DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 791 — DMEA NO. 3555

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [x] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [x] Royalty Audits
- [x] Certification of Discovery
- [x] Closing Letter
- [x] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final)
- [x] Work Comoleted analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [x] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports

- [x] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

Folders No. _____ : Maps (Use pocket folder or envelope)

Folders No. 3 : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

17963

355

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

FIRST ROYALTY AUDIT CERTIFICATE

I have examined the production records and sales documents pertaining to the sale of Uranium ores for the period April 28, 1955 through May 14, 1957, by

W. A. Greer
c/o Four Corners Exploration Company
1185 College Place
Grand Junction, Colorado

produced from the Bachelor Group of Claims, located in the Bull Canyon Mining District of San Miguel and Montrose Counties, Colorado, on which royalties are due the U. S. Government under terms of Contract Idm-N791, Docket No. DMEA-3555 (Uranium) dated April 28, 1955, as amended.

My examination was made in accordance with generally accepted standards applicable in the circumstances.

The audit established the total sales of such ores for this period, subject to DMEA royalties, to be $179,363.86. Royalty due the Government at the contract rate of 5% is $8,968.19. The royalty paid and balance due are as follows:

Total Royalties Due	$8,968.19
Total Royalties Paid	8,968.19
Balance of Royalties Due	$ 0.00

June 25, 1957

Donald T. Finch
Donald T. Finch, Auditor

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DMEA
RECEIVED JUL 5 1957

DATE	INITIALS	CODE
7/11	[illegible]	[illegible]
"	[illegible]	[illegible]
7-11	[illegible]	[illegible]
		[illegible]

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DMEA
RECEIVED JUL 5 1957
DATE | INITIALS | CODE

FIRST ROYALTY AUDIT REPORT

I INTRODUCTION

On June 13, 1957, an audit was made of the production, sales, and royalty accounts and records of

W. A. Greer
c/o Four Corners Exploration Company
1125 College Place
Grand Junction, Colorado

pertaining to the sale of Uranium ore during the period April 28, 1955 through May 14, 1957, produced from property known as the Bachelor Group in the Bull Canyon Mining District of San Miguel and Montrose Counties, Colorado, on which royalties are due the U. S. Government under the terms of Contract Idm-E791, Docket No. DMEA-3555 (Uranium) dated April 28, 1955, as amended.

The property is operated and accounting records are maintained by the Four Corners Exploration Company under a contract with W. A. Greer. These records consist of an integrated accounting system and copies of liquidation settlement sheets issued by purchasers of the ore, and are located at the above address. Mr. F. O. Manol, Managing Partner of Four Corners Exploration Company, and Mr. C. T. Langloise, Accountant, were consulted as necessary during the course of the audit. Their cooperation greatly facilitated the audit work.

II GENERAL INFORMATION

The exploration contract provides that should the Government make a certification of discovery or development, the operator either as principal or surety, shall pay to the Government a percentage royalty on all minerals mined or produced from the land described in Annex I of Article 2 of the contract within a period of 10 years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Certificate of Discovery or Development was issued on July 16, 1956.

According to a Report of Review dated July 5, 1956, prepared by Donald T. Finch, DMEA Auditor, the total accepted costs of the exploration amounted to $34,636.85, with the Government's contribution on a 75% basis being $25,977.64.

III SCOPE OF AUDIT AND FINDINGS

A. Conference with Examining Engineer

The Examining Engineer was not available for conference. Review of the Check Sheet of Examining Engineer, dated June 24, 1957, indicates the Operator stockpiles low grade ores subject to DMEA royalties, but that adequate records are maintained on such material to protect the Government's interests. This Check Sheet also indicates the Operator does not commingle production subject to DMEA royalties with exempt production and assay controls are considered adequate.

B. Audit of Settlement Statements

A considerable amount of preaudit work was accomplished in the DMEA office, Region III, Denver, Colorado, prior to the field audit. During this preaudit work a statement of royalties received was prepared from copies of liquidation settlement sheets furnished by purchasers of ore in support of royalty payments made by such purchasers directly to the regional DMEA Executive Officer. The royalty receipts were verified with deposits made by the regional Finance Officer. All of the data included in the statement were confirmed by detailed recomputation. This statement, which is filed as a part of my audit work papers, was reconciled with the production and sales records in the producer's office during the on-site audit.

Correspondence and personal interview with the Field Operations Office of the Atomic Energy Commission confirmed the sales of U_3O_8 during the period under review and that production bonus applicable to the property had been paid in full.

