IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
OCT 25 1954

October 22, 1954

Memorandum

REVIEW OF APPLICATION DMEA-3524 (Uranium)

To: E. W. Ellis, Defense Minerals Exploration Administration
From: R. D. Trace, U. S. Geological Survey
Applicant's name and address: Intermountain Uranium Corp., Monticello, Utah
Name of property: Lea, Jeannie, and Aqua groups
Location of property: Lavender Canyon, San Juan County, Utah
Summary of applicant's proposal:
Stage I: Wagon drill 310 holes on a 200-foot grid pattern.
Stage II: Wagon drill 110 holes between the 200-foot grid holes.
Sources of information on applicant's property:
Photogeologic map of Carlisle 16 Quadrangle, San Juan County, Utah, USGS TEM 375 (open filed).
Comments:

The applicant gives us the following information:

1. The potential ore-bearing formation underlies the area. (This is confirmed in TEM-375.)

2. Small quantities of ore have been produced from 2 claims a little over a mile to the northwest and "immediately east."

3. The geologic report says "several prospect pits have been dug (where?). . .and mineralization was observed (how much?). . .a great deal of drilling is under way (nearby) and favorable results are indicated. . ." (But nowhere does the report tell us what can be seen in the project area.)

4. The geologic report talks about radioactivity anomalies so vaguely that it means nothing whatsoever.

5. The geologic report, in discussing the localization of ore in the channels, says "Additional field work is needed to definitely establish the channel trends, but it is SUFFICIENT TO SAY (my caps) at this time that such channels do exist on the property under discussion and several of them are mineralized. . ." This is very interesting, but where?

Some minor discrepancies are evident, i.e. the west boundary of the Lea and Jeannie groups is shown differently in the applicant's maps. If the area is approved for a project, the number of holes in Stage I should be reduced and Stage II drilling should be eliminated, as it is development drilling.

In summary: The application for a project is presented in a weak manner. I would like to see a geologic map showing some or all of the following: channels, pits with samples, location and strength of anomalies, and an evaluation of the ore-bearing sandstone in terms of favorability criteria. All this assumes that the ore-bearing sandstone is exposed in the area.

RECOMMENDATION: Request more information.

R. D. Trace

RDTrace:hlm
G-10/22/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641

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UNITED STATES
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Docket file
J. E. Crawford, 3641

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

RECEIVED
OCT 13 1954

October 12, 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

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

Subject: DMEA Docket No. 3524, Intermountain Uranium Corporation, Monticello, Utah

I have reviewed the application included in the subject docket and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

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

John E. Crawford

Attachment

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

Defense Materials Administration
RECEIVED
OCT 13 1954

October 12, 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

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

Subject: DMEA Docket No. 3524, Intermountain Uranium Corporation, Monticello, Utah

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John E. Crawford

Attachment

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration
RECEIVED
OCT - 8 1954

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. 3524
Metal or Mineral Uranium
Date Received
Estimated Cost $35,240
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: [redacted], Monticello, Utah.

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

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

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

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying sheets. See attached sheets. 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

See attached sheets

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

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

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

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

See attached sheets

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

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

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

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

(*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 Uranium

(*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 60 days and be completed within 4 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated August 10, 1954, 195__

INTERMOUNTAIN URANIUM CORP.
(Applicant)

By F. Bennion Redd

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

INTERMOUNTAIN URANIUM CORPORATION
Monticello, Utah.

Form
MD-:03

RECEIVED
OCT 8 1954

1. NAME OF APPLICANT:

(a.) Intermountain Uranium Corp.

Monticello, Utah.

(b.) A Corporation; Incorporated in the State of Utah.

(c.) Keith H. Redd, Pres., Monticello, Utah.

Alfred Frost, Vice-Pres., Monticello, Utah.

E. Dennion Redd, Sec. Treas., Monticello, Utah.

(d.) Not Applicable

3. APPLICANT'S PROPERTY RIGHTS:

(a.) The land consists of 24 unpatented mining claims, i.e. The Lea claims numbers 1 - 10, The Aqua claims numbers 1 - 8, The Jeannie claims numbers 1 - 5 and the Patty 1. These claims area located in T. 31 S., R. 21 E.

(b.) Not applicable

(c.) Owner by location

(d.) Not applicable

(e.) Not Applicable

(f.)

NAME OF CLAIM	BOOK NO.	PAGE NO.	COUNTY
Lea 1	113	361	San Juan
" 2	"	362	"
" 3	"	362	"
" 4	"	363	"
" 5	"	363	"

NAME OF CLAIM	PAGE NO.	PAGE NO.	COUNTY
Lea 6	113	363	San Juan
Lea 7	"	364	"
Lea 8	"	365	"
Lea 9	"	365	"
Lea 10	"	366	"
Jeannie 1	"	366	"
" 2	"	367	"
" 3	"	367	"
" 4	"	368	"
" 5	"	368	"
Betty 1	"	369	"

4. [illegible] DESCRIPTION

(a.) Reference to the attached claim map will show that both the Consolerente and the Lavender groups of claims have been transferred to the Lavender Uranium Company, and the Intermountain Uranium Company has retained a 12½ royalty on the [illegible] ore only. A small mining operation is underway on the Consolerente No. 2 claim, but none of the mine ore is available to the public, nor the Intermountain Uranium Company.

On August 26, 1952, the Intermountain Uranium Company entered into a mining lease agreement with the Red Cliff Mining Company, but this agreement covered the claims located to the Lavender Uranium

Company which claims are not included in this application for a DMEA loan.

In May, 1952 one load of ore weighing 22495 pounds was shipped from the Conglomerate #7 claim. Uranium content was .28%. One load of ore was shipped from the Conglomerate #2 claim which weighed 12703 pounds and averaged .36% uranium. These claims are not included in this application for DMEA assistance, however.

(b.) Road construction work and access roads to all the groups of claims mentioned previously has been done.

The mine workings on the Lavender Uranium Company property (which is immediately east of the groups of claims for which DMEA assistance is being sought) are accessible, but maps are not available.

Daily production is unknown, but the estimated reserve is 2,000 tons of .25% uranium ore.

(c.) See attached geologic report

(d.) The area is accessible from U.S. Highway 160 from a point 44 miles south of the Town of Moab, Utah; thence in a westerly direction for about 25 miles; thence in a southerly direction for approximately 3 miles into the Lavender Canyon area. All access roads are in good condition.

The distance to the AEC mill at Monticello, Utah is 40 miles or 80 miles to the AEC buying station at Moab.

Supply and residence points are either Moab or Monticello.

(e.) Manpower, materials and supplies are available at Moab or Monticello, Utah.

Water is available from the annual stream immediately north of the claims.

Power must be supplied by a diesel generator.

INTERMOUNTAIN URANIUM CORPORATION
MONTICELLO, UTAH

Form
MF-103

5.

(a.) Uranium

(b.) The proposed exploration program will consist of wagon drilling in two areas in which there are no operating mines. Maps of both areas are attached, and these areas encompass the Aqua groups of claims, and the Jeannie, Patty, and Lea groups of claims. Initial drill stage maps are attached and initial drilling will be on 200 foot centers to delineate favorable ground for further exploratory drilling. The attached 'Drilling Stage Maps' also show the relationships of all drill holes to particular stratigraphic horizons

(c.) Work will start within 60 days and be completed within 4 months.

(d.) The Intermountain Uranium Corp. has been active in the uranium industry since early in 1951. Actual supervision of the program will be assigned to a geologist who has had experience in supervising exploratory drilling operations of this nature.

INTERMOUNTAIN URANIUM CORP.
Monticello, Utah

Form
MF-103

6. ESTIMATE OF COSTS

(a.) First Stage Drilling on the Jeannie, Lea and Patty Groups; 124 wagon drill holes to a depth of 100' @ .60/ft — $7,440.00

Second stage drilling on the above groups; 50 wagon drill holes to a depth of 100 feet @ .60/ft — $3,000.00

First Stage drilling on the Aqua claims; 186 holes to a depth of 100 ft. @.60/ft — $11,100.00

Second stage drilling on the above claims; (Aqua); 60 holes to a depth of 100'@.60/ft — $3,600.00

Bulldozer Operation; construction and repair of roads and drill sites; 30 days @ $100.00/day — $3,000.00

Supervision and Consultants (Itemized below) — $4,500.00

Misc. (Item below) — $ ~~[illegible]~~ 600.00

Contingencies — $2,000.00

TOTAL COST OF PROGRAM — $35,240.00

(b.) Supervision — $2,000.00
Geologists — $1,000.00
Surveying — $1,500.00

(c.) None

(d.) None

(e.) None

(f.) None

(g.) Analytical work; 200 samples @ $3.00/sample — $600.00

INTERMOUNTAIN URANIUM CORP.
Monticello, Utah.

Form
MF-103

(h.) Contingencies $2,000.00

Dated August 10, 1954.

