MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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Date Rec'd
JAN 28 1955
BUREAU OF MINES
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. 3663
Metal or Mineral Uranium
Date Received 2-3-55
Estimated Cost $57,000
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:

URANIUM CHIEF INCORPORATED
323 East 2nd South
Salt Lake City, Utah.

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

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

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

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

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

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

Purchaser under Contract

(*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.

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 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 8 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated November 1, 1954, 195

URANIUM CHIEF INC.
(Applicant)

By J. Keith Hansen, Sec'try-Treas.

J. Keith Hansen

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

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URANIUM CHIEF INC.
323 East 2nd South
Salt Lake City, Utah.

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UNITED STATES DEPARTMENT OF THE INTERIOR

DEPUTY MINERAL EXPLORATION AND ADMINISTRATION

1. Name of Applicant

(a.) Uranium Chief Inc.
323 East 2nd South
Salt Lake City, Utah.

(b.) A Utah Corporation; incorporated July 30, 1954.

(c.) B. F. Eliason, President and Director
2230 Harleys Terrace
Salt Lake City, Utah.

Gordon C. Holt, Vice-President and Director
2252 Laird Ave.,
Salt Lake City, Utah

J. Keith Hansen, Secretary-Treasurer
1052 Woodside Drive
Salt Lake City, Utah

(d.) Not Applicable

3. Applicants Property Rights

(a.) The property consists of 62 unpatented mining claims which were purchased from Walter D. Snyder and

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323 East 2nd South
Salt Lake City, Utah.

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3. Applicants Property Rights (continued)

Robert J. Fellneth on July 30th, 1954. The claims are located in sections 21, 22, 27, 28 and 33, T. 31 S., R. 21 E., and section 35, T. 32 S., R. 25 E., SLBM. Title is uncontested and the properties have been surveyed by a registered Utah surveyor.

(b.) None

(c.) Uranium Chief Inc. purchased the claims from Mr. R. J. Fellneth and Mr. Walter L. Snyder

(d.) Copies of the legal documents pertaining to the transfer have been attached to this application . (See attached exhibits)

(e.) None

(f.)

CLAIM NAME	LOC.	BOOK NO.	PAGE NO.	COUNTY
Queen 1	5/11/54	91	269	San Juan
Queen 2	5/11/54	91	270	"
Queen 3	5/11/54	91	270	"
Queen 4	5/11/54	91	271	"
Queen 5	5/11/54	91	271	"
Queen 6	5/11/54	91	272	"
Queen 7	5/11/54	91	272	"
Queen 8	5/11/54	91	273	"
Queen 9	5/11/54	91	273	"
Queen 10	5/11/54	91	274	"
Queen 11	5/11/54	91	274	"
Queen 12	5/11/54	91	275	"
Queen 13	5/11/54	91	275	"
Queen 14	5/11/54	91	276	"
Queen 15	5/11/54	91	276	"
Queen 16	5/11/54	91	277	"
Queen 17	5/11/54	91	277	"

URANIUM SHIPP INC.
323 Ro st 2nd South
Salt Lake City, Utah.

Form
UF-103

3. (f.) Continued

CLAIM NAME	RWO	TOCK NO.	PAGE NO.	COUNTY
Queen #18	5/11/54	91	278	San Juan
Richard #1	3/21/53	19	299	"
Richard #2	3/21/53	19	299	"
Richard #3	3/21/53	19	300	"
Richard #4	3/21/53	19	300	"
Richard #5	3/21/53	19	301	"
Richard #6	3/21/53	19	301	"
Richard #7	3/21/53	19	301	"
Richard #8	3/21/53	23	1	"
Sand #1	5/14/54	93	298	"
Sand #2	5/14/54	93	299	"
Sand #3	5/14/54	93	299	"
Sand #4	5/14/54	93	299	"
~~Sand #5~~				
Low #1	5/16/53	25	280	"
Low #2	5/16/53	25	281	"
Low #3	5/16/53	25	281	"
Low #4	5/16/53	25	282	"
Elba #1	4/6/53	23	143	"
Elba #2	4/6/53	23	143	"
Elba #3	4/6/53	23	144	"
Elba #4	4/6/53	23	144	"
Elba #5	4/6/53	23	145	"
Elba #6	4/6/53	23	145	"
Viola #1	"	23	138	"
Viola #2	"	23	138	"
Viola #3	"	23	139	"
Viola #4	"	23	139	"
Viola #5	"	23	140	"
Viola #6	"	23	140	"
Viola #7	"	23	141	"
Viola #8	"	23	141	"
Viola #9	"	23	142	"
Viola #10	"	23	142	"
Flat #1	5/16/53	25	269	"
Flat #2	5/16/53	25	269	"
Flat #3	5/16/53	25	270	"
Flat #4	5/16/53	25	270	"

URANIUM SHIPPERS LTD.,
323 East 2nd South
Salt Lake City, Utah.

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3. (f.) Continued

CLAIM NAME	REC.	PAGE	BOOK	COUNTY
Joyce 1	4/6/53	134	23	San Juan
Joyce 2	"	134	23	"
Joyce 3	"	135	23	"
Joyce 4	"	135	23	"
Joyce 5	"	136	23	"
Joyce 6	"	136	23	"
Joyce 7	"	137	23	"
Joyce 8	"	137	23	"

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323 East 2nd South
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4. Physical Description

(a.) Surveying and geologic mapping are being conducted on the property by geologists associated with the Uranium Chief Inc.

(b.) None

(c.) Please see attached geologic report entitled ' Geologic Report on the Richard, Sam, Lew, Elba, Viola, Flat, Joyce and Queen Groups of Claims, South Lisbon Valley, San Juan County, Utah., by Richard A. Teichman Jr.

(d.) Approach roads to the area have been constructed and further construction is continuing. From Moab, Utah the area is reached by travelling 36 miles south of Moab, Utah on U. S. Highway 160 , a good paved road, thence in an easterly direction through Dry Valley for a distance of 20 miles to the South Lisbon Valley area and the claims under discussion.

The Town of Moab, Utah is the principal supply and shipping point and is about 50 miles distant over good roads.

4. Physical Description (continued)

(e.) Material and supplies are available from well-stocked warehouses in Moab, Utah.

Water for drilling can be obtained from several springs within a short distance of the claims.

Power must be supplied by a diesel generator.

5. The Exploration Project

(a.) Uranium Ores

(b.) The projected program will consist of a reconnaissance, exploration and development drilling program which will be executed in stages.

<u>STAGE 1</u> Reconnaissance drilling on 1,000 foot centers to delineate favorable drilling ground. Average depth of hole on all except the Queen claims will be about 400 feet. A total of 34 wide-spaced holes will be needed for a total footage of approximately 15,000 feet, (4 holes on the Queen claims will require about 2,800 of the above total).

All other drill stages have been indicated on the attached map, but it is anticipated

5. The Exploration Project (continued)

That additional drilling will be undertaken by Uranium Chief should the initial drilling the initial drilling stage prove successful.

Therefore, the total footage requested under this application is 15,000 of diamond core footage, type BX. (See attached map for drill hole locations).

(c.) Work will commence immediately upon approval of the SBA loan by government officials and will be completed within four months of the starting date.

(d.) Uranium Chief Inc. has just recently entered the uranium industry, however it is anticipated that an experienced geologist will be retained to conduct the drilling program as required by SBA regulations.

6. Estimate of Costs

(a.) Several bids were solicited for the program and the lowest bid was by the Brown Drilling Co of Grand Junction, Colorado with a bid of :

Plug	$ 2.70/ft
Core	$ 6.00/ft

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323 East 2nd South
Salt Lake City, Utah.