	CLIMAX URANIUM COMPANY	UNION CARBIDE NUCLEAR COMPANY	VANADIUM CORPORATION OF AMERICA	TOTAL
Dates	7/19/56	8/2/56 to 4/22/57	9/28/56 to 4/27/57	7/19/56 to 4/27/57
Wet Weight, Pounds	21,050	1,648,080	4,032,450	5,701,580.00
Dry Weight, Pounds	20,671	1,579,887.90	3,835,257	5,435,815.90
Dry Weight, Tons	10.340	789.995	1,917.628	2,717.963
Assays: (Average)				
U_3O_8	.13	.36	.4066	.3918
V_2O_5	1.52	2.06	2.3650	2.2727
Pounds U_3O_8	26.87	5,677.07	15,594.37	21,298.31
Base Payment U_3O_8	$56.43	$19,830.73	$54,580.32	$74,467.48
Development Allowance @ 50¢	$13.44	$ 2,838.55	$ 7,797.21	$10,649.20
Premiums U_3O_8				
Excess of 4 lbs. per ton				
Pounds U_3O_8		2,528.07	7,923.87	10,451.94
Amount @ 75¢		$ 1,896.07	$ 5,942.92	$ 7,838.99
Excess of 10 lbs. per ton				
Pounds U_3O_8			57.95	57.95
Amount @ 25¢			$14.49	$14.49
Haulage Allowance				
Per Wet Ton (Average)	8.70	2.67	5.285	4.543
Wet Tons	10.525	824.04	2,016.225	2,850.79
Amount	$91.57	$2,201.60	$10,656.73	$12,949.90
Pounds of V_2O_5	314.20	32,514.58	90,710.00	123,538.78
Amount @ 31¢	$ 97.40	$10,302.89	$28,120.10	$ 38,520.39
Total Receiving Station Payment	$258.84	$37,069.84	$107,111.77	$144,440.45
A.E.C. Production Bonus	56.43	10,219.44	24,647.54	34,923.41
Total Value Subject to Royalty	$315.27	$47,289.28	$131,759.31	$179,363.86

	CLIMAX URANIUM COMPANY	UNION CARBIDE NUCLEAR COMPANY	VANADIUM CORP. OF AMERICA	TOTAL
Average Value per Ton	$30.49	$59.86	$68.71	$65.99
Average DMEA Royalty Percentage	5%	5%	5%	5%
DMEA Royalty Due	$15.76	$2,364.46	$6,587.97	$8,968.19
DMEA Royalty Paid	15.76	2,364.46	6,587.97	8,968.19
Balance of DMEA Royalty Due	$ 0.00	$ 0.00	$ 0.00	$ 0.00

The foregoing data includes U.C.N. Liquidation No. 7207 dated April 22, 1957; V.C.A. Liquidation No. 4-083 dated April 27, 1957, and Finance Officer's Certificate of Deposit No. 57-155 dated May 14, 1957.

The audit has confirmed the accuracy and propriety of the royalty payments received by the Regional Finance Officer, which are applicable to ore sales during the period April 28, 1955 through May 14, 1957. It has also determined that all indicated sales of ores during the subject period have been properly accounted for.

June 25, 1957

Donald T. Finch

Donald T. Finch, Auditor

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DMEA
RECEIVED JUL 5 1957

DATE	INITIALS	CODE
	Check One	
	Yes	No

Check Sheet of Examining Engineer

Operator's Name W. A. Greer

Address C/O Four Corners Exploration Company
1125 College Place

Grand Junction, Colorado

Exploration Contract No. Idm-E791 Docket No. DMEA-3555

1. (a) Does the Operator stockpile ore subject to royalty repayment?

   (b) If so, is segregation and identification procedure adequate?

2. (a) Does Operator commingle production subject to DMEA royalties with exempt production? ✓

   (b) If so, do you consider the allocation of the commingled production equitable?

3. (a) Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period? ✓

   (b) If so, are adequate records maintained on such material to protect the Government's interest? ✓

4. Do you consider the assay controls in effect are adequate? ✓

5. Do you consider that the manner of disposing of production gives the Government its fair royalty returns? ✓

6. Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA royalties? ✓

7. Does the Operator buy from or sell to other Operators? ✓

8. Comment on any item 2 (b) to 6 if answer is No.

Date 6-24-57

W. H. Salsbury
Mining Engineer

Docket

FILE C

Surname:

Ching

Kirkin

Sharpe

App. Sol. Off.