INTERMOUNTAIN URANIUM CORP.
APPLICANT

By F. Bennion Redd

GEOLOGIC REPORT ON THE LAVENDAR CANYON-BRIDGER JACK MESA AREA, SAN JUAN COUNTY, UTAH

T. 31 S., R. 21 E.

By

Richard A. Teichman Jr.

and

Jack I. McLelland

June 4, 1954

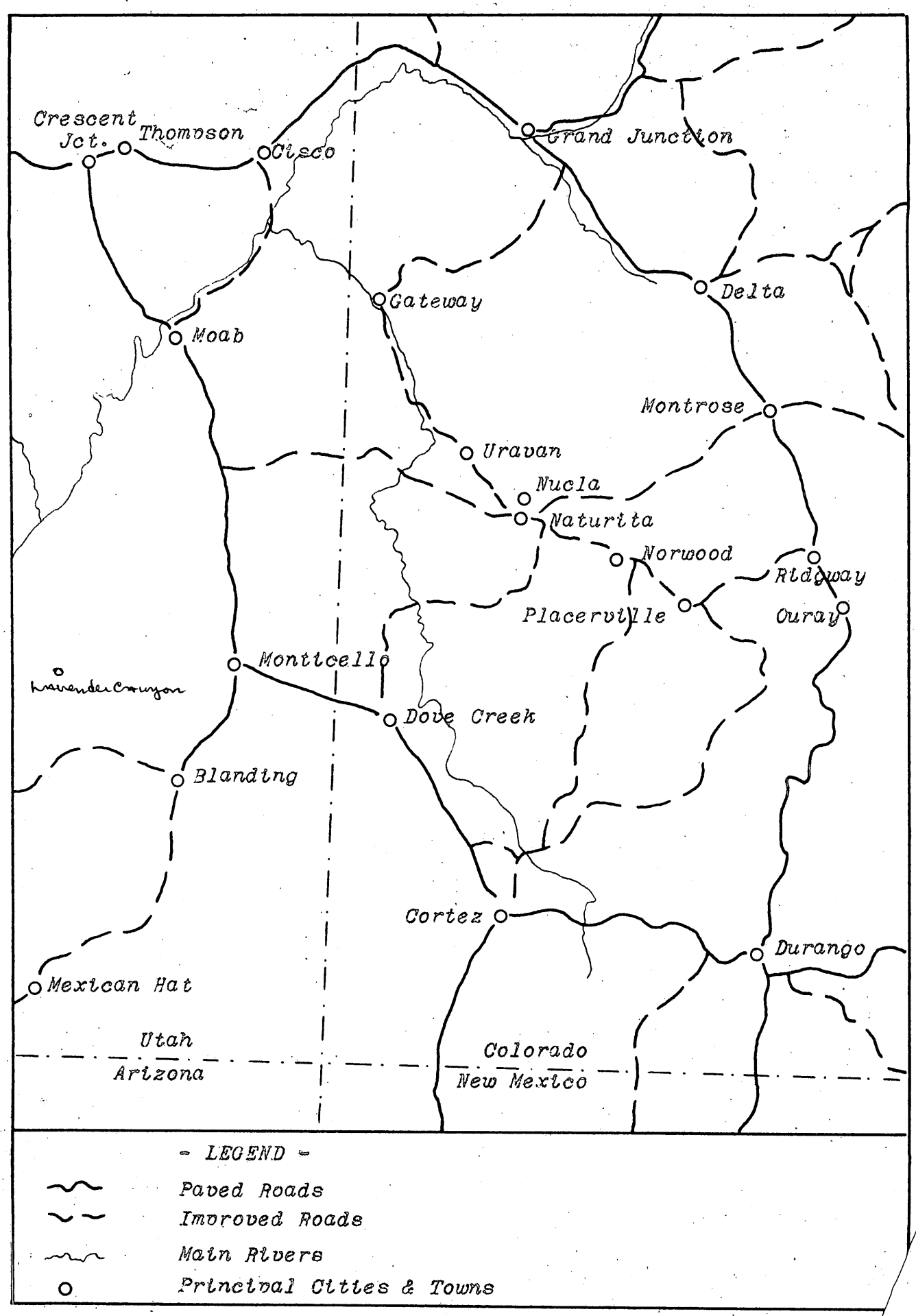

FIGURE - - INDEX MAP, COLORADO PLATEAU AREA

oooO CONTENTS Oooo

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1. Introduction	1
2. Past and Present Mining Activity	2
3. Geomorphology and Climate	3
4. Airborne Radiometric Reconnaissance	4
5. Geology	5
6. Tectonic Structure	6
7. Economic Geology	7
8. Conclusions and Recommendations	8

ILLUSTRATIONS

1. Location Map, Lavender Canyon, Bridger Jack Mesa Area, San Juan County, Utah.

2. Generalized Stratigraphic Section, Lavender Canyon, Bridger Jack Mesa Area, San Juan County, Utah.

3. Claim Map, Intermountain Uranium Corp, Lavender Canyon Area., San Juan County, Utah.

INTRODUCTION

A reconnaissance of the Lavendar Canyon - Bridger Jack Mesa area was undertaken during the latter part of May and the first Part of June, 1954, at the request of Intermountain Uranium Company, of Monticello, Utah. The objectives of the preliminary reconnaissance were:

1. to examine and study the outcrops of the Triassic Mossback member of the Chinle formation, and the Triassic Shinarump Conglomerate

2. to determine whether or not evidence of mineralization could be found, and whether or not ore trends could be projected into the area under discussion from surrounding favorable areas.

3. to specifically examine the groups of claims in Lavandar Canyon known as the Lea, Glenna, Jeannie, Pattie, Aqua, Yellow Dandy, Doodle, Vagabond, Copy-Cat, Bee Bee, Greenhorn, Indian Creek, Inspiration, and Owochoma.

4. to evaluate the above named areas and claims in terms of the possible presence of uranium ore bodies of commercial size, and to evaluate the property in terms of the possibility of further exploring the property by drilling should favorable criteria be found.

5. to determine whether or not sufficient justification existed to make application for government aid under the provisions of DMEA order 1, dated March 7, 1952.

Approximately 24 square miles make up the Lavendar Canyon - Bridger Jack Mesa Area, and of this about seven square miles in the vicinity of the above named claims was investigated.

The area is located in San Juan County, Utah, on the southeast side of the Colorado River. It is accessible from Monticello, Utah, by follwoing U.S. Highway 160 north for 12 miles to the Home of Truth, a religious sect; thence west on a country road for 21 miles to the Dugout Ranch; thence following the right branch of the dirt road for about three miles; thence a short distance in a southwesterly direction to the property. The access roads into the area are passable throughout the year, and new roads are being constructed and old roads are being rebuilt.

PAST AND PRESENT MINING AND EXPLORATION ACTIVITY
(PRIVATE AND GOVERNMENT)

The property examined consists of 93 claims broken down into the following groups:

Lea 1 - 10	Section 15
Aqua 1 - 8	Section 21,22,27,28
Yellow Dandy 1 - 3	Section 27, 28, 33
Doodle 1 - 2	Section 33
Vagabond 1 - 6	Section 33
Glenna 1 - 29	Section 20, 21, 28, 29
Copy Cat 1 - 7	Section 17, 20
Bee Bee 1 - 4	Section 17, 19, 20
Greenhorn 1 - 5	Section 17, 20
Indian Creek 1 - 3	Section 4, 5
Inspiration 1 - 10	Section 4, 5, 8, 17
Owochomo 1 - 6	Section 8, 17, 18

No guarntee is made as to title nor compliance in the past with State and Federal mining laws.

At the present time there is no record of production of uranium ores from within the area covered by the preliminary reconnaissance on file in the Grand Junction office of the United States Atomic Energy Commission. However, several prospects pits have been dug in the Triassic Mossback member (TrS on attached map) of the Chinle formation and mineralization was observed.

At the southern tip of Bridger Jack Mesa a great deal of drilling activity is under way and favorable results are indicated.

8 The United States Atomic Energy Commission is requesting that owners of property in the Salt Creek Mesa area (immediately south of the property examined) execute 'Exploration Agreements' with the Commission. This step generally means that the Commission is considering some form of exploratory operation other than reconnaissance, presumably drilling. The favorable horizon in the Salt Creek Mesa area is the same as that exposed in Lavender Canyon.

GEOMORPHOLOGY AND CLIMATE

The elevation within the Lavender Canyon area ranges from 6,000 feet in the northern part of the area to 7,000 feet in the southern part of the area, with an apparent relief of approximately 700 feet.

The major land forms within the area are two northeasterly trending mesas; one named Bridger Jack Mesa and the other, which lies immediately west of Bridger Jack Mesa and is un-named.

The cliffs forming the sides of these mesas have apparently been cut by the lateral swinging of a stream which when rapidly moving and incising its channel into horizontal strata of varying resistance causes the valley walls to consist of alternating vertical cliffs and talus slopes with the angle of repose of the sediments on the weaker strata.

The drainage pattern is dendritic, which is characteristic of areas where structural controls are not exaggerated. The area under discussion dips gently to the northeast, but the main drainage to the northwest and the Colorado appears to be superposed. Abundant water is available a short distance from the properties.

The climate is semi-arid with less than 20 inches of rain a year. Runn off during the summer months can be dangerous, particularly when traveling in dry washes.