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6. Estimate of Costs (Continued)

(a.) Approximately 10,000 feet of the required drilling will be of the non-core type at a cost of $27,000.00

Approximately 5,000 feet of the required drilling will be of the core type at a cost of $30,000.00

TOTAL COST $57,000.00

(b.) None

(c.) None

(d.) None

(e.) None

(f.) None

(g.), None

(h.) None

TOTAL PROJECT COST $57,000.00

7. (a.) Uranium Chief is prepared to furnish its share of the cost of the project in accordance with AEA regulations.

(b.) Uranium Chief Inc. proposes to furnish its share of costs in cash, payable upon demand.

URANIUM CORP. INC.
325 East 2nd South
Salt Lake City, Utah.

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7.

Dated.....

URANIUM CORP. INC.
.....
Applicant

By J. Beth Hansen
Title Secretary-Treasurer

DEPARTMENT OF THE INTERIOR
Bureau of Mineral Administration
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GEOLOGIC REPORT ON THE RICHARD, ROUD,
ICA, LEE, VIOLA, FLAT, JOYCE AND QUEEN
GROUPS OF CLAIMS, SOUTH LISBON VALLEY,
SAN JUAN COUNTY, UTAH.

T. 31, 32 S., R. 25, 26 E.

By

RICHARD A. TEICHMANN JR.
CONSULTING GEOLOGIST
Moab, Utah

October, 1954

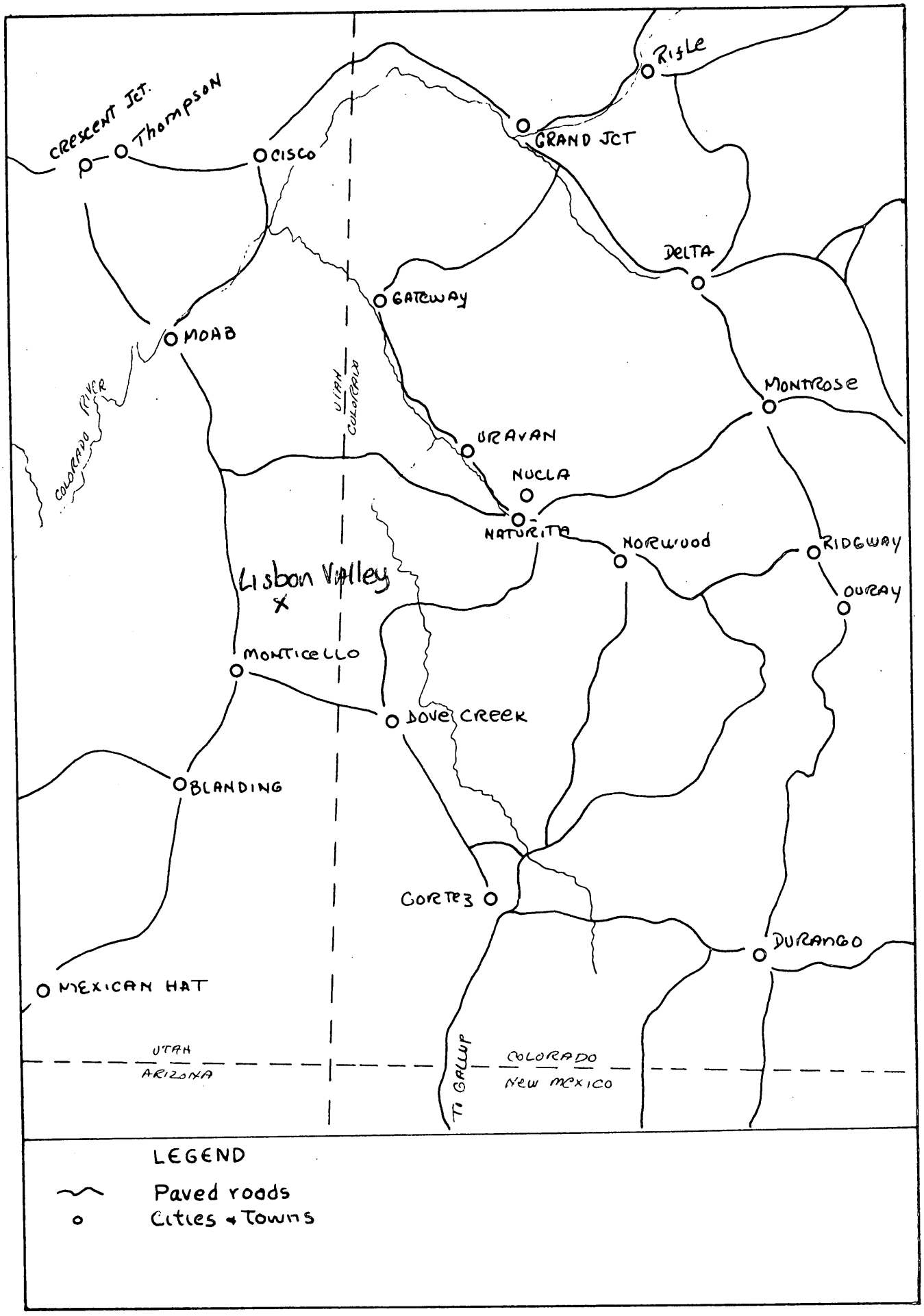

FIG.- INDEX MAP, COLORADO PLATEAU AREA

October, 1954

Uranium Chief, Inc.
% Tanner & Hansen, C.P.A's,
1750 South State Street,
Salt Lake City, Utah.

Gentlemen:

I have prepared and submit herewith the geologic report which you requested covering the properties in South Ithabon Valley, San Juan County, Utah. These properties include the Richard, Sand Lou, Alba, Viola, Flat, Joyce and Queen groups of claims.

Pursuant to your instructions, I have included recommendations for further development.

Sincerely,

Richard A. Teichman

RICHARD A. TEICHMAN JR.
Geologist

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8. CONCLUSIONS AND RECOMMENDATIONS
9. DRILLING RECOMMENDATIONS

ILLUSTRATIONS

1. Index Map, Colorado Plateau Area.
2. Stratigraphic Section, South Dig Indian Wash and Lisbon Valley.
3. Geologic section across Lisbon Valley anticline, San Juan County, Utah.

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INTRODUCTION

During the early part of October, 1954, a geologic examination of the South Lisbon Valley area, San Juan County, Utah, was made at the request of Mr. Robert Fellmeth of Moab, Utah. This examination was designed to assess the potential of the entire area and to specifically examine and assess the potential of the following properties.

CLAIM NAME		TOWNSHIP	RANGE	SECTIONS
Richard	1-3	31 S	26 E	21,20
Sand	1-4	31 S	26 E	28
Low	1-4	31 S	26 E	28
Elba	1-6	31 S	26 E	28
Viola	1-10	31 S	26 E	28,33
Flat	1-4	31 S	26 E	21,22,27,28
Joyce	1-9	31 S	26 E	28,33
Queen	1-10	32 S	25 E	35

No guarantee can be made as to title nor compliance in the past with state and federal mining statutes.

The objectives of the geologic reconnaissance were as follows;

1. To determine whether or not the above listed claims are located in areas considered to be geologically favorable for the production of commercial quantities of uranium and vanadium ores.

2. To determine whether or not further geological study, development and/or exploration of the properties is warranted.

3. To determine whether or not are trends in surrounding areas can be projected into the area under discussion.

LOCATION AND ACCESSIBILITY

The claims under discussion are located in South Lisbon Valley, near the Radium, Empire and Liberty groups of claims, within sections 21, 22, 27, 28, and 33 and 35. Township 31 and 32 South Range 25 and 26 East of the Salt Lake City Meridian.

From Moab, Utah the area is reached by traveling 38 miles south of Moab on US Highway 160, a good paved road, thence in an easterly direction through Dry Valley for a distance of 20 miles to the South Lisbon Valley area and the claims under discussion.

Ore from the area now being mined is being shipped either 40 miles to the AEC mill at Monticello, Utah or 60 miles to the new AEC buying station at Moab, Utah.

Roads are passable throughout the year.