Alexander

Payne

Geehan

Selfridge

Johnson

CERTIFICATION BY THE UNITED STATES OF AMERICA OF A DISCOVERY OR DEVELOPMENT UNDER AN EXPLORATION PROJECT CONTRACT

To: W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Pursuant to the provisions of Exploration Project Contract No. Idm-E791, dated April 28, 1955, (Docket No. DMEA-3555), hereinafter called the "contract," between you and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien therefor and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows:

Core and non-core drilling on the land described in Article 2 of the contract intersected uranium-vanadium mineralization of ore grade. The ore occurs as irregularly distributed bodies in the upper sandstone lenses of the Salt Wash member of the Jurassic Morrison formation.

DATED: JUL 1 6 1956

MChing/gla/izm 7-10-56
cc to: Operator (original)
Four Corners Exploration Co.
205 Petroleum Bldg.
Grand Junction, Colorado
Louis P. Gaggini, Geo-Engineering
304 Main St.
Grand Junction, Colorado
Homer N. Rosenquist
Naturita, County of Montrose, Colorado
Contract Adm. & Audit Div.
DMEA Field Team, Reg. III (2)
Finance Office
Docket
Rare & Misc. Metals Div.
Admr.'s Reading File
Operating Committee
Robert W. Geehan, Rm. 3608
T. H. Kiilsgaard, Rm. 5224
F. E. Johnson, Rm. 4460
Mr. Ching

THE UNITED STATES OF AMERICA

By [signature]
Administrator, Defense Minerals Exploration Administration

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Murphy	500
	Grace	500
		800
12/29	GCS	120
12/29	On leave	110
12/29	Coe	220
		225

DEC 29 1960

Mr. W. A. Greer
502 Alisa Drive
Albuquerque, New Mexico

Re: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel
Counties, Colorado
Contract Idm-2791

Dear Mr. Greer:

A royalty payment of $492.13 received this month completes repayment in full of the Government's participation of $25,977.64 in the above-referenced exploration contract for uranium. As a result of the repayment, the Government retains no lien or claim against the property or any future production therefrom.

Sincerely yours,

/s/ George C. Selfridge (2/2)

Acting Director

FMMurphy/gla (12/28/60)
Rewritten by GCSelfridge/bh (12/29/60)
Copy to: Docket DMEA-3555
Director's Reading File
Frank E. Johnson
Review Committee
Region III (2)
Code 500
CA&A Division

Mr. Homer N. Rosenquist
202 Red Mesa Heights
Grand Junction, Colorado

Mr. Louis P. Gaggini
304 Main Street
Grand Junction, Colorado

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/28	Murphy	500
	L. Talbert	500
12/29	Talbert	800
		130
		110
		220

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: EMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Dear Mr. Greer:

This is to advise that the final payment made for production during November 1960 completes repayment in full of the Government's participation of $25,977.64 in the above-referenced exploration contract for uranium. As a result of the repayment, the Government retains no lien or claim against the property or any future production therefrom.

Sincerely yours,

Acting Director

FMMurphy/gla
12-28-60
cc to: Director's Reading File
Frank E. Johnson
Review Committee
Region III (2)
Docket
Code 500
Contract Division

Mr. Homer N. Rosenquist
202 Red Mesa Heights
Grand Junction, Colorado

Mr. Louis P. Gaggini
304 Main Street
Grand Junction, Colorado

43683

7-16-56

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

W. A. Greer
502 Alice Drive
Albuquerque, New Mexico

pertaining to Exploration Project Contract No. Ida-2791, Docket No. DMEA-3555, including Amendments Nos. 1 and 2, for the months of August, 1955 to April, 1956, inclusive, covering a project for the exploration of Uranium on property known as Bachelor Claims Nos. 2 through 6, in San Miguel and Montrose Counties, Colorado.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer of the DMEA Field Team, Region III, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reason:

> All of the costs incurred were under a contract provision for payment by the Government on the basis of fixed unit costs for work actually performed.

The review disclosed the following facts in regard to the amount paid or to be paid the contractor:

Total cost as billed by Contractor		$34,636.85
Exceptions:		
By DMEA Finance Officer	0	
Herewith	0	0
Total Accepted Cost		$34,636.85

The contract calls for a 75 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Twenty-five thousand, nine hundred seventy-seven and 64/100ths Dollars

** $25,977.64 **

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

Donald T. Finch
Donald T. Finch, Auditor

y 5, 1956

Final Audit
Report

Docket copy

Porter
Dwyer
"Appd. Sol. Off."
Ching
Ellis
Talbot
Selfridge
Fishman
Whitehead

AMENDMENT NO. 2
to
EXPLORATION PROJECT CONTRACT NO. 14m-2791
dated April 28, 1955
DOCKET NO. DMEA-3555
between
THE UNITED STATES OF AMERICA
and
W. A. GREER

It is agreed this 1st day of February, 1956, that the Contract is further amended, effective December 17, 1955, as follows:

1. (a) Work under the Contract shall be suspended during the period beginning December 17, 1955, and ending not later than March 31, 1956.