AIRBORNE RADIOMETRIC RECONNAISSANCE

During the course and as part of the field examination of the previously listed properties, the rims of the Mossback and the Shinarump were flown by an airborne unit consisting of a pilot and a geologist using a two-seater Luscombe aircraft mounting a Model SAB-7 airborne scintillator.

During the course of the radiometric reconnaissance, no true anomalies were found, but several areas of high background were noted and plotted on the attached maps. The rims in the vicinity of these areas of high background were examined and found to be anomalous.

GEOLOGY

No detailed examination or geologic study of the Lavender Canyon - Bridger Jack Mesa area is recorded in the literature although some reference to the area is made by E.T. McKnight (1940).

The rocks exposed in the area range in age from the Permian Cedar Mesa Sandstone member of the Cutler formation to the Navajo sandstone of the Jurassic.

Several detailed sections were measured throughout the Lavander Canyon area. No detailed column will be included within the framework of this report, however. It should be noted that no pronounced variation in the thickness of the Moenkopi was noted, although sufficient exists to confirm the theory of 'channeling' as described in the literature. Channels being sedimentary deposits which have scoured down into and are nonconformable upon the Triassic Moenkopi formation.

These channels or scours are often mineralized as was observed on the Lavender 1 claim, on the Lavender 3 claim and in the southern part of the district where development activity is underway. The importance of these channels and scours obviously depends upon the relation to mineralization. The association between the two has been well established in the White Canyon area to the south and in the Inter-River area to the north.

The trends of the channels and scours within the area under discussion appear to oriented in a

TABLE 1. - Generalized Section of the Lavender Canyon - Bridger Jack Mesa Area

System	Formation	Thickness	Description
Jurassic	Wingate Sandstone	340	Light red - buff; medium grained sandstone; vertical joint system; stained with desert varnish; forms vertical cliffs.
Triassic	Chinle Formation	420	Gray-green to red and lavender, fine to medium grained to conglomeratic in places; thin beds of siltstone and mudstone; some carbon present.
	Mossback formation	50 - 100	Light gray-green, fine to medium grained, carbonaceous with fossil logs; lenses of arkose at base; forms vertical ledges.
	Shinarump Conglomerate	0 - 20	Light gray, conglomeratic, quartz pebbles, some carbon; absent in places, poorly cemented.
	Moenkopi formation	450	Brown mudstone and siltstone; flaggy and fissile in places; purple in places below the Shinarump.
Permian	Cutler formation	675	

northeasterly direction, or about 20° to the trend of Bridger Jack Mesa. Additional field work is needed to definetly establish the channel trends, but it is sufficient to say at this time that such channels do exist on the property under discussion and several of them are mineralized and offer promise for development.

TECTONIC STRUCTURE

There are no pronounced folds within the area, but the sedimentary beds are dipping 2 - 3 degrees to the east off the east flank of an anticlinal nose that plunges under southwest of the property under discussion.

South of the property lies one of the major fault areas. The Shay Mountain graben is the most outstanding fault structure. It is a block that has been dropped 200 - 300 feet and it is 700 - 1500 feet wide. The exact time of faulting is unknown, but it is assumed that it occured simultaneously with the formation of the Abajo Mountains in late Cretaceous or early Tertiary.

Jointing is pronounced within the Triassic Mossback member of the Chinle formation. It is a closely spaced, conjugate jointing system with northeast and southeast strikes. Jointing in the Wingate sandstone is columular and strikes in the same direction as the Mossback member. There is no noticeable faulting within the Chinle or Moenkopi formations.

The drainage patterns and the escarpment are controlled by the joint systems. The joints appear

to be of the same age and no evidence has been found to confirm either a pre-mineral or post-mineral origin.

ECONOMIC GEOLOGY

Mineralization is to be found along most of the outcrop of the Mossback formation in the Lavender Canyon area. The background scintillation count is double normal on the Mossback bench. No mineralization has yet been found in any of the other formations within the area.

As has been mentioned active development is taking place immediately south and west of the properties under discussion. Roads are being built and passenger cars can now be driven into the area.

Ore is being stockpiled in several places south of the Lavender Canyon area, but no shipments have yet been made. Grab samples from the outcrops in the south Lavender Canyon area returned a 2% chemical assay. (AEC sample No. 34606 and 34605.) Approximately 5,000 feet of wagon drilling has been completed in the Lavender and Conglomerate groups of claims. Results were good and preparation is being made to ship ore.

The ore occurs at the base of the Mossback member in a gray-brown, medium grained sandstone that fills lenses and scours in the Moenkopi formation. Mineralization is of the uraninite type which is common to the Mossback member. Traces of secondary uranium minerals were noted as was some copper. The sandstones in some places have saturated with hematite.

The top few feet of the Moenkopi formation has been altered to a grey-green color. The lower 60% of the Chinle formation has also been altered as has been previously noted.

CONCLUSIONS AND RECOMMENDATIONS

Several conclusions were reached during the course of the reconnaissance of the Lavender Canyon - Bridger Jack Mesa Area. These are:

1. the properties under discussion are favorably located relative to mineralized outcrops.

2. it is felt that trends of 'channels and scours' can be predicted to a degree that would make a program of drilling feasible.

3. on several of the properties all favorable criteria for ore deposition, as described in the literature, have been observed.

4. the upper Chinle sediments have been altered to a marked degree. Alteration (color change) of sediments indicates the movement of solution; probably hydrothermal solutions. The association of alteration and mineralization is classic in the White Canyon area at the site of the Happy Jack mine.

Based on the foregoing conclusions the following recommendations are presented for consideration.

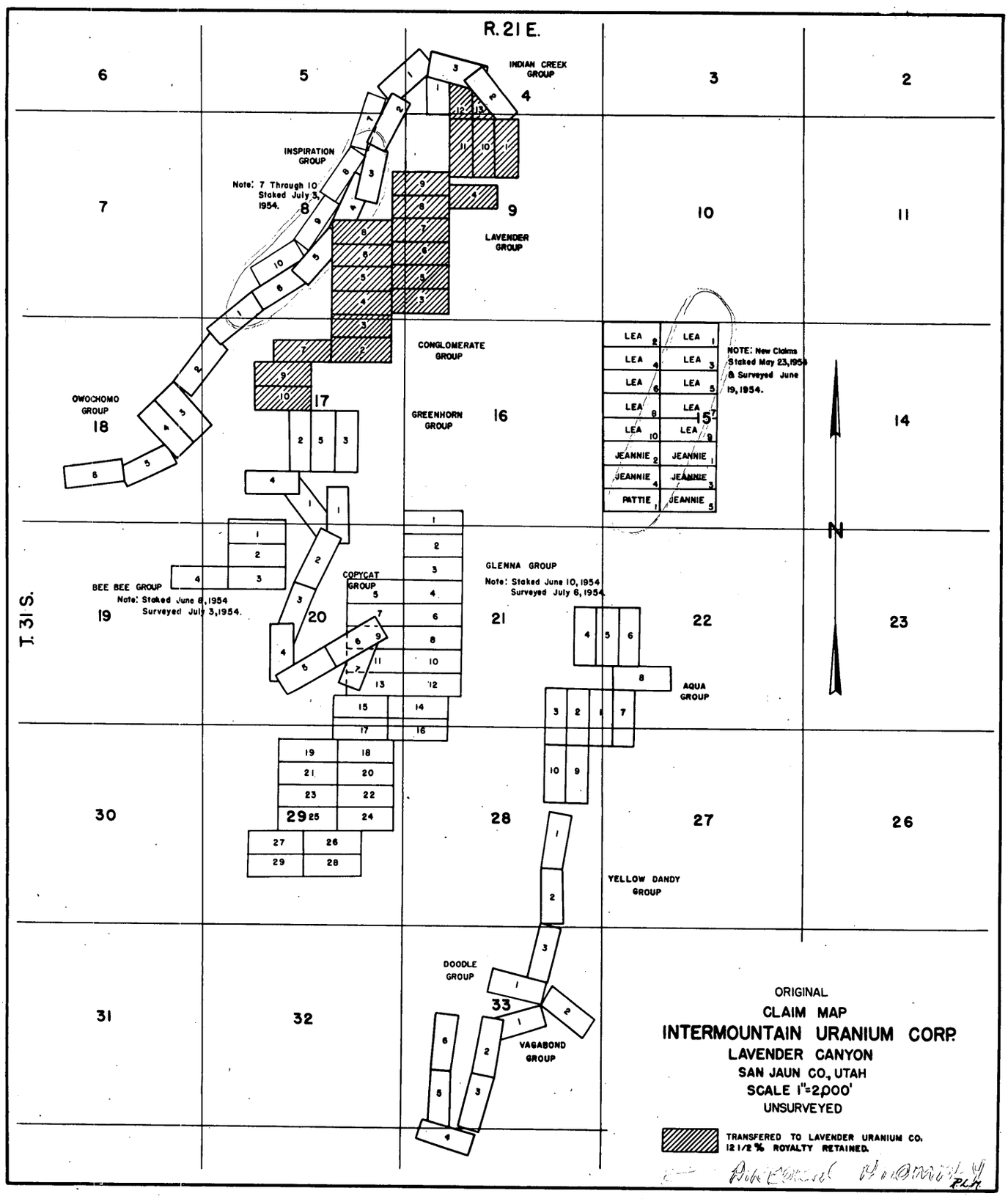
It is to be recommended that:

1. A reconnaissance and exploratory wagon drilling program be considered for the "Jeannie", "Pattie", "Lee", "Aqua", ~~"Inspiration", and "Quechamo"~~ groups of claims.