GEOMORPHOLOGY AND CLIMATE

The South Lisbon Valley district has an elevation ranging from 7400 feet on the Dakota formation in the southwestern part of the area to 6300 feet on the Salt Wash member of the Morrison formation near the Radium group of mines.

The area is located on the northeastern edge of the Great Sage Plains in the southern part of Libbon Valley.

The southern part of Libbon Valley, which lies northwest of McIntyre Canyon and between the Great Sage Plain on the southwest, and the Island Mesa area on the northeast is a graben valley formed by a series of fault blocks which are late cretaceous in age.

The drainage pattern is dendritic in nature and the southern part of Libbon Valley drains in an easterly direction through McIntyre Canyon to the Dolores River.

The climate is semi-arid, with precipitation averaging 20 inches per year. Vegetation consists of sage, cactus, and small pinon and juniper trees. Working conditions are good throughout the year.

MINING HISTORY

Production from the district has been known for many years, with the Radium, Empire and Liberty Group of claims being the largest producers in the area. The Slick Rock mining district, several miles to the east has also been a large producer for many years. The Liberty Group of claims is located in South Libbon Valley, northwest of the Radium group in what is known as Bull Pen Canyon. Production figures from this area have been obtained from the owner Mr. F. A. Sitton of Dove

Creek, Colorado and are itemized as follows:

DATES	AVERAGE V_2O_5	AVERAGE U_3O_8	TONS	VALUE
1/1/51-7/15/51	2.50	.30	500	$15,000.00

Production of uranium and vanadium ores from this district has been confined to the Salt Wash member of the Morrison Formation.

The Queen Mary mine, located in section 10, Township 21 South Range 24 East, has also produced quantities of good grade uranium and vanadium ores. At the present time the mine is inoperative although good ore is still showing in the ribs.

The United States Atomic Energy Commission has requested exploration agreements from property owners in the Queen Mary mines area to the northwest, which procedure often signifies AEC interest in drilling a particular area. Triangulation stations have also been set-up in the area by the commission.

TIGHNIL LENTICULS

Ibeon Valley is located midway between two major laccolithic intrusives the La Sal mountains and the Abajo Mountains and on the axis of what is known as the Ibeon Valley-Dolores anticline.

The anticline trends in a northwesterly direction from a point approximately 20 miles west of the San Miguel Mountains where it joins the Gypsum Valley anticline to a point 20 miles east of Behemoth Dome, in the Inter-River area northwest of Moab, Utah.

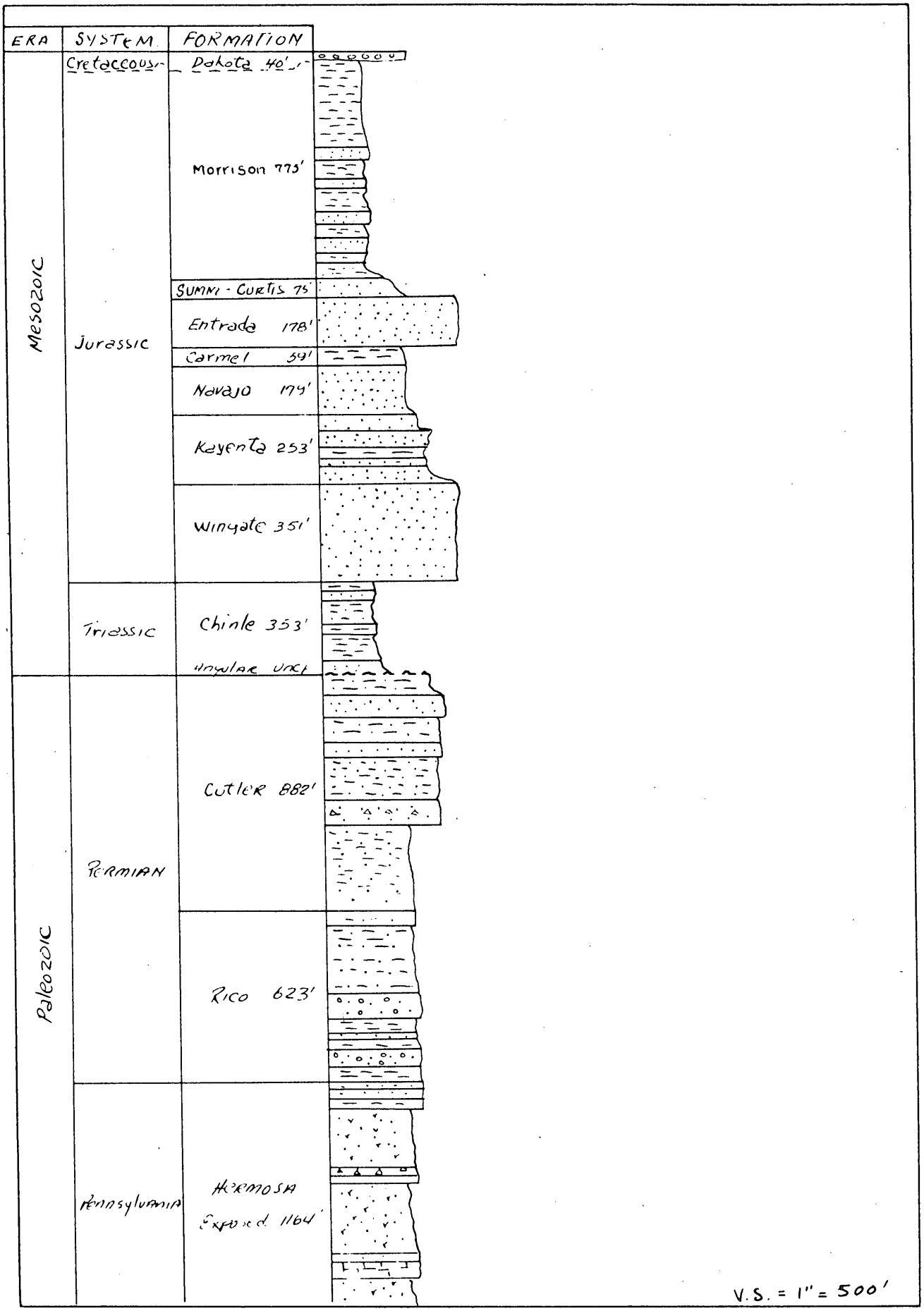


FIG.- STRATIGRAPHIC SECTION, SOUTH BIG INDIAN WASH and Lisbon Valley, San Juan County, UTAH.

Lisbon Valley to a major fault valley and determination of the attitude and displacement along the fault is difficult due to the presence of alluvium in the fault zone. However, recent field evidence from cross-sections and drill hole data show the fault to be hinged at the north end reaching a maximum displacement of approximately 5,000 feet east of the Big Indian Rock and 'Horse-Falling' out in the south, near the claims under discussion.

The major fault in the graben-block area trends in a northeasterly direction through township 31 south range 23 east with the least displacement near the Colorado State line.

The displacement places the Cretaceous Dakota formation against the Triassic Chinle formation for a maximum displacement of 2000 feet.

The many other small faults in the area are of small displacement and the lack of good marker beds and the extensive detrital cover makes their exact displacement difficult to determine. Relationship to mineralization has not been established. However, the faults generally do not displace the Morrison formation, and therefore are less that 200 feet.

GEOLOGY

Few detailed reports exist on the South Lisbon Valley area, and only two are of interest here. They are:

1. Report on the Green River Desert District, by Kirkpatrick, UMDC report, 1944, CLASSIFIED

3. Report on South Lisbon Valley, by Otto McRae, UMDC, (unpub) CLASSIFIED 1955.

It is to be noted that the above listed reports are both considered CLASSIFIED information by the UMDC and are not available to the general public.

The rocks exposed in the area range in age from the Triassic Chinle Formation to the Cretaceous Dakota sandstone.