(b) No costs incurred by the Operator during the period of suspension shall be allowable for contribution by the Government, and the Government shall not contribute to any costs of rehabilitation or repair which, in its opinion, would not have occurred if there had been no suspension of the work.

(c) The Operator, at his own cost and expense, without contribution by the Government, during the period of suspension shall preserve and protect the project work and any property in which the Government has an interest.

2. In Article 3, the time fixed for the completion of the work is extended from "December 31, 1955," to "June 30, 1956."

This agreement shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute under the provisions of the Contract, or the fixed unit cost of any item of work.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

W. A. GREER

W. A. Greer

By W. M. Lower
Executive Officer
DMEA Field Team, Region III

Rec'd 12/15/5

No. 1

AMENDMENT OF CONTRACT: No. Idm-E791

Contract Docket No. DMEA 3555, Contract Idm-E791, dated April 28, 1955, between the United States of America and W. A. Greer is hereby amended as follows, effective September 11, 1955:

Reference is made to EXHIBIT "A" attached to Exploration Project Contract Form MF-200A (Revised June 1954) heading "Description of the work," subheading Stage II

Prior to the start of the exploration project work the Atomic Energy Commission drilled certain holes in the area where the proposed DMEA holes were to be drilled. One of these holes designated as Z-102 disclosed encouraging enough results to warrant additional offset drill holes and it appears advantageous to the Government to authorize such drilling. Therefore the second sentence in the paragraph of subheading under "Stage II" mentioned above which states "The purpose of these holes is to further explore any mineralization or favorable areas found in work under Stage I" is revised to state "The purpose of these holes is to further explore any mineralization or favorable areas found in work under Stage I including the area surrounding Atomic Energy Commission's Drill Hole Z-102." This hole is shown as a letter X within a red square [X] on the map Figure 1 attached to and made a part of this amendment.

Otherwise the drilling must comply with all provisions and is subject to all conditions of the contract.

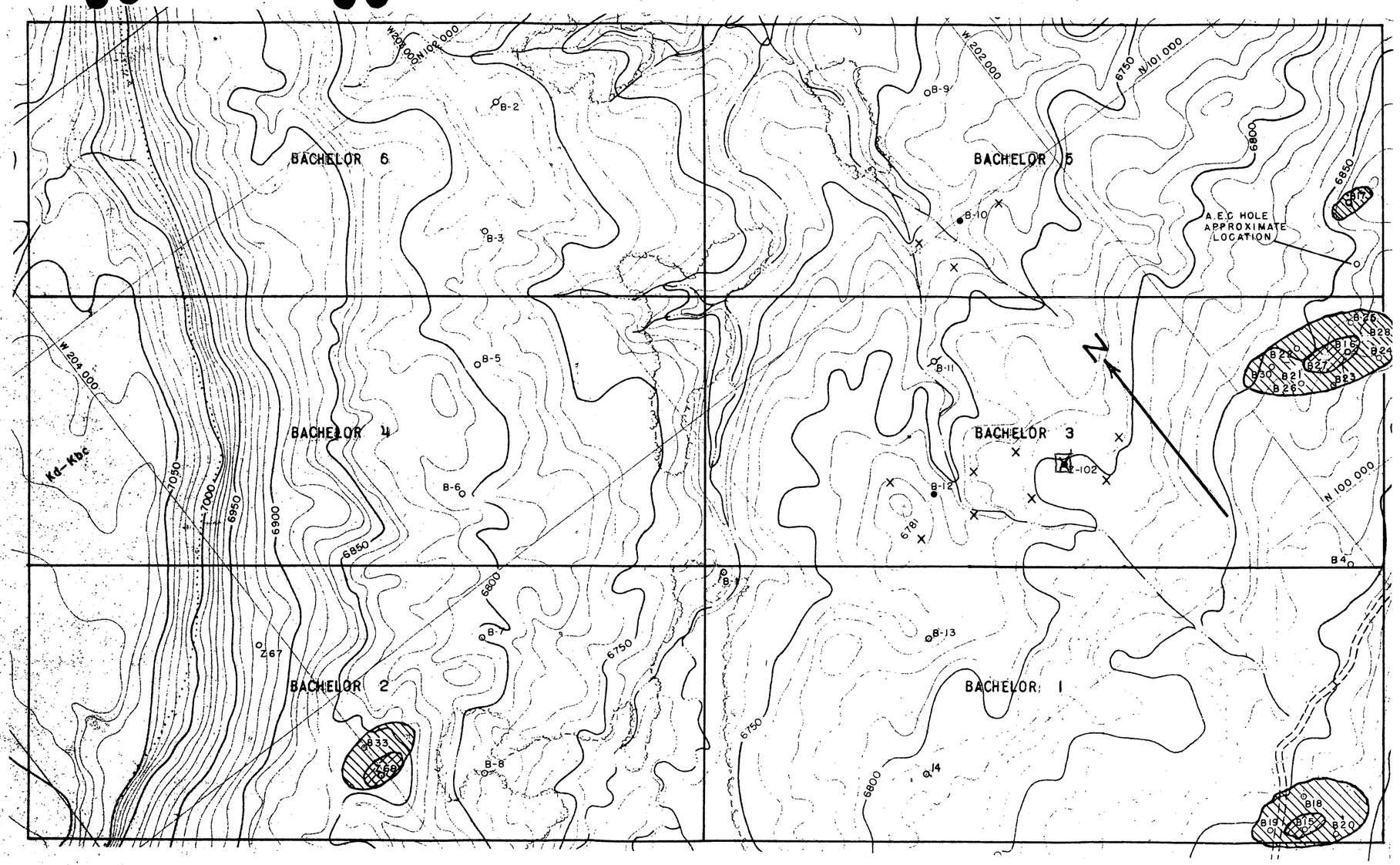
This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, nor the agreed unit cost of any item of work.