2. Initial drill holes be spaced on 200 foot centers to outline favorable ground to outline favorable ground for more intensive drilling.

Richard A. Teichman, Jr. Jack I. McLelland

Fig. 2


R. 21 E.
T. 31 S.
INDIAN CREEK GROUP
INSPIRATION GROUP
Note: 7 Through 10 Staked July 3, 1954.
LAVENDER GROUP
CONGLOMERATE GROUP
GREENHORN GROUP
OWOCHOMO GROUP
LEA
JEANNIE
PATTIE
NOTE: New Claims Staked May 23, 1954 & Surveyed June 19, 1954.
BEE BEE GROUP
Note: Staked June 8, 1954 Surveyed July 3, 1954.
COPYCAT GROUP
GLENNA GROUP
Note: Staked June 10, 1954 Surveyed July 6, 1954.
AQUA GROUP
YELLOW DANDY GROUP
DOODLE GROUP
VAGABOND GROUP
N
ORIGINAL
CLAIM MAP
INTERMOUNTAIN URANIUM CORP.
LAVENDER CANYON
SAN JAUN CO., UTAH
SCALE 1"=2,000'
UNSURVEYED
TRANSFERED TO LAVENDER URANIUM CO. 12 1/2 % ROYALTY RETAINED.

Surname copy
Ellis

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

MAR 16 1955

Mr. F. Bennion Redd, Sec.-Treas.
Intermountain Uranium Corporation
Monticello, Utah

Re: Docket No. DMEA-3524 (Uranium)
Lea claims, et al
San Juan County, Utah

Dear Mr. Redd:

This will acknowledge receipt of your letter dated March 11, 1955, which was in reply to our previous correspondence on the subject application.

It is noted that you now desire to have the application returned to you for a possible re-submission at a later date.

Under our regulations we cannot return the application. However, we will consider the docket closed. Should you desire to submit the needed information at a later date, you may file a new application and, where the questions were properly answered in the original application, a reference to that application for such answers will be in order.

Sincerely yours,

C. O. Mittendorf
By ESY
Administrator

EWEllis/gla
3-15-55
cc to: Admr.'s Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
Code 700
DMEA Field Team, Region III (2)

R.C.B.

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

March 15, 1955

Memorandum

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

From: Ernest Wm. Ellis, Chief
Rare & Miscellaneous Metals Division

Subject: Docket No. DMEA-3524 (Uranium)
Intermountain Uranium Corporation
Lea claims, et al
San Juan County, Utah

Referring to the Applicant's letter of March 11, 1955, to which a response has been prepared today, we are closing the subject application on our records by withdrawal, and request that your records be noted accordingly.

Ernest Wm. Ellis

Ernest Wm. Ellis

Surname copy

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

March 15, 1955

Memorandum

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

From: Ernest Wm. Ellis, Chief
Rare & Miscellaneous Metals Division

Subject: Docket No. DMEA-3524 (Uranium)
Intermountain Uranium Corporation
Lea claims, et al
San Juan County, Utah

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Ernest Wm. Ellis

Ernest Wm. Ellis

EWEllis/gla
cc to: Admr.'s Reading File
Docket
Code 700

3/14/55 gla

INTERMOUNTAIN URANIUM CORPORATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 14 1955

MONTICELLO, UTAH

March 11, 1955

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-3524
(Uranium)
Lea claims, et al
San Juan County, Utah

Gentlemen:

In regard to our application of August 10, 1954, for an exploration contract in the amount of $35,240.00, we wish to inform you that the geologist and engineers who were handling this application for us have failed to carry out their assigned duties and so we respectfully request that this file ~~to~~ be returned to us for later re-submission.

Sincerely yours,

INTERMOUNTAIN URANIUM CORPORATION

By: F. Bennion Redd
Secretary D.C.

FBR:dc

F. BENNION REDD
ATTORNEY AT LAW
MONTICELLO, UTAH

March 11, 1955

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-3524
(Uranium)
Lea claims, et al
San Juan County, Utah

Gentlemen:

In regard to our application of August 10, 1954, for an exploration contract in the amount of $35,240.00, we wish to inform you that the geologist and engineers who were handling this application for us have failed to carry out their assigned duties and so we respectfully request that this file ~~to~~ be returned to us for later re-submission.

Sincerely yours,

INTERMOUNTAIN URANIUM CORPORATION

By:

Secretary

FBR:dc

700

Surname copy

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

MAR 4 - 1955

Mr. F. Bennion Redd, Sec.-Treas.
Intermountain Uranium Corporation
Monticello, Utah

Re: Docket No. DMEA-3524 (Uranium)
Lea claims, et al
San Juan County, Utah

Dear Mr. Redd:

A review of your application of August 10, 1954, for an exploration contract in the amount of $35,240.00 reveals that our letters of October 26, 1954, and February 2, 1955, requested additional information necessary to process your application.

Inasmuch as we have received no reply, we assume that you no longer desire to proceed with the application. We wish to cooperate with you in the matter of allowing ample time, but if the needed data has not been received by April 3, 1955, we will then consider the docket closed.

Sincerely yours,

SIGNED

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

EWEllis/gla
3-4-55
cc to: Admr. Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
DMEA Field Team, Region III (2)

R.C.L.

Surname 700

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

FEB 2 1955

Mr. F. Dennion Redd, Sec.-Treas.
Intermountain Uranium Corporation
Monticello, Utah

Re: Docket No. DMEA-3524 (Uranium)
Lea claims, et al
San Juan County, Utah

Dear Mr. Redd:

Reference is made to our letter dated October 26, 1954, relating to the captioned docket.

Action on your application is pending receipt of the information requested in above-mentioned letter. If you are no longer interested in the processing of this application, please advise us.

Sincerely yours,

SIGNED

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

EWEllis:am
2-2-55
cc to: Admr. Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
DMEA Field Team, Region III(2)

rname copy

700

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

Ellis
Mitchell

OCT 26 1954

Mr. F. Bennion Redd, Sec.-Treas.
Intermountain Uranium Corporation
Monticello, Utah

Re: Docket No. DMEA-3524 (Uranium)
Lea claims, et al
San Juan County, Utah

Dear Mr. Redd:

In processing the captioned application we find that certain vital information is lacking.

The geologic report by Teichman and McLelland on the Lavender Canyon area states, "However, several prospect pits have been dug in the Triassic Moosback member (TrS on attached map) of the Chinle formation and mineralization was observed." Also, it is stated, "Mineralization is to be found along most of the outcrop of the Moosback formation in the Lavender Canyon area." Yet the claim maps which accompany the application fail to show just where the mineralization occurs. This was requested under "4. Physical description (c)" of the application.

Kindly forward a map or sketch (in quadruplicate) locating thereon any test pits where samples were taken and show what the samples assayed and across what widths. Also please give the location and strength of anomalies that were determined. If no test pits were dug, then possibly mineralization is shown to exist along the rim of the canyon. It is quite necessary that we have more than geologic theory upon which to make our recommendations.

When we receive this information we will be in a better position to judge the merits of your proposed project.

Sincerely yours,

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

EWEllis/gla
10-26-54
cc to: Admr. Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
DMEA Field Team, Region IV (2)

R.C.

10/25/54 gla

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
OCT 25 1954

October 22, 1954

Memorandum

REVIEW OF APPLICATION DMEA-3524 (Uranium)

To: E. W. Ellis, Defense Minerals Exploration Administration
From: R. D. Trace, U. S. Geological Survey
Applicant's name and address: Intermountain Uranium Corp., Monticello, Utah
Name of property: Lea, Jeannie, and Aqua groups
Location of property: Lavender Canyon, San Juan County, Utah
Summary of applicant's proposal:
Stage I: Wagon drill 310 holes on a 200-foot grid pattern.
Stage II: Wagon drill 110 holes between the 200-foot grid holes.
Sources of information on applicant's property:
Photogeologic map of Carlisle 16 Quadrangle, San Juan County, Utah, USGS TEM-375 (open filed).
Comments:

The applicant gives us the following information:

1. The potential ore-bearing formation underlies the area. (This is confirmed in TEM-375.)

2. Small quantities of ore have been produced from 2 claims a little over a mile to the northwest and "immediately east."

3. The geologic report says "several prospect pits have been dug (where?). . .and mineralization was observed (how much?). . .a great deal of drilling is under way (nearby) and favorable results are indicated. . ." (But nowhere does the report tell us what can be seen in the project area.)