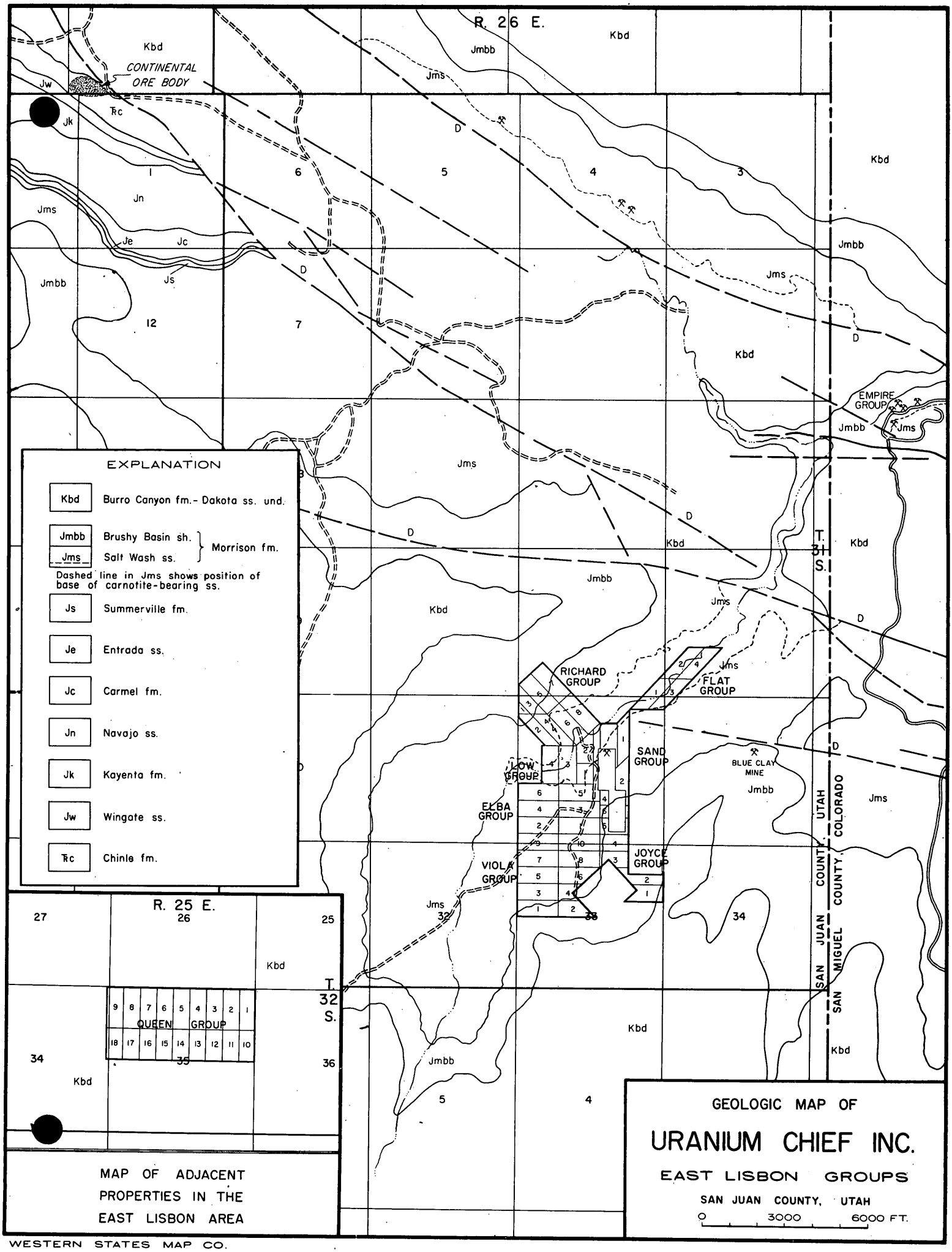
<u>ECONOMIC GEOLOGY</u>

Production of uranium and vanadium ores in the district is confined to the Salt Wash member of the Morrison formation, although mineralization has been noted along fracture planes in other formations. This is considered to be of little significance as far as commercial quantities of uranium are concerned.

Ore minerals found in the Salt Wash member of the Morrison formation are of the carnotite-tyuyamunite types. Carnotite is probably the principal vanadium mineral.

The Post Rock, the upper sandstone lenses of the Salt Wash member of the Morrison formation, is light to dark brown, medium to fine-grained and contains specks of limonite and abundant amounts of carbonaceous material.

Carnotite and tyuyamunite is present in the host



WESTERN STATES MAP CO.

GEOLOGIST'S REPORT ON MINING CLAIMS

Attached to the Offering Circular and made a part hereof by reference as Exhibit "A" is a geological report by Robert L. Menl concerning this Issuer's claims in the Monument, Coal Bed Canyons and Lockhart Canyon areas in San Juan County, Utah. Mr. Mehl received his formal geology training at the University of Kansas and first entered the Uranium field in the summer of 1951. He has been employed as geologist for the Great Western Uranium and Dan Danvers Uranium for the past two years. His work has been exclusively studying and evaluating mining properties for the purpose of purchase by these companies.

EXHIBIT "A" — GEOLOGICAL REPORT MONUMENT AND COAL BED CANYONS

The reconnaissance of the Monument and Coal Bed Canyon Area was undertaken during the latter part of June, 1954, at the request of Tanner & Hansen, Certified Public Accountants, Moab, Utah. The objectives of this investigation were to:

1. Study the Morrison formation in the Monument and Coal Bed Canyon Areas.
2. Determine possible mineralization in the area, and to ascertain probable concentrations of uranium ores.
3. Specifically to examine the Uranium Chief Claims.
4. Examine these claims for valuation of economic considerations for uranium ore deposits.
5. Make a recommendation for an exploration program.

The fifteen claims in Monument Canyon comprise an area of approximately 300 acres. They have been surveyed, and no evidence of overstaking was apparent.

The claims are easily accessible by taking U. S. Highway 160 east from Monticello, Utah, for 18 miles then turning south, following the main traveled road for 15 miles; thence over five miles of unimproved road, which would be satisfactory for travel except in bad weather.

The property in question is situated in Township 36 South, Range 25 East, S. L. M., San Juan County, Utah.

No detailed examination or geologic study of the area is recorded in literature.

GEOGRAPHY

The elevation varies from seven thousand two hundred (7,200) feet on the means to six thousand three hundred (6,300) feet in the canyons.

The drainage of the area is to the west and south in a dendritic pattern, which is characteristic of areas where structural controls are not exaggerated.

The area is heavily covered with sage-brush, cedar, spruce, and pine-tree growth.

GEOLOGY AND PETROGRAPHY

The formations exposed in the area are of lower Cretacious Age with the Dakota Sandstone forming the high mesas.

The Dakota Sandstone is underlain by the Brushy Basin shale member of the Morrison formation. The Brushy Basin is composed of varied colored shales forming red, blue, green, gray and brown dune-like structures.

The Brushy Basin member is followed by the Salt Wash with its many sandstone members, which is the lowest formation of Cretacious age in this geologic province. The sandstone members of the Salt Wash contain the possible mineralized horizons thought to underlie the company's holdings. Most of the uranium deposits of the United States come from these Salt Wash sand members.

GENERALIZED SECTION OF THE MONUMENT AND COAL BED CANYON AREAS

System	Formation	Thickness	Description
	Dakota	10-50 ft.	Buff colored; medium grained; vertical joint system; heavy limonite stain; forms cap rock for mesas.
Cretacious Morrison formation	Brushy Basin shale member	250 ft.	Varied colored shales forming red, blue, green, gray and brown dune-like structures. Abundance of calcite, petrified wood and mineralized bone.
	Salt Wash Sand	300 ft.	Heavy sandstone lenses; medium to coarse grained: limonite staining in sandstone; forms benches.

The claims lie on a flat directly on top of the Salt Wash. The Brushy Basin shale member of the Morrison formation has been eroded away. Approximately ten feet of alluvial fill covers the claims.

rock as blebs or lenses and to also present as grain coatings and fracture fillings.

