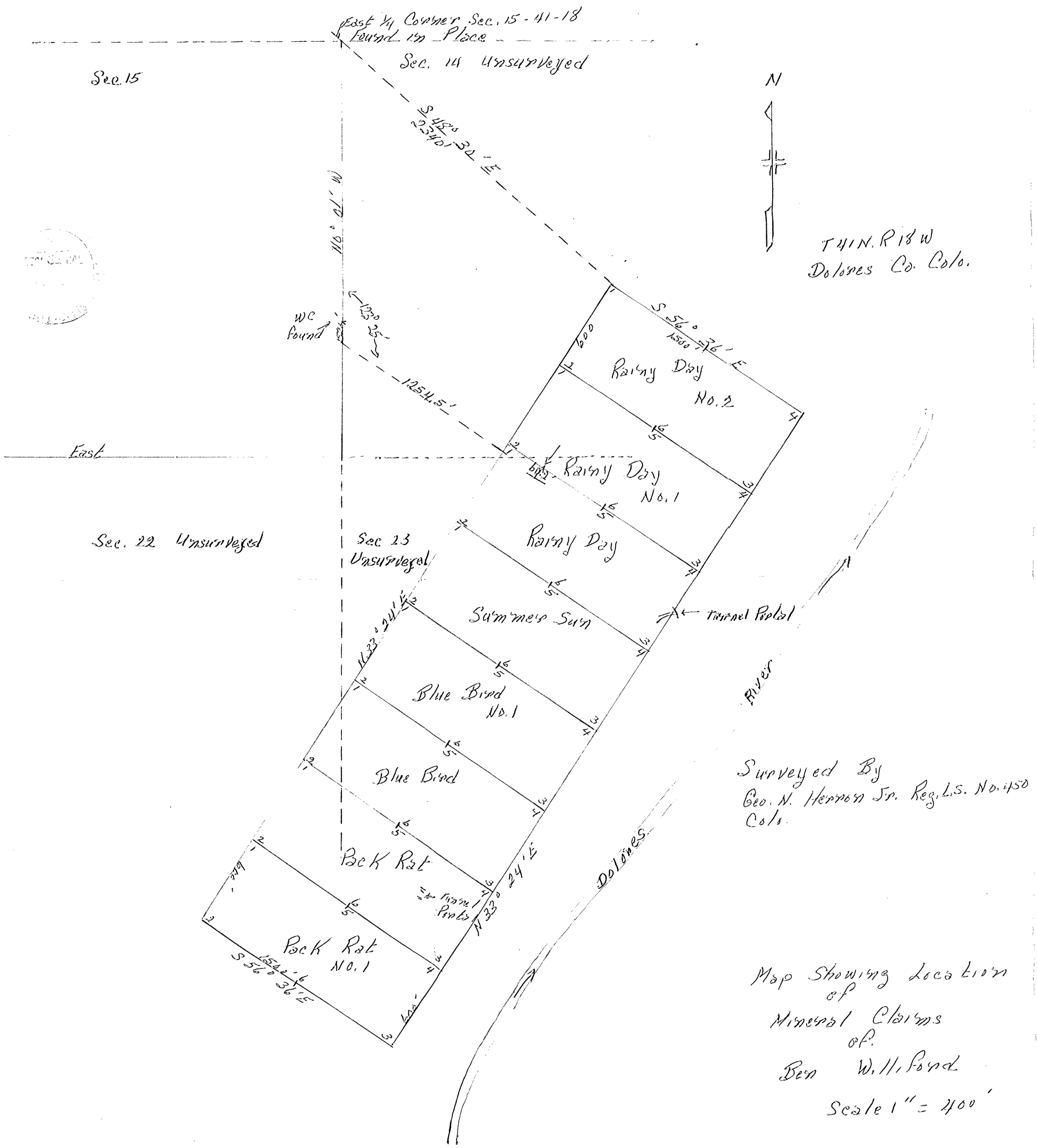
There have been several miners and Geologists who have looked at this claim who think that there is a large one Body at least by the time we reach this heavy Sandstone Rim.



Approx 110' Slope from 1st Morrison Rim to Heavy Sandstone Rim

Rainy Day Claim

Scale 1" = 100'



Map Showing Location
of
Mineral Claims
of
Ben Willford

Scale 1" = 400'