4. The geologic report talks about radioactivity anomalies so vaguely that it means nothing whatsoever.

5. The geologic report, in discussing the localization of ore in the channels, says "Additional field work is needed to definitely establish the channel trends, but it is SUFFICIENT TO SAY (my caps) at this time that such channels do exist on the property under discussion and several of them are mineralized. . ." This is very interesting, but where?

Some minor discrepancies are evident, i.e. the west boundary of the Lea and Jeannie groups is shown differently in the applicant's maps. If the area is approved for a project, the number of holes in Stage I should be reduced and Stage II drilling should be eliminated, as it is development drilling.

In summary: The application for a project is presented in a weak manner. I would like to see a geologic map showing some or all of the following: channels, pits with samples, location and strength of anomalies, and an evaluation of the ore-bearing sandstone in terms of favorability criteria. All this assumes that the ore-bearing sandstone is exposed in the area.

RECOMMENDATION: Request more information.

RD Trace

R. D. Trace

10/13/54 fa

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

Defense Minerals Administration
RECEIVED
OCT 13 1954

October 12, 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

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

Subject: DMEA Docket No. 3524, Intermountain Uranium Corporation, Monticello, Utah

I have reviewed the application included in the subject docket and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

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

John E. Crawford
John E. Crawford

Attachment

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

October 11, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

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

DMEA - 3524 Intermountain Uranium Corp.

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

October 11, 1954

Intermountain Uranium Corp.
Monticello
Utah

Subject: DMEA-3524
Re: Exploration Assistance

Gentlemen:

The receipt of your application dated August 10, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3524 and referred to the Rare & Miscellaneous Metals Division.

Kindly refer to in any future correspondence relating to your application.

Sincerely yours,

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

224 New Customhouse
Denver 2, Colorado

October 5, 1954

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region lV

Subject: (Uranium) Application of Intermountain Uranium Corporation
Lea, Jeannie, and Patty Claims
San Juan County, Utah

Enclosed are two copies of the subject application requesting exploration assistance in the amount of $35,240.00.

A copy of this application has been forwarded to Mr. A. P. Butler, T.E.P.C.O., Building 21, Denver Federal Center, Denver, Colorado.

W H King
W. H. King

September 29, 1954.

Mr. W.H. King
Exec. Officer, DVEA
Field Team, Region IV
224 New Custom House
Denver, Colorado.

Dear Mr. King:

We submit herewith a revised application for DVEA assistance which you requested in your letter dated August 19, 1954.

I trust that the application is now complete, and can be processed.

Sincerely,

H. J. Fellmeth
of Tanner & Hanson
Moab, Utah.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Exploration Administration
RECEIVED
OCT 8 1954

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. 3524
Metal or Mineral Uranium
Date Received
Estimated Cost $35,240
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: INTERMOUNTAIN URANIUM CORPORATION, Monticello, Utah.

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

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

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

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

See attached sheets

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

See attached sheets

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

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

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

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

See attached sheets

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

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

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

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

See attached sheets

(*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 Uranium

(*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 60 days and be completed within 4 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated August 10, 1954, 195__

INTERMOUNTAIN URANIUM CORP.
(Applicant)

By F. Bennion Redd

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

INTERMOUNTAIN URANIUM CORPORATION
Monticello, Utah.

Form
MF-;03

1. NAME OF APPLICANT

(a.) Intermountain Uranium Corp.

Monticello, Utah.

(b.) A Corporation; Incorporated in the State of Utah.

(c.) Keith D. Redd, Pres., Monticello, Utah.

Alfred Frost, Vice-Pres., Monticello, Utah.

T. Dennion Redd, Sec. Treas., Monticello, Utah.

(d.) Not Applicable

3. APPLICANTS INTEREST IN THE

(a.) The land consists of 24 unpatented mining claims, i.e. The Lea claims numbers 1 - 10, The Aqua claims numbers 1 - 5, The Jeannie claims numbers 1 - 5 and the Patty 1. These claims area located in T. 31 S., R. 21 E.

(b.) Not applicable

(c.) Owner by location

(d.) Not applicable

(e.) Not Applicable

(f.)

NAME OF CLAIM	BOOK NO.	PAGE NO.	COUNTY
Lea 1	113	361	San Juan
" 2	"	362	"
" 3	"	362	"
" 4	"	363	"
" 5	"	363	"

NAME OF CLAIM	TOWNSHIP	SECTION	COUNTY
Lea 6	113	364	San Juan
Lea 7	"	364	"
Lea 8	"	365	"
Lea 9	"	365	"
Lea 10	"	366	"
Double 1	"	366	"
" 2	"	367	"
" 3	"	367	"
" 4	"	368	"
" 5	"	369	"
Patty 1	"	370	"

4. [illegible]

(a.) Reference to the office of claim [illegible] will show that both the Ramlocrete and the Lavender groups of claims have been transferred to the Lavender Uranium Company, and the Intermountain Uranium Company has retained a 12½% royalty on the two groups. A small mining operation is underway on the Double group No. 2 claim, but [illegible] of the mine are not available to the public, nor the Intermountain Uranium Company.

On August 26, 1952, the Intermountain Uranium Company entered into a similar lease agreement with the Atlas Vanadium Company, but this agreement covered the claims leased to the Lavender Uranium

Company which claims are not included in this application for a DMEA loan.

In May, 1952 one load of ore weighing 22495 pounds was shipped from the Conglomerate #7 claim. Uranium content was .28% . One load of ore was shipped from the Conglomerate #2 claim which weighed 12703 pounds and averaged .36 % uranium. These claims are not included in this application for DMEA assistance, however.

(b.) Road construction work and access roads to all the groups of claims mentioned previously has been done.

The mine workings on the Lavender Uranium Company property (which is immediately east of the groups of claims for which DMEA assistance is being sought) are accessible, but maps are not available.

Daily production is unknown, but the estimated reserve is 2,000 tons of .20 % uranium ore.

(c.) See attached geologic report

(d.) The area is accessible from U.S. Highway 160 from a point 44 miles south of the Town of Moab, Utah; thence in a westerly direction for about 26 miles; thence in a southerly direction for approximately 3 miles into the Lavender Canyon area. All access roads are in good condition.

The distance to the AEC mill at Monticello, Utah is 40 miles or 89 miles to the AEC buying station at Moab.

Supply and residence points are either Moab or Monticello.

(e.) Manpower, materials and supplies are available at Moab or Monticello, Utah.

Water is available from the annual stream immediately north of the claims.

Power must be supplied by a diesel generator.

5.

(a.) Uranium

(b.) The proposed exploration program will consist of wagon drilling in two areas in which there are no operating mines. Maps of both areas are attached, and these areas encompass the Aqua groups of claims, and the Jeannie, Patty, and Lea groups of claims. Initial drill stage maps are attached and initial drilling will be on 200 foot centers to delineate favorable ground for further exploratory drilling. The attached 'Drilling Stage Maps' also show the relationships of all drill holes to particular stratigraphic horizons

(c.) Work will start within 60 days and be completed within 4 months.

(d.) The Intermountain Uranium Corp. has been active in the uranium industry since early in 1951. Actual supervision of the program will be assigned to a geologist who has had experience in supervising exploratory drilling operations of this nature.

INTERMOUNTAIN URANIUM CORP.
Monticello, Utah

FORM
MR-103

6. ESTIMATE OF COSTS

(a.)	First Stage Drilling on the Jeannie, Lea and Patty Groups; 124 wagon drill holes to a depth of 100' @ .60/ft	$7,440.00
	Second stage drilling on the above groups; 50 wagon drill holes to a depth of 100 feet @ .60/ft	$3,000.00
	First Stage drilling on the Aqua claims; 186 holes to a depth of 100 ft. @.60/ft	$11,100.00
	Second stage drilling on the above claims; (Aqua); 60 holes to a depth of 100'@.60/ft	$3,600.00
	Bulldozer Operation; construction and repair of roads and drill sites; 30 days @ $100.00/day	$3,000.00
	Supervision and Consultants (Itemized below)	$4,500.00
	Misc. (Item. below)	$ 600.00
	Contingencies	$2,000.00
	TOTAL COST OF PROGRAM	$35,240.00

(b.)	Supervision	$2,000.00
	Geologists	$1,000.00
	Surveying	$1,500.00

(c.) None

(d.) None

(e.) None

(f.) None

(g.) Analytical work; 200 samples @ $3.00/sample $600.00

INTERMOUNTAIN URANIUM CORP.
Monticello, Utah.

Form
MF-103

(h.) Contingencies $2,000.00

Dated August 10, 1954.