Dated October 17, 1955

UNITED STATES GOVERNMENT

By W. M. Traver
W. M. Traver, Executive Officer, DMEA Field Team, Region III

W. A. Greer
W. A. Greer
Operator
Four Corners Exploration Co.
1118 Main St.
Grand Junction, Colorado
Assignee
by: J Manul
Partner



EXPLANATION

Kd-Kbc	CRETACEOUS DAKOTA-BURRO CANYON
Jmb	JURASSIC MORRISON BRUSHY BASIN MEMBER
.....	FORMATION CONTACT
	INFERRED MINERALIZED GROUND
	INFERRED ORE
	DRILL HOLES. HOLES WITH NUMBERS PREFIXED Z DRILLED BY ATOMIC ENERGY COMMISSION. HOLE NUMBERS B-2 THRU B-14 DRILLED UNDER D.M.E.A. CONTRACT, STAGE I. ALL OTHER HOLES DRILLED BY W. A. GREER
○	BARREN
⊘	WEAKLY MINERALIZED
●	ORE-BEARING
×	LOCATION OF PROPOSED STAGE II DRILL HOLE

Note: TOPOGRAPHY, GEOLOGY AND CLAIM BOUNDARIES FROM APPLICANTS MAP

200 0 400 FEET
CONTOUR INTERVAL 10 FEET

SECTION 15 (UNSURVEYED)
T. 45 N., R. 18 W.
N.M.P.M.

Figure 1. MAP OF PART OF BULL CANYON DISTRICT, SHOWING LOCATION OF STAGE I DRILL HOLES AND PROPOSED STAGE II DRILL HOLES ON BACHELOR GROUP OF CLAIMS, W. A. GREER (FOUR CORNERS EXPLORATION CO.) SAN MIGUEL COUNTY, COLORADO

For reference:

Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

per Traver memorandum: 1/30/56 + 1/4/57

Docket copy

RECEIVED
JUL - 5 1955

MF-200A
(Revised June 1954)

Docket No. DMEA - 3555

Commodity Uranium

Contract No. Idm-E 791

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this 28th day of April, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] W. A. Greer,

whose mailing address is 502 Aliso Drive
Albuquerque, New Mexico,
hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Colorado, ~~County~~ Counties of San Miguel and Montrose, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] lessee of [5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] See Annex I, [7] ~~---~~ recorded in Book ---, page ---, official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: Royalty claim of Louis P. Gaggini.

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows Consent to Lien of owner and Subordination Agreement of Louis P. Gaggini.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 7, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 7(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of uranium. The work to be performed is described in Exhibit "A." The Operator on or before August 1, 1955 shall commence the work, and on or before December 31, 1955 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $37,535.00. The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $28,151.25: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work

performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records or accounts.

ARTICLE 7. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 6) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 8. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 8 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 9. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 10. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

W. A. Greer
W. A. GREER
(Operator)

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals Exploration Administration

By .....

.....