The average grade of the ore obtained from areas surrounding the claims under discussion is about .2% U_3O_8 and 1.2% U_2O_5.

CONCLUSIONS AND RECOMMENDATIONS

During the course of the preliminary investigation it was found that the RICHARD, LAND, [illegible], [illegible], VICLA, [illegible], AND JOYCE groups of claims were located in an area considered to be geologically favorable for the deposition of uranium ores.

It is recommended that the above listed groups of claims be considered for further geological study and exploration.

Based on the criteria established by government agencies a drilling program is outlined below.

It is recommended that further geological study be made before valid recommendations can be made concerning the potential of the Queen group of claims.

DRILLING RECOMMENDATIONS

It is recommended that:

1. The above listed groups of claims be explored using physical methods of exploration, i.e. diamond drilling.

2. Initial drill hole spacings be on 500 foot centers to locate favorable ground.

3. Second stage drilling be on 200 foot centers to further define mineralized ground and outline ore-bearing horizons.

4. Development of oreblocks be done using diamond drill holes spaced on 100 foot centers.

It has been established that a large part of the drilling will range between 200 and 600 feet in depth.

Very truly yours,

RICHARD A. TAICHMAN, JR.
Consulting Geologist

[illegible] HAYES [illegible]
Consulting Geologist

Grand Junction, Colorado.

January, 1[illegible].

Uranium Corp. Inc.
Salt Lake City, Utah

Dear Sirs:

At your request I have examined the properties owned by your corporation in the South Elbon Valley area, San Juan County, Utah.

The attached is a report on the geology and the uranium potentiality of the properties which consist of the, Mobard, Ice, Sand, Flat, Alba and Joyce groups of claims.

Sincerely,

[illegible] HAYES

Consulting Geologist

/rs

SUPPLEMENTARY GEOLOGIC REPORT ON THE URANIUM-BEARING ROCK [illegible] IN THE LOWER LISBON VALLEY AREA, SAN JUAN COUNTY, UTAH.

Sections 28 and 29

T.31 S., R.26 E., SLBM

By

William S. Ferguson
WILLIAM S. FERGUSON
Consulting Geologist

January, 1954.

[illegible]

	Page
1. Introduction	1
2. Accessibility	1
3. Economic Geology-Mining History	1
4. Geology	2
5. Conclusions	4
6. Recommendations	4

INTRODUCTION

A geologic reconnaissance of the Frantus Chief properties in sections 20 and 29, T. 31 S., R. 20 E., SLBM was undertaken during the early part of January, 1956. The purpose of the reconnaissance was to project ore trends if possible, plot sedimentary trends, map the Liberty Mine owned by Mr. Litton of Dove Creek and to otherwise determine the relative favorability of the area as compared to other producing districts.

ACCESSIBILITY

The area may be reached by two routes. First, through Dry Valley which is 30 miles south of the Town of Moab, Utah on U.S. Highway 160, or from Monticello, Utah by traveling 15 miles east to the Dead Summit Point Rd, and thence 15 miles in a northerly direction to the property. All roads into the area are passable throughout the year.

GEOLOGY-ORE DEPOSIT

Sections 20 and 29, T. 31 S., R. 20 E., SLBM are located in a well-known uranium and vanadium producing district. Within a radius of a few miles there are a number of large and small deposits, chiefly Morrison. These deposits range in size from the Indian 7 deposit of 200,000 tons in the Slick Rock district to 1,000 tons in the

Waterfall and Prisco groups to the northwest.

The average grade of the deposits is .25% uranium and 1.20 % vanadium where Morrison deposits are encountered.

The Liberty mine owned by Mr. Sitton of the Dove Creek area is located on the western boundary of the Uranium Chief property, and it was this mine that was mapped with the intent to determine the direction of lineation and other sedimentary features as a guide to ore.

To the east of the Sitton mine there is a great deal of drilling activity underway. No information could be obtained on this activity nor the results at this time.

GEOLOGY

The ore-bearing horizon in the area under consideration is the upper sandstone member of the Jurassic Morrison formation. This is turn is overlain by the Brushy Basin member of the Morrison formation, composed of carbonized shales, siltstones and mudstones. The Morrison formation is approximately 400 feet thick. The sub rock is the Burro Canyon formation of the Cretaceous.

The mineralized sandstone lenses in the area are about 60-70 feet thick. The color of the sandstone varies. On the rims it is tan to dark brown due to limonite staining. Fresh hand specimens range in color from light gray to white and brown. The grain size ranges from fine to medium. Limonite is abundant. Carbonaceous material is also abundant.

No excessive thickness of green mudstone were observed, but thin splits or galls are apparent everywhere.

Cross-bedding and contorted bedding are common. Current lineation was noted and measured, but in general the lineation is obscure and precise measurement difficult. On the basis of as many readings as could be obtained the general direction of sedimentation appears to be in a southwesterly direction.

The area under consideration is just south of the horsetail structure at the south end of the Lisbon Valley fault. These faults are rather small and of little displacement and probably create the channelways necessary for the passage of solution. At the present time the relationship between structure and ore occurence in the horizon has not been clearly defined, but progress is being made on the problem.

There is a widely spaced joint set developed in the vicinity of the Sitton mine with the major set trending in a southwesterly direction. There is a possibility that a conjugate joint set has been developed near the mine, but the presence of heavy snow cover makes field observation extremely difficult.

Extending between the portals of the two small workings there is a thick seam of green mudstone and abundant carbonaceous material associated. (See at scale mine map) This seam rolls with the bedding planes, normal and cross-bedded, and it is the principal mudstone horizon noticed in the mine workings. A bleached area with numerous limonite specks is noticed around and above the mine portal.

Carnotite 'paint' is noted throughout the carbon seam and throughout the accompanying mudstone and sandstone. The

mineralization appears to follow the carbonaceous seam as it cuts through the mine workings. The green mudstone laminae also follows the carbonaceous seam, and where the carbon pinches out the the seam continues as green mudstone.

CONCLUSIONS

From a study of the mine workings it can be concluded that the ore deposit was a typical carnotite-tyuyamunite type deposit. Carbon and limonite were abundant and rather intimately associated with the ore.

Cross-bedding and lineation was noted throughout the mine, and although there is a relatively fractures, carnotite paint was observed on the set which trends in a southeasterly direction.

The fracture set, current lineation and the mine workings themselves trend in a southeasterly direction, giving rise to the belief that stream deposition, structure and ore trends are in approximately the same direction.

RECOMMENDATIONS

Based upon the ore trends developed in and above the mine workings it is suggested that exploratory diamond drilling be done in the areas south and east of the Hitton mine on the properties now controlled by Uranium Chief Inc.

QUIT CLAIM DEED

WALTER B. SNYDER and OVELLA SNYDER, his wife, and R. J. FELLMETH and JULIANNE FELLMETH, his wife, GRANTORS, of Dove Creek, State of Colorado and Moab, State of Utah, hereby Quit Claim to URANIUM CHIEF, INC., a Utah Corporation, GRANTEES, of Salt Lake City, State of Utah, for the sum oe Ten Dollars ($10.00) and other valuable considerations, the following described mining claims located in San Juan County, State of Utah, TO WIT:

Those certain mining claims in which certificates of location are recorded in the County Recorder's Office of San Juan County, State of Utah, and particularly described therein, and said certificates as recorded are hereby incorporated in and made a part of the description of the herein described mining claims. The names of the said mining claims, the book and pages where recorded are as follows:

NAME	BOOK	PAGE
Flat #1	25	269
Flat #2	25	269
Flat #3	25	270
Flat #4	25	270
Richard #1	19	299
Richard #2	19	299
Richard #3	19	300
Richard #4	19	300
Richard #5	19	301
Richard #6	19	301
Richard #7	23	1
Richard #8	23	1
Viola #1	23	168
Viola #2	23	168
Viola #3	23	139
Viola #4	23	139
Viola #5	23	139
Viola #6	23	139
Viola #7	23	141
Viola #8	23	141
Viola #9	23	142
Viola #10	23	142
Elba #1	23	143
Elba #2	23	143
Elba #3	23	144
Elba #4	23	144
Elba #5	23	145
Elba #6	23	145

2.