INTERMOUNTAIN URANIUM CORP.
APPLICANT

By F. Bennion Redd

GEOLOGIC REPORT ON THE LAVENDAR CANYON-BRIDGER JACK MESA AREA, SAN JUAN COUNTY, UTAH

T. 31 S., R. 21 E.

By

Richard A. Teichman Jr.

and

Jack I. McLelland

June 4, 1954

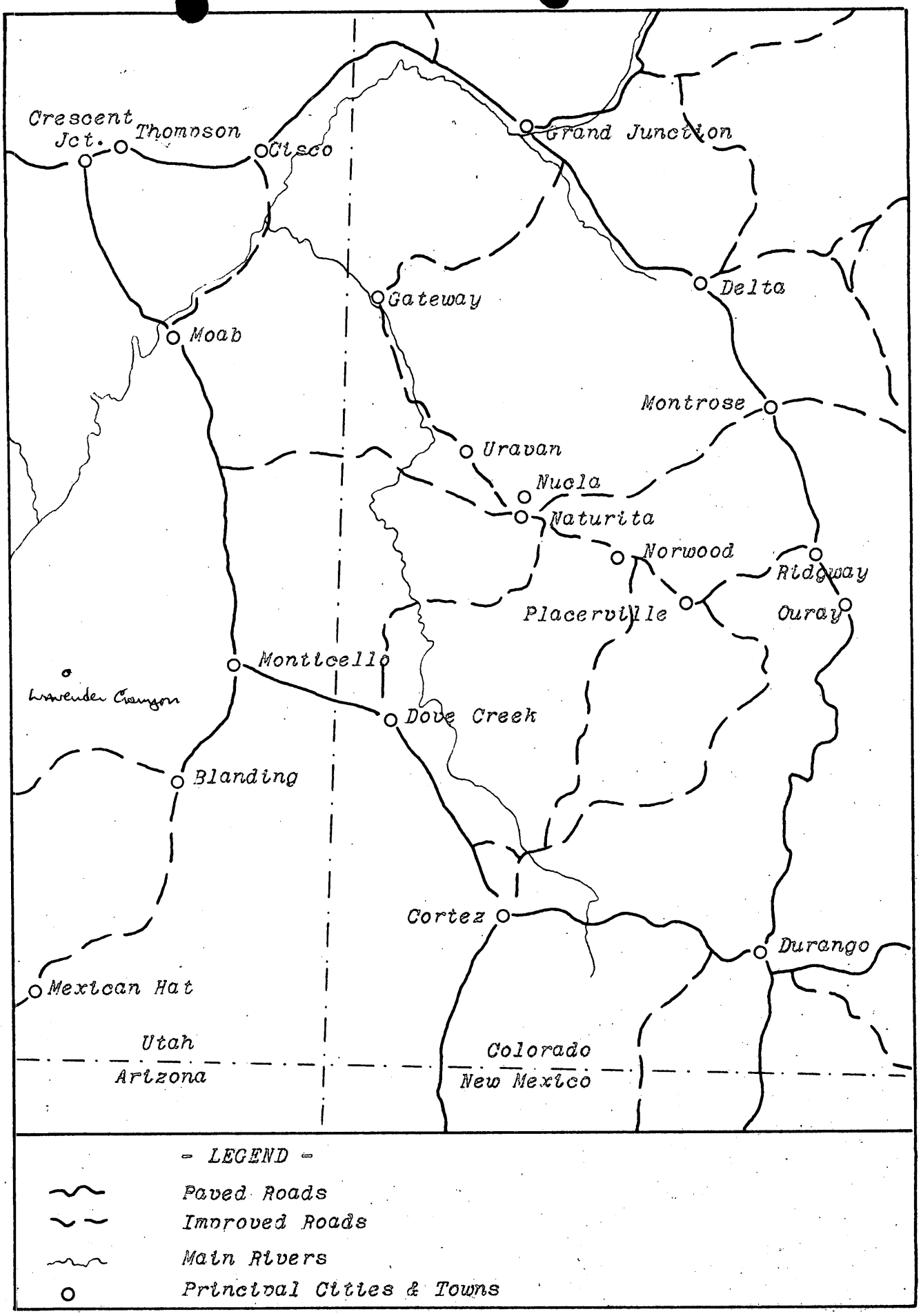

FIGURE - - INDEX MAP, COLORADO PLATEAU AREA

oooO CONTENTS Oooo

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1. Introduction	1
2. Past and Present Mining Activity	2
3. Geomorphology and Climate	3
4. Airborne Radiometric Reconnaissance	4
5. Geology	5
6. Tectonic Structure	6
7. Economic Geology	7
8. Conclusions and Recommendations	8

ILLUSTRATIONS

1. Location Map, Lavender Canyon, Bridger Jack Mesa Area, San Juan County, Utah.

2. Generalized Stratigraphic Section, Lavender Canyon, Bridger Jack Mesa Area, San Juan County, Utah.

3. Claim Map, Intermountain Uranium Corp, Lavender Canyon Area., San Juan County, Utah.

INTRODUCTION

A reconnaissance of the Lavendar Canyon - Bridger Jack Mesa area was undertaken during the latter part of May and the first Part of June, 1954, at the request of Intermountain Uranium Company, of Monticello, Utah. The objectives of the preliminary reconnaissance were:

1. to examine and study the outcrops of the Triassic Mossback member of the Chinle formation, and the Triassic Shinarump Conglomerate

2. to determine whether or not evidence of mineralization could be found, and whether or not ore trends could be projected into the area under discussion from surrounding favorable areas.

3. to specifically examine the groups of claims in Lavandar Canyon known as the Lea, Glenna, Jeannie, Pattie, Aqua, Yellow Dandy, Doodle, Vagabond, Copy-Cat, Bee Bee, Greenhorn, Indian Creek, Inspiration, and Owochoma.

4. to evaluate the above named areas and claims in terms of the possible presence of uranium ore bodies of commercial size, and to evaluate the property in terms of the possibility of further exploring the property by drilling should favorable criteria be found.

5. to determine whether or not sufficient justification existed to make application for government aid under the provisions of DMEA order 1, dated March 7, 1952.

Approximately 24 square miles make up the Lavendar Canyon - Bridger Jack Mesa Area, and of this about seven square miles in the vicinity of the above named claims was investigated.

The area is located in San Juan County, Utah, on the southeast side of the Colorado River. It is accessible from Monticello, Utah, by follwoing U.S. Highway 160 north for 12 miles to the Home of Truth, a religious sect; thence west on a country road for 21 miles to the Dugout Ranch; thence following the right branch of the dirt road for about three miles; thence a short distance in a southwesterly direction to the property. The access roads into the area are passable throughout the year, and new roads are being constructed and old roads are being rebuilt.

PAST AND PRESENT MINING AND EXPLORATION ACTIVITY
(PRIVATE AND GOVERNMENT)

The property examined consists of 93 claims broken down into the following groups:

Lea 1 - 10	Section 15
Aqua 1 - 8	Section 21,22,27,28
Yellow Dandy 1 - 3	Section 27, 28, 33
Doodle 1 - 2	Section 33
Vagabond 1 - 6	Section 33
Glenna 1 - 29	Section 20, 21, 28, 29
Copy Cat 1 - 7	Section 17, 20
Bee Bee 1 - 4	Section 17, 19, 20
Greenhorn 1 - 5	Section 17, 20
Indian Creek 1 - 3	Section 4, 5
Inspiration 1 - 10	Section 4, 5, 8, 17
Owochomo 1 - 6	Section 8, 17, 18

No guarntee is made as to title nor compliance in the past with State and Federal mining laws.

At the present time there is no record of production of uranium ores from within the area covered by the preliminary reconnaissance on file in the Grand Junction office of the United States Atomic Energy Commission. However, several prospects pits have been dug in the Triassic Mossback member (TrS on attached map) of the Chinle formation and mineralization was observed.

At the southern tip of Bridger Jack Mesa a great deal of drilling activity is under way and favorable results are indicated.

8 The United States Atomic Energy Commission is requesting that owners of property in the Salt Creek Mesa area (immediately south of the property examined) execute 'Exploration Agreements' with the Commission. This step generally means that the Commission is considering some form of exploratory operation other than reconnaissance, presumably drilling. The favorable horizon in the Salt Creek Mesa area is the same as that exposed in Lavender Canyon.

GEOMORPHOLOGY AND CLIMATE

The elevation within the Lavender Canyon area ranges from 6,000 feet in the northern part of the area to 7,000 feet in the southern part of the area, with an apparent relief of approximately 700 feet.

The major land forms within the area are two northeasterly trending mesas; one named Bridger Jack Mesa and the other, which lies immediately west of Bridger Jack Mesa and is un-named.

The cliffs forming the sides of these mesas have apparently been cut by the lateral swinging of a stream which when rapidly moving and incising its channel into horizontal strata of varying resistance causes the valley walls to consist of alternating vertical cliffs and talus slopes with the angle of repose of the sediments on the weaker strata.

The drainage pattern is dendritic, which is characteristic of areas where structural controls are not exaggerated. The area under discussion dips gently to the northeast, but the main drainage to the northwest and the Colorado appears to be superposed. Abundant water is available a short distance from the properties.

The climate is semi-arid with less than 20 inches of rain a year. Runn off during the summer months can be dangerous, particularly when traveling in dry washes.

AIRBORNE RADIOMETRIC RECONNAISSANCE

During the course and as part of the field examination of the previously listed properties, the rims of the Mossback and the Shinarump were flown by an airborne unit consisting of a pilot and a geologist using a two-seater Luscombe aircraft mounting a Model SAB-7 airborne scintillator.

During the course of the radiometric reconnaissance, no true anomalies were found, but several areas of high background were noted and plotted on the attached maps. The rims in the vicinity of these areas of high background were examined and found to be anomalous.