Ching

Butrin
Hoffland
Ellis
Chandler
Selfridge
Johnson

I, ..., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70618-1

DMEA
Date Rec'd.
JUL 21 1955
RECEIVED
JUL - 5 1955
BUREAU OF MINES
Denver, Colorado

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Colorado, County of San Miguel, described as follows:1/ In a lease dated March 15, 1954, and recorded in Book 223, Page 146 of the official records of said County.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ W. A. Greer

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract or any amendment thereof shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract or any amendment thereof there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

(OVER)

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions In paragraph 2 the words "the period fixed in the contract or any extension thereof has" are substituted for "ten years have."

Dated this 29th day of June, 1955.

Homer N. Rosengeist [Seal]

[Seal]

[Seal]

MF-201
(Revised February 1953)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUL - 5 1955

SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

10% Royalty reservation as shown on Mining Lease Assignment - Recorded

in County of San Miguel, State of Colorado, June 14, 1954, Book 223, Page 149
upon that certain parcel of ground described in a proposed Exploration Project Contract

between W. A. Greer, 502 Aliso N. E., Albuquerque, New Mexico

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 27th day of June, 1955

Louis P. Daggiere [SEAL]

[SEAL]

I, _____, certify that I am the _____

(Secretary, etc.) of the corporation named herein; that _____

who signed this agreement was then _____ (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

RECEIVED
JUL - 5 1955

EXPLORATION PROJECT CONTRACT
W. A. GREER
DOCKET NO. DMEA-3555

ANNEX I

The land referred to in Article 2 of the contract consists of six unpatented mining claims situated in Section 14, T. 45 N., R. 18 W., N.M.P.M., San Miguel and Montrose Counties, Colorado, recorded at the San Miguel County Courthouse as follows:

Name of Claim	Book No.	Page No.
Bachelor	174	518
" #2	174	519
" #3	174	519
" #4	174	520
" #5	174	520
" #6	174	521

These claims were leased for a period of ten years by Homer M. Rosenquist to Louis P. Gaggini, by an instrument dated March 15, 1954, recorded in Book 223 at page 146; and the lease was assigned to W. A. Greer by an instrument dated June 4, 1954, recorded in Book 223 at page 149.

The claims are shown on a map, Figure 3, attached to and made a part of the contract, and the location of the claims is shown on an index map, Figure 1, attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
W. A. GREER
DOCKET NO. DMEA-3555

EXHIBIT "A"

Description of the Work

The work consists of exploration by plug-bit and core drilling.

The drill holes shall test the principal known ore zone of the land. This zone lies approximately 100 feet below the top of the Salt Wash member of the Morrison formation, consistently occurring in the second sandstone unit from the top of the member. It is anticipated that the average depth of the holes will be approximately 375 feet, of which an average of 180 feet is likely to be cored. The coring should begin about 10 feet above the top sandstone unit of the Salt Wash and should bottom in red mudstone within a 20-foot zone beneath the favorable ore horizon.

All drill core and cuttings shall be saved and split, and one-half retained by the Operator for study or analysis and one-half properly stored for the use of the Government. The Operator's portion shall be checked radiometrically for uranium, and samples indicating significant mineralization shall be analyzed chemically for both uranium and vanadium.

All drill holes shall be logged geologically and probed radiometrically, and the record of such logging and probing, together with certified copies of all assay certificates, shall be submitted with the Operator's monthly progress reports.

All holes shall be reamed and cased as necessary.

The work shall be done in two stages. If, in the opinion of the Government, the results of Stage I warrant further work, the Operator shall perform that work outlined in Stage II which the Government approves in writing in advance.

Notwithstanding any other provision of the contract, no hole shall be drilled which, in the opinion of the Government, would duplicate drilling performed prior to the date of the contract.

The location, inclination, direction, and extent of all project work are subject to the approval of the Government.

Stage I

The work under this stage consists of the preparation of access roads and drill sites by bulldozer and the drilling of 12 holes aggregating approximately 4500 feet, in two rows, as shown on the attached Figure 3. The holes in each row shall be spaced approximately 300 feet apart.

Stage II

The work under this stage consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 18 holes aggregating not more than 6,800 feet. The purpose of these holes is to further explore any mineralization or favorable areas found in the work under Stage I. No hole shall be drilled closer than 100 feet to any previously drilled hole.

Fixed Unit Costs

Stage I

2 bulldozer moves on or off property @ $50.00/move 1/	$ 100.00	
48 hours bulldozer work @ $12.00/hr.	576.00	
2340 feet of plug drilling @ $2.70/ft.	6,318.00	
2160 feet of core drilling @ $3.60/ft.	7,776.00	
25 chemical analyses @ $5.00/ea.	125.00	
		$14,895.00

1/ The completed work constitutes the unit.