NAME	BOOK	PAGE
Sand #1	93	298
Sand #2	93	298
Sand #3	93	299
Sand #4	93	299

Subject to Royalty Reservation herto reserved to E. R. Brown.

WITNESS the hands of the said GRANTORS this 29th day of October, A.D. 1954.

R J Fellmeth

Walter B Snyder

Ovella Snyder

Julianne Fellmeth

ACKNOWLEDGEMENT

STATE OF UTAH)
) SS
County of San Juan)

On this 29th day of October, A. D. 1954, personally appeared before me WALTER B. SNYDER and OVELLA SNYDER, his wife, and R. J. FELLMETH and JULIANNE FELLMETH, his wife, the signers of the foregoing instrument, who duly acknowledged to me that they executed the same.

Donald T. Adams
Notary Public, Residing at
Monticello, Utah.

My Commission Expires:
2-1-55
~~August 17, 1958~~

QUIT CLAIM DEED

WALTER B. SNYDER and OVELLA SNYDER, his wife; and R. J. FELLMETH AND JULIANNE FELLMETH, his wife, GRANTORS, of Dove Creek, State of Colorado and Moab, State of Utah, hereby Quit Claim to URANIUM CHIEF, INC., a Utah Corporation, GRANTEES, of Salt Lake City, State of Utah, for the sum of Ten Dollars ($10.00) and other valuable considerations, the following described mining claims located in San Juan County, State of Utah, TO WIT:

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NAME	BOOK	PAGE
Joyce #1	23	134
Joyce #2	23	134
Joyce #3	23	135
Joyce #4	23	135
Joyce #5	23	136
Joyce #6	23	136
Joyce #7	23	137
Joyce #8	23	137
Queen #1	91	269
Queen #2	91	270
Queen #3	91	270
Queen #4	91	271
Queen #5	91	271
Queen #6	91	272
Queen #7	91	272
Queen #8	91	273
Queen #9	91	273
Queen #10	91	274
Queen #11	91	274
Queen #12	91	275
Queen #13	91	275
Queen #14	91	276
Queen #15	91	276
Queen #16	91	277
Queen #17	91	277
Queen #18	91	278
Low #1	25	280
Low #2	25	281
Low #3	25	281
Low #4	25	282

NAME	BOOK	PAGE
Low #5		
Low #6		
Low #7		
Low #8		
Mule Shoe #1	45	480
Mule Shoe #2	45	481
Mule Shoe #3	45	481
Mule Shoe #4	45	482
Mule Shoe #5	45	482
Mule Shoe #6	45	483
Mule Shoe #7	45	483
Mule Shoe #8	45	484
Mule Shoe #9	45	484
Mule Shoe #10	45	485
Mule Shoe #11	45	485
Mule Shoe #12	45	486
Willow Creek #3	71	46
Willow Creek #6	119	313
Willow Creek #7	119	314
Willow Creek #8	119	314
Willow Creek #9	119	315
Willow Creek #10	119	315
Uranium Chief #1	109	359
Uranium Chief #2	109	359
Uranium Chief #3	109	360
Uranium Chief #4	109	360
Uranium Chief #5	109	361
Uranium Chief #6	109	361
Uranium Chief #7	109	362
Uranium Chief #8	109	362
Uranium Chief #9	109	363
Uranium Chief #10	109	363
Uranium Chief #11	109	364
Uranium Chief #12	109	364
Uranium Chief #13	109	365
Uranium Chief #14	109	365
Uranium Chief #15	109	366

Subject to Royalty Reservation hereto reserved to E. R. Brown and Ed Baird Jr.
Richard #11

WITNESS the hands of the said GRANTORS, this 29th day of October, A.D. 1954.

R J Fellmeth

Hettie Fellmeth

Ovella Snyder

Julius Fellmeth

5

ACKNOWLEDGEMENT

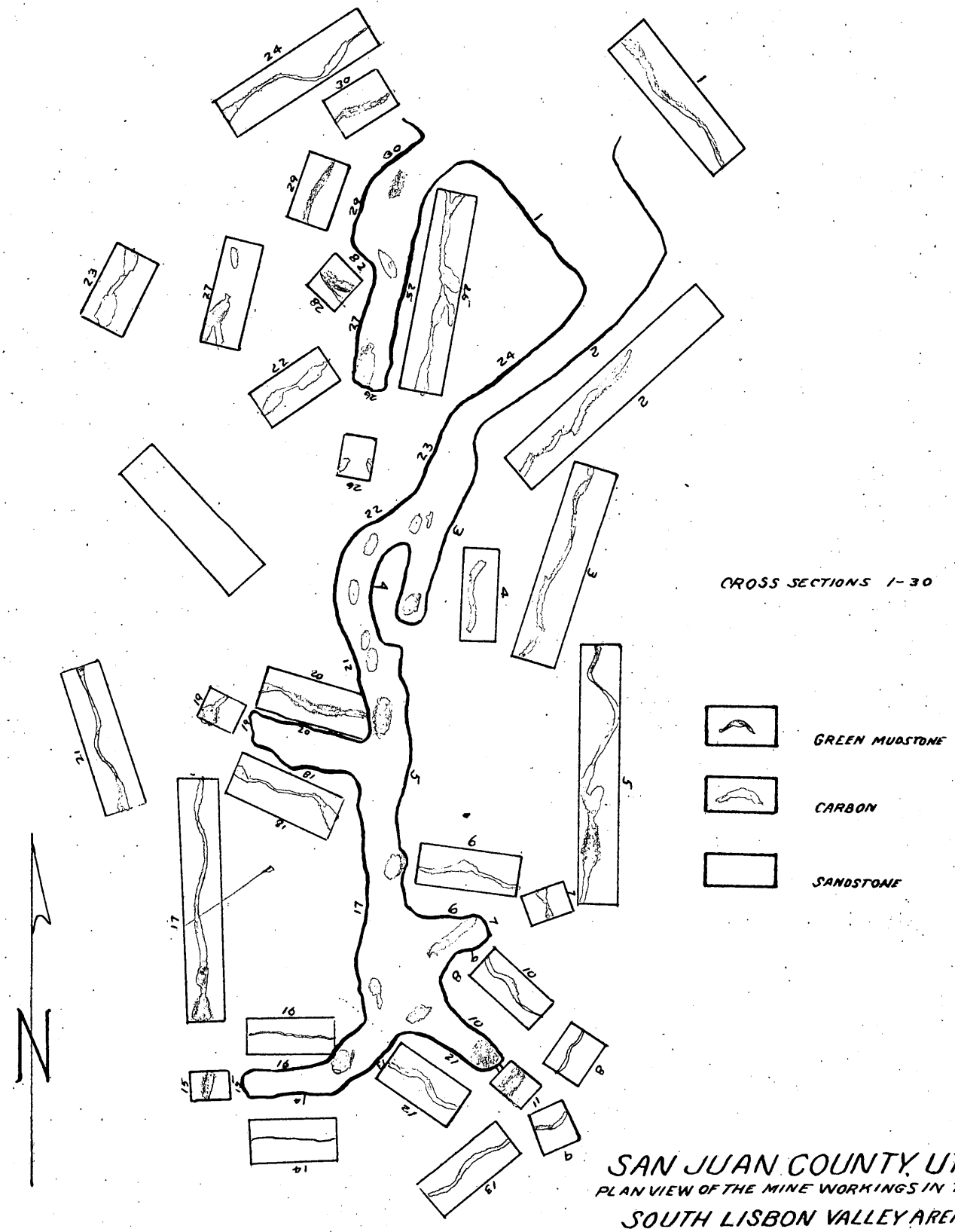
STATE OF UTAH)
) SS
County of San Juan)

On this 29th day of October, A. D. 1954, personally appeared before me WALTER B. SNYDER and OVELLA SNYDER, his wife; and R. J. FELLMETH and JULIANNE FELLMETH, his wife, the signers of the foregoing instrument, who duly acknowledged to me that they executed the same.