GEOLOGY

No detailed examination or geologic study of the Lavender Canyon - Bridger Jack Mesa area is recorded in the literature although some reference to the area is made by E.T. McKnight (1940).

The rocks exposed in the area range in age from the Permian Cedar Mesa Sandstone member of the Cutler formation to the Navajo sandstone of the Jurassic.

Several detailed sections were measured throughout the Lavander Canyon area. No detailed column will be included within the framework of this report, however. It should be noted that no pronounced variation in the thickness of the Mossback was noted, although sufficient exists to confirm the theory of 'channeling' as described in the literature. Channels being sedimentary deposits which have scoured down into and are nonconformable upon the Triassic Moenkopi formation.

These channels or scours are often mineralized as was observed on the Lavender 1 claim, on the Lavender 3 claim and in the southern part of the district where development activity is underway. The importance of these channels and scours obviously depends upon the relation to mineralization. The association between the two has been well established in the White Canyon area to the south and in the Inter-River area to the north.

The trends of the channels and scours within the area under discussion appear to oriented in a

TABLE 1. - Generalized Section of the Lavender Canyon - Bridger Jack Mesa Area

System	Formation	Thickness	Description
Jurassic	Wingate Sandstone	340	Light red - buff; medium grained sandstone; vertical joint system; stained with desert varnish; forms vertical cliffs.
Triassic	Chinle Formation	420	Gray-green to red and lavender, fine to medium grained to conglomeratic in places; thin beds of siltstone and mudstone; some carbon present.
	Moss back formation	50 - 100	Light gray-green, fine to medium grained, carbonaceous with fossil legs; lenses of arkose at base; forms vertical ledges.
	Shinarump Conglomerate	0 - 20	Light gray, conglomeratic, quartz pebbles, some carbon; absent in places, poorly cemented.
	Moenkopi formation	450	Brown mudstone and siltstone; flaggy and fissile in places; purple in places below the Shinarump.
Permian	Cutler formation	675	

northeasterly direction, or about 20° to the trend of Bridger Jack Mesa. Additional field work is needed to definetly establish the channel trends, but it is sufficient to say at this time that such channels do exist on the property under discussion and several of them are mineralized and offer promise for development.

TECTONIC STRUCTURE

There are no pronounced folds within the area, but the sedimentary beds are dipping 2 - 3 degrees to the east off the east flank of an anticlinal nose that plunges under southwest of the property under discussion.

South of the property lies one of the major fault areas. The Shay Mountain graben is the most outstanding fault structure. It is a block that has been dropped 200 - 300 feet and it is 700 - 1500 feet wide. The exact time of faulting is unknown, but it is assumed that it occured simultaneously with the formation of the Abajo Mountains in late Cretaceous or early Tertiary.

Jointing is pronounced within the Triassic Moasback member of the Chinle formation. It is a closely spaced, conjugate jointing system with northeast and southeast strikes. Jointing in the Wingate sandstone is columular and strikes in the same direction as the Moasback member. There is no noticeable faulting within the Chinle or Moenkopi formations.

The drainage patterns and the escarpment are controlled by the joint systems. The joints appear

to be of the same age and no evidence has been found to confirm either a pre-mineral or post-mineral origin.

ECONOMIC GEOLOGY

Mineralization is to be found along most of the outcrop of the Mossback formation in the Lavender Canyon area. The background scintillation count is double normal on the Mossback bench. No mineralization has yet been found in any of the other formations within the area.

As has been mentioned active development is taking place immediately south and west of the properties under discussion. Roads are being built and passenger cars can now be driven into the area.

Ore is being stockpiled in several places south of the Lavender Canyon area, but no shipments have yet been made. Grab samples from the outcrops in the south Lavender Canyon area returned a 2% chemical assay. (AEC sample No. 34606 and 34605.) Approximately 5,000 feet of wagon drilling has been completed in the Lavender and Conglomerate groups of claims. Results were good and preparation is being made to ship ore.

The ore occurs at the base of the Mossback member in a gray-brown, medium grained sandstone that fills lenses and scours in the Moenkopi formation. Mineralization is of the uraninite type which is common to the Mossback member. Traces of secondary uranium minerals were noted as was some copper. The sandstones in some places have saturated with hematite.

The top few feet of the Moenkopi formation has been altered to a grey-green color. The lower 60% of the Chinle formation has also been altered as has been previously noted.

CONCLUSIONS AND RECOMMENDATIONS

Several conclusions were reached during the course of the reconnaissance of the Lavender Canyon - Bridger Jack Mesa Area. These are:

1. the properties under discussion are favorably located relative to mineralized outcrops.

2. it is felt that trends of 'channels and scours' can be predicted to a degree that would make a program of drilling feasible.

3. on several of the properties all favorable criteria for ore deposition, as described in the literature, have been observed.

4. the upper Chinle sediments have been altered to a marked degree. Alteration (color change) of sediments indicates the movement of solution; probably hydrothermal solutions. The association of alteration and mineralization is classic in the White Canyon area at the site of the Happy Jack mine.

Based on the foregoing conclusions the following recommendations are presented for consideration.

It is to be recommended that:

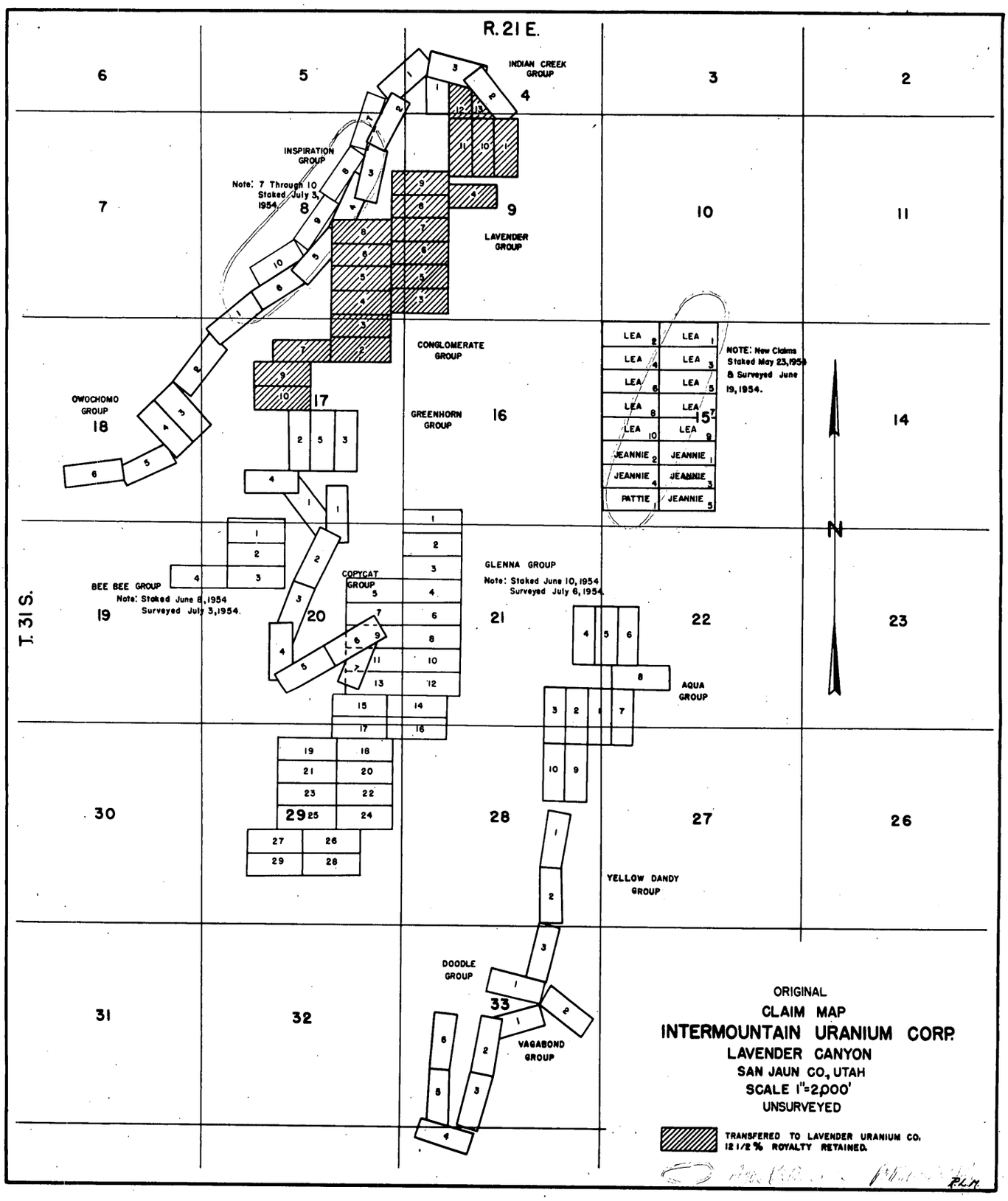
1. A reconnaissance and exploratory wagon drilling program be considered for the "Jeannie", "Pattie", "Lea", "Aqua", ~~"Inspiration", and "Owechomo"~~ groups of ~~claims.~~

2. Initial drill holes be spaced on 200 foot centers to outline favorable ground to outline favorable ground for more intensive drilling.

Richard A. Teichman, Jr.

Jack I. McLelland

Fig. 2


R. 21 E.
T. 31 S.
INDIAN CREEK GROUP
INSPIRATION GROUP
Note: 7 Through 10 Staked July 3, 1954.
LAVENDER GROUP
CONGLOMERATE GROUP
GREENHORN GROUP
OWOCHOMO GROUP
LEA
JEANNIE
PATTIE
NOTE: New Claims Staked May 23, 1954 & Surveyed June 19, 1954.
BEE BEE GROUP
Note: Staked June 6, 1954 Surveyed July 3, 1954.
COPYCAT GROUP
GLENNA GROUP
Note: Staked June 10, 1954 Surveyed July 6, 1954.
AQUA GROUP
YELLOW DANDY GROUP
DOODLE GROUP
VAGABOND GROUP
N
ORIGINAL
CLAIM MAP
INTERMOUNTAIN URANIUM CORP.
LAVENDER CANYON
SAN JAUN CO., UTAH
SCALE 1"=2,000'
UNSURVEYED
TRANSFERED TO LAVENDER URANIUM CO. 12 1/2 % ROYALTY RETAINED.

EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

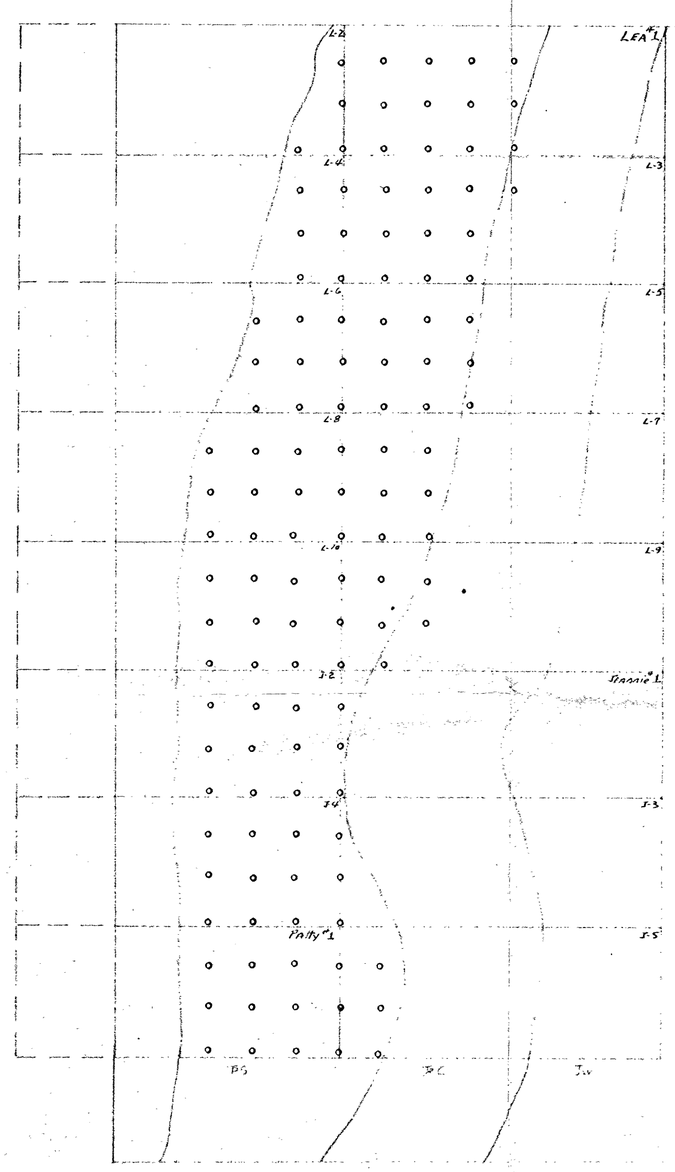
OFFICIAL BUSINESS

U. S. GEOLOGICAL SURVEY
SOUTH 137 HOWARD ST.
SPOKANE 4, WASHINGTON

3 CENTS 3 3 CENTS 3 3 CENTS 3

Mr. George C. Selfridge, Chairman
Operating Committee
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

R.21E.



T. 31 S.

N

15 | 14
22 | 23

FIRST DRILLING STAGE

CLAIM MAP

INTERMOUNTAIN URANIUM CORPORATION

LAVENDER CANYON,

SAN JUAN COUNTY, UTAH.

Key –

Jw = Wingate Sandstone

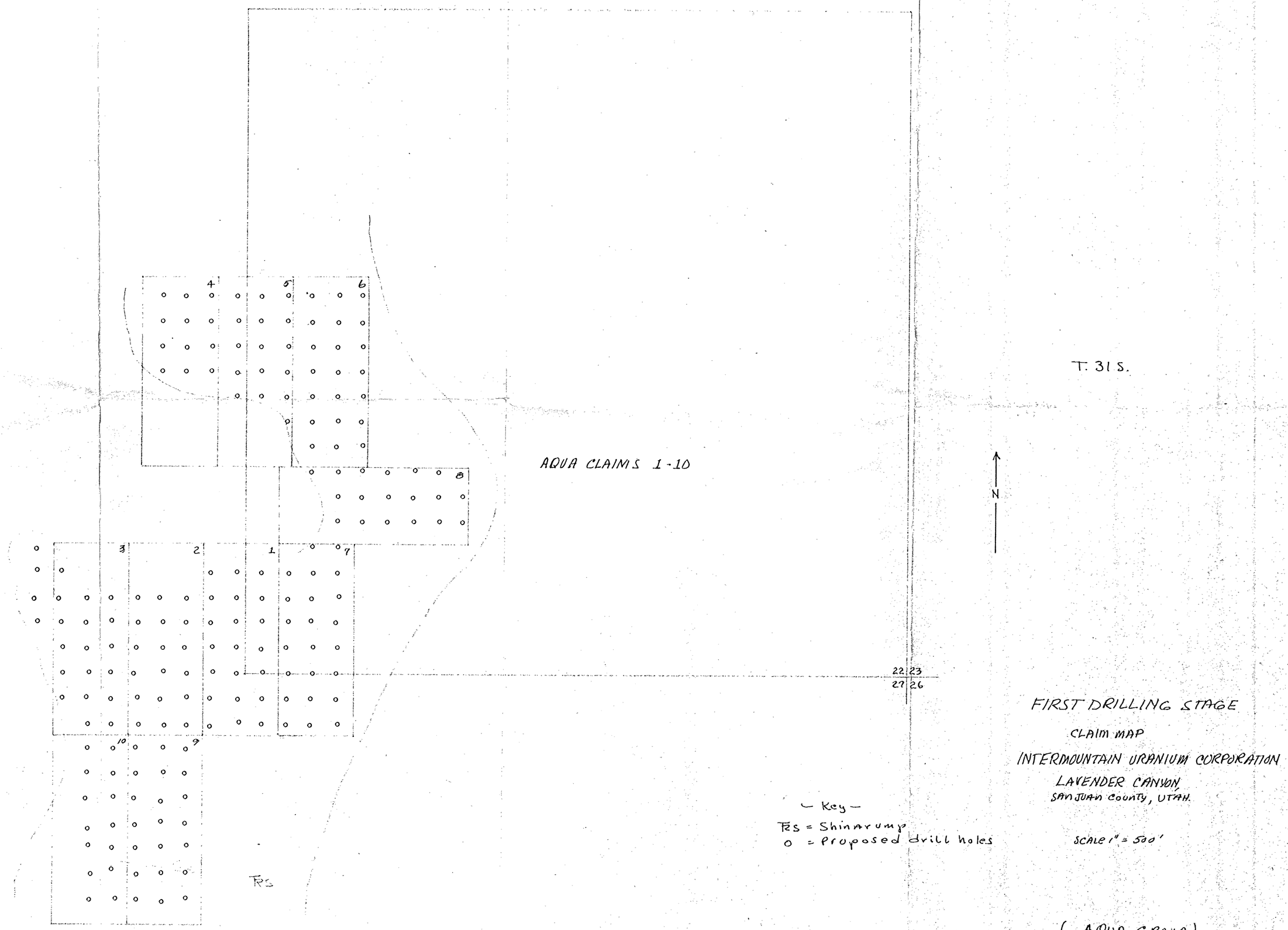
Rc = Chinle Formation

Ŧes = Shinarump (mossback?) formation

o = Proposed drill holes

SCALE 1" = 500'

(Jeannie Patty + Lea claims)


R.21E.
T. 31 S.
AQUA CLAIMS 1-10
N
4
5
6
8
3
2
1
7
10
9
22 23
27 26
TRS
FIRST DRILLING STAGE
CLAIM MAP
INTERMOUNTAIN URANIUM CORPORATION
LAVENDER CANYON
SAN JUAN COUNTY, UTAH.
— Key —
TRS = Shinarump
o = Proposed drill holes
SCALE 1" = 500'
(AQUA GROUP)