Donald T. Adams
Notary Public, Residing at
Monticello, Utah.

My Commission Expires:
2-1-55
~~August 17, 1958.~~

SEC. 28
T31S R26E



SAN JUAN COUNTY, UTAH
PLAN VIEW OF THE MINE WORKINGS IN THE
SOUTH LISBON VALLEY AREA
URANIUM CHIEF INC.

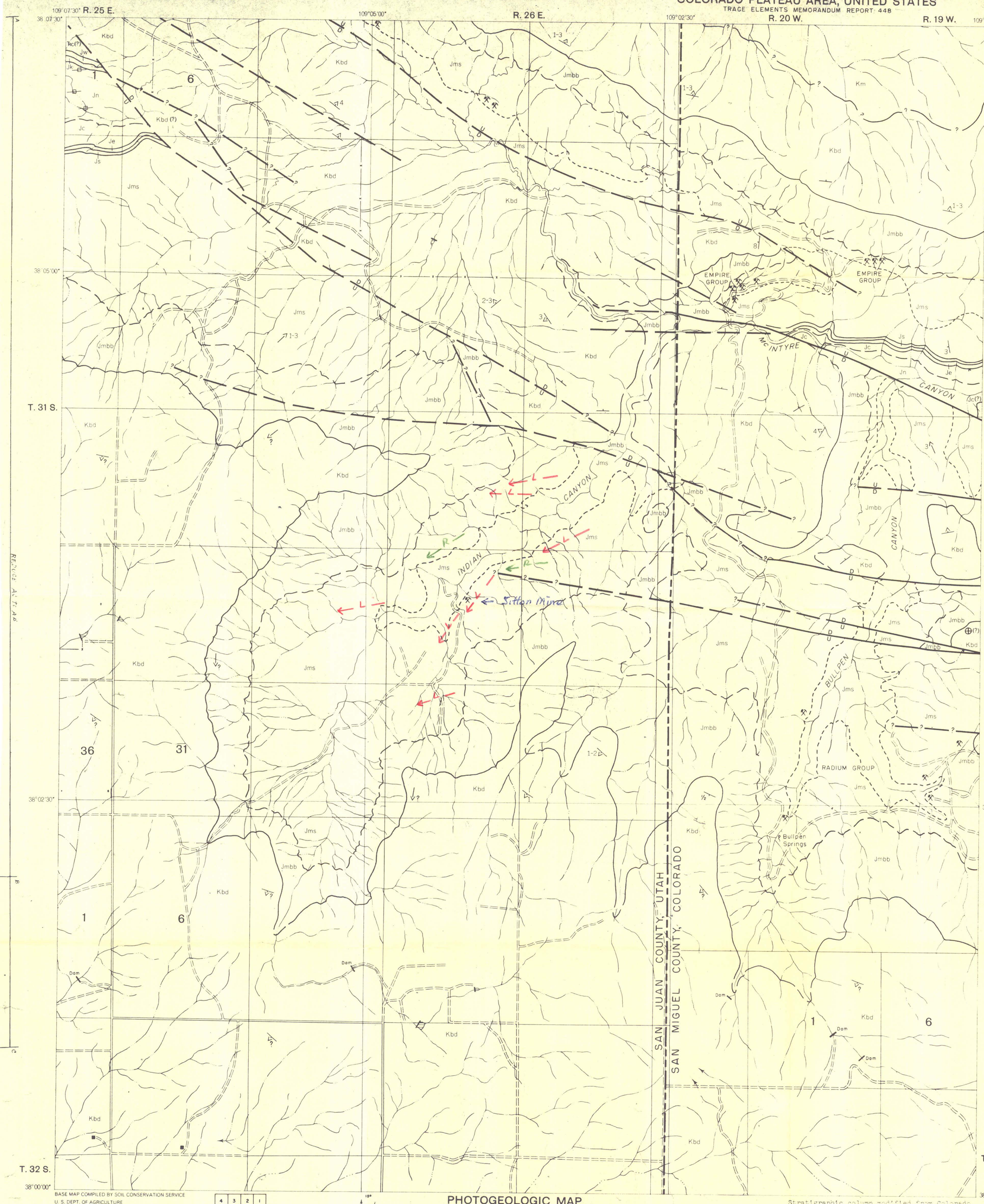
0 10' 20'

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
ATOMIC ENERGY COMMISSION

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

TRACE ELEMENTS MEMORANDUM REPORT 448



EXPLANATION

QUATERNARY

Qal — Alluvium
Valley fill and terrace gravel

CRETACEOUS

Upper — Km — Mancos shale

Lower — Kbd — Burro Canyon formation and Dakota sandstone, undifferentiated (In places may be covered by thin mantle of Mancos shale (Upper Cretaceous))

JURASSIC

Upper — Jmbb, Jms — Morrison formation
Brushy Basin shale member, Jmbb; Salt Wash sandstone member, Jms. Dashed line shows position of base of carnotite-bearing sandstone

Js — Summerville formation

Middle — Je — Entrada formation

Jc — Carmel formation

JURASSIC (?)

Jn — Navajo sandstone

Jk — Kayenta formation

Jw — Wingate sandstone

TRIASSIC

Upper — TRc — Chinle formation

Contact
(Can be accurately located within 30 feet horizontally)

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

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

Probable or doubtful contact

Fault
(Dashed where approximately located)

Probable or doubtful fault

High-angle fault
(U, upthrown side; D, downthrown side)

Strike and dip of beds
(Based on field measurement)

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

Horizontal beds

Mine or quarry

Spring

Primary road

Secondary road

Trail

Fence

State boundary

Ripple marks

BASE MAP COMPILED BY SOIL CONSERVATION SERVICE
U. S. DEPT. OF AGRICULTURE

JULY 1952

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

MT. PEALE QUADRANGLE

TRUE NORTH 15°

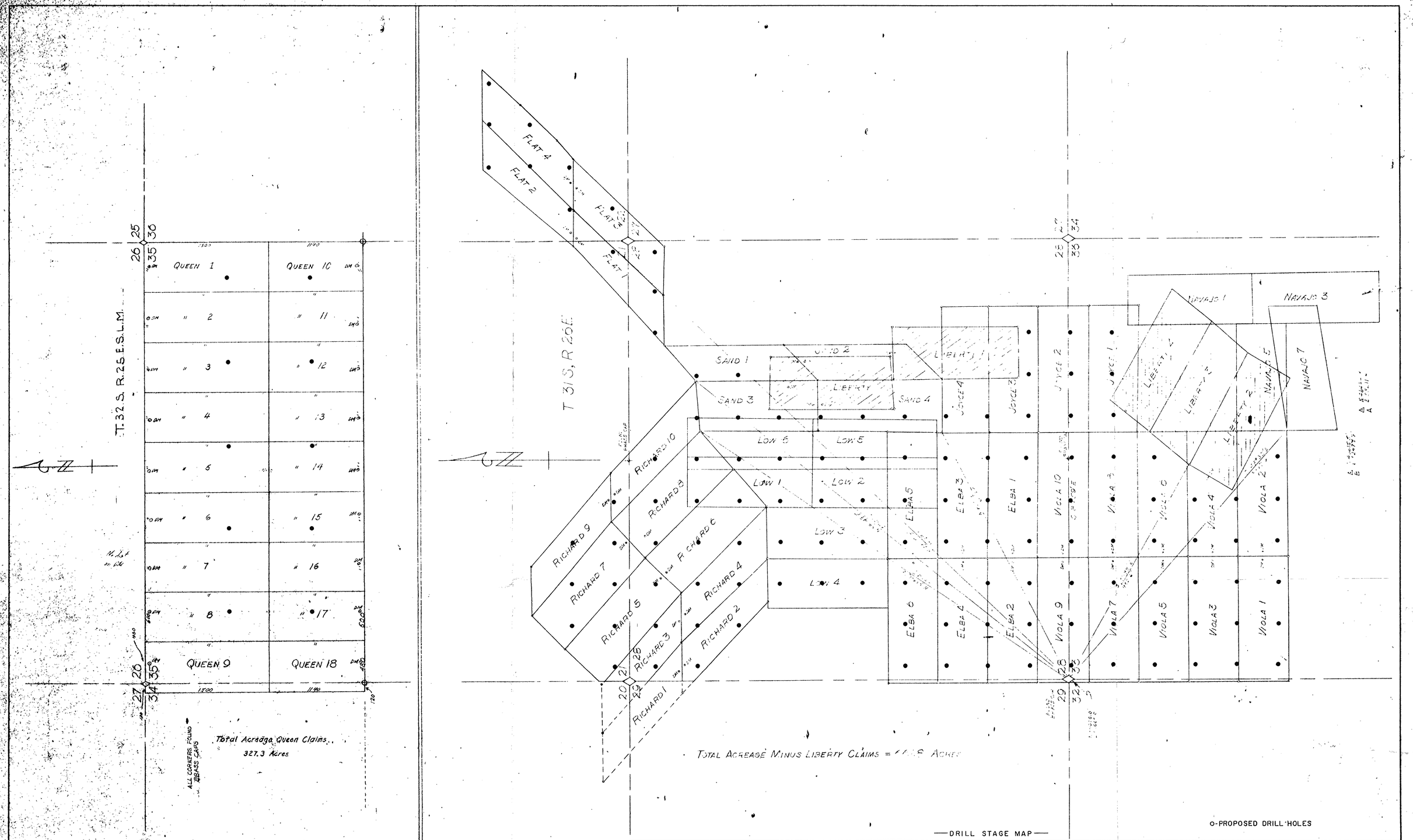
PHOTOGEOLOGIC MAP
MT. PEALE - 16
UTAH - COLORADO

PHOTOGEOLOGY BY R. J. HACKMAN
PHOTOGEOLOGIC UNIT, ALASKAN GEOLOGY BRANCH

SCALE 1:24,000
0 — 1 MILE

Stratigraphic column modified from Colorado Geol. Survey Bull. 16; U. S. Geol. Survey Strategic Minerals Inv., Geologic map of vanadium region of southwestern Colorado and southeastern Utah, by R. P. Fischer, 1944; Oil and Gas Inv., Prelim. Map 53; and U. S. Geol. Survey unpublished report.

M8-3.16-1



—DRILL STAGE MAP—

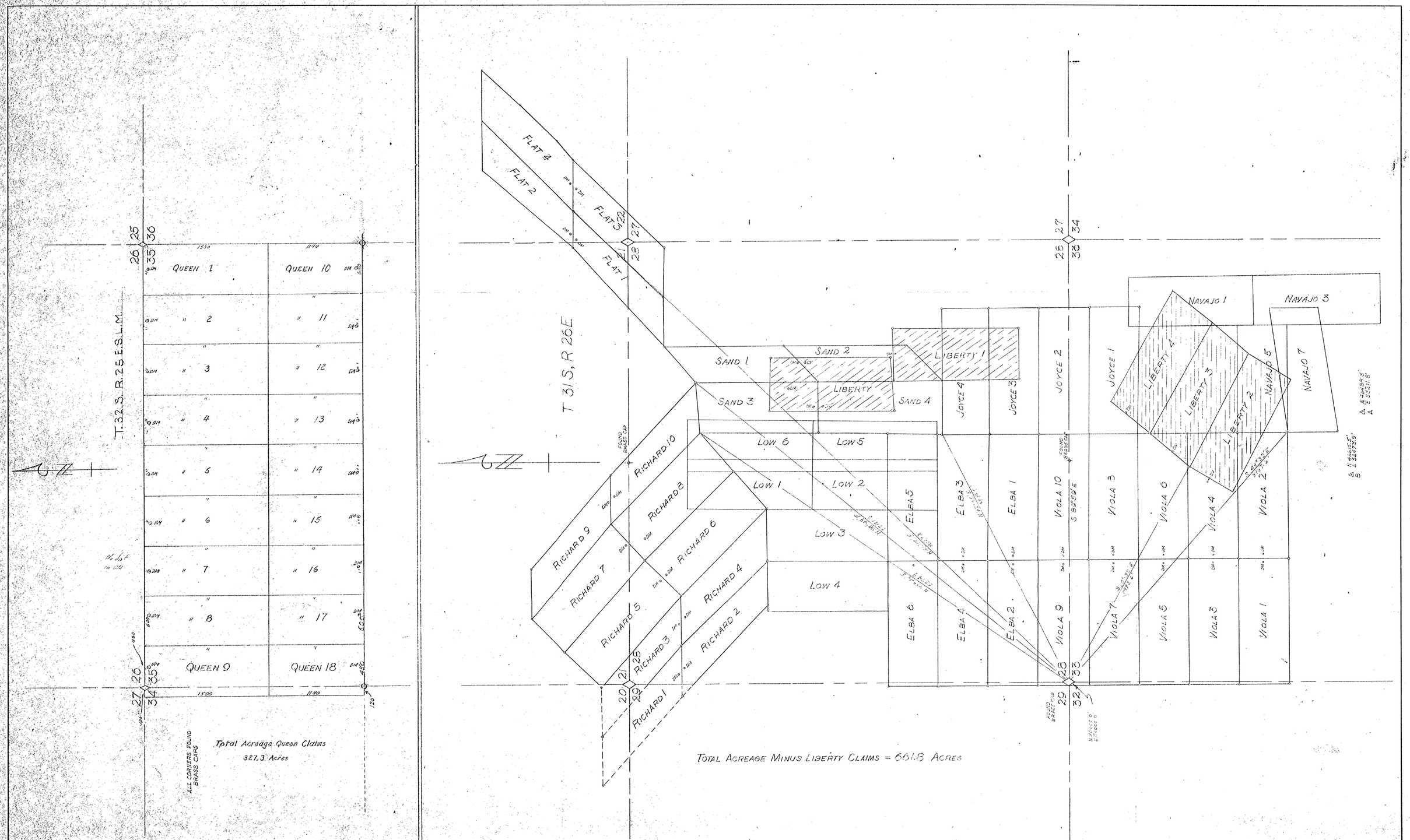
DATE	REVISION	BY	CHKD.

METROPOLITAN ENGINEERS, INC.
CONSULTING ENGINEERS
140 WEST 2nd SOUTH — SALT LAKE CITY, UTAH

DRAWN BY [illegible] DATE 8/29/[illegible] CHECKED BY ____ DATE ____ SCALE: 1" = 500'

NAME OF OWNER: SNYDER & FELLMUTH
LOCATION OF JOB: LITTLE INDIAN CANYON, SAN JUAN CO.
TITLE OF DRAWING:

CONTRACT NO.
DRAWING NO.



DATE	REVISION	BY	CHKD.

METROPOLITAN ENGINEERS, INC.
CONSULTING ENGINEERS
140 WEST 2nd SOUTH — SALT LAKE CITY, UTAH

DRAWN BY E.N. DATE 8/10/57 CHECKED BY ____ DATE ____ SCALE: 1" = 500'

NAME OF OWNER: SNYDER & FELLMUTH
LOCATION OF JOB: LITTLE INDIAN CANYON - SAN JUAN CO.
TITLE OF DRAWING:

CONTRACT NO.
DRAWING NO.

SALT LAKE BLUE