Stage II

6 bulldozer moves on or off property @ $50.00/move 2/	$ 300.00	
72 hours bulldozer work @ $12.00/hr.	864.00	
3560 feet of plug drilling @ $2.70/ft.	9,612.00	
3240 feet of core drilling @ $3.60/ft.	11,664.00	
40 chemical analyses @ $5.00/ea.	200.00	
		$22,640.00
Estimated Total Cost of Project		$37,535.00
Government Participation @ 75%		$28,151.25

2/ The completed work constitutes the unit.

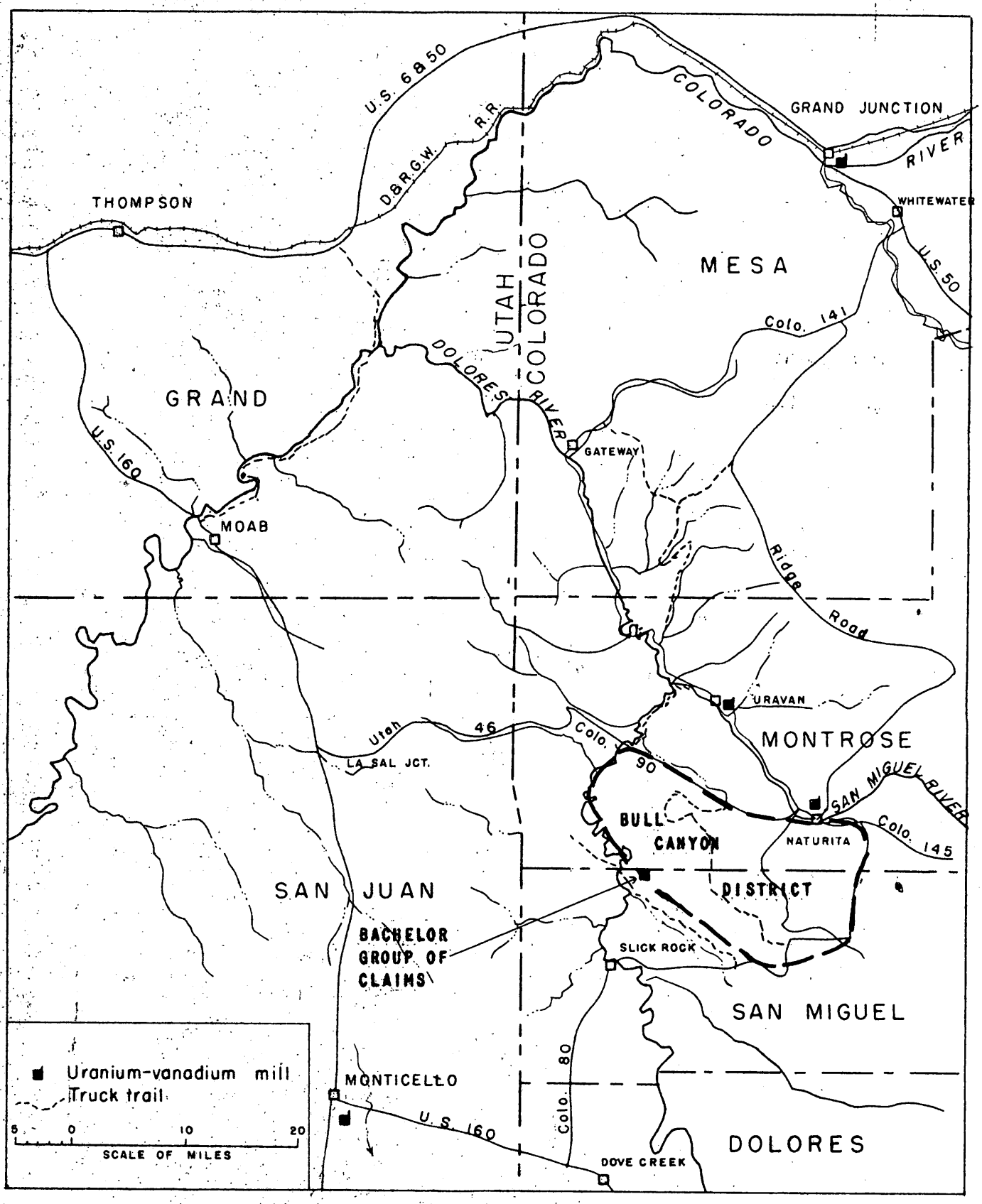
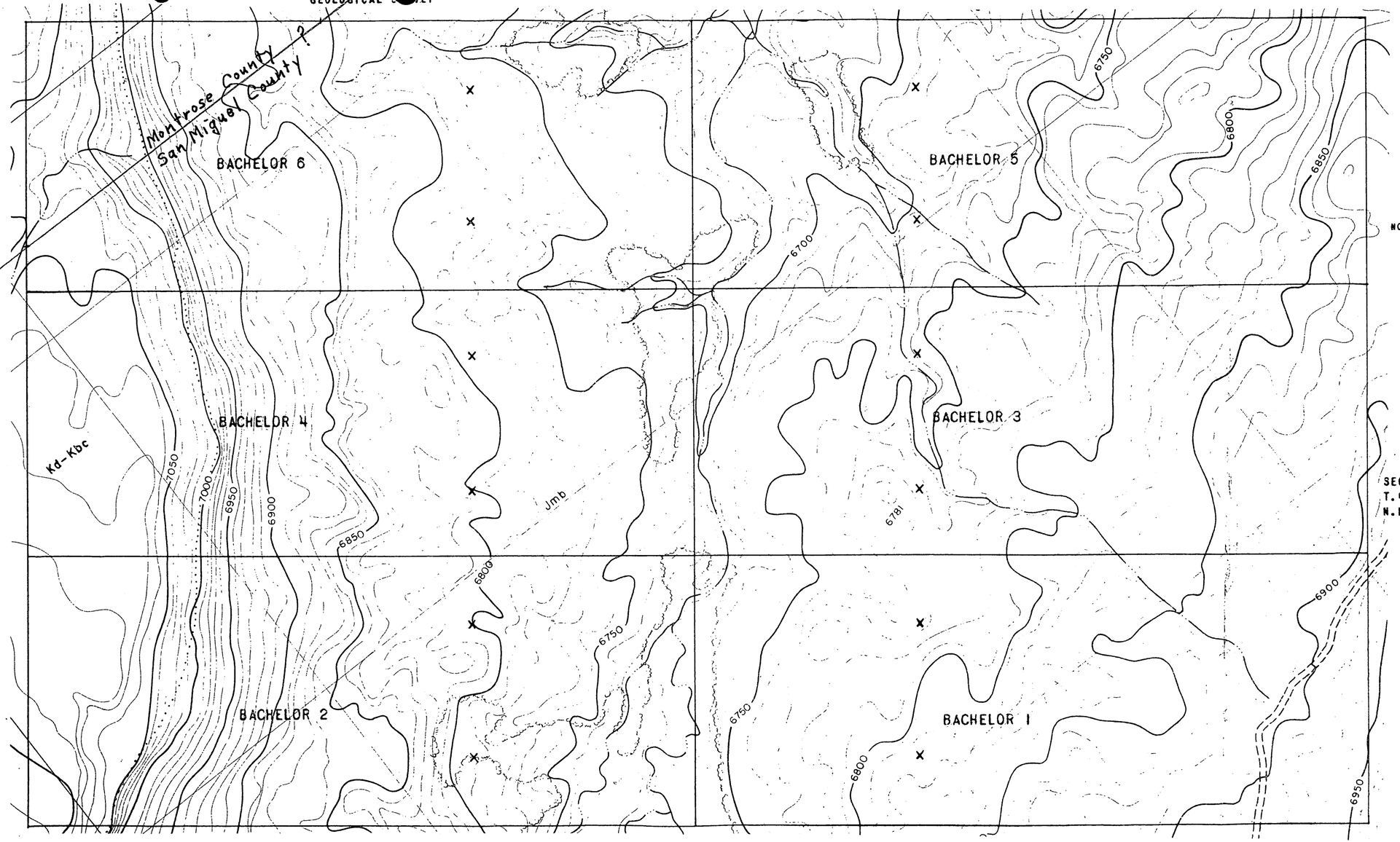


Figure 1. INDEX MAP OF PART OF COLORADO PLATEAU SHOWING LOCATION OF BACHELOR GROUP OF CLAIMS, W. A. GREER, SAN MIGUEL COUNTY, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3555



EXPLANATION

Kd-Kbc	CRETACEOUS DAKOTA-BURRO CANYON
Jmb	JURASSIC MORRISON BRUSHY BASIN MEMBER
X	LOCATION OF PROPOSED DRILL HOLES, STAGE 1
.....	FORMATION CONTACT

NOTE: TOPOGRAPHY, GEOLOGY AND CLAIM BOUNDARIES FROM APPLICANTS MAP

N

SECTION 14 (UNSURVEYED)
T. 45 N., R. 18 W.
N.M.P.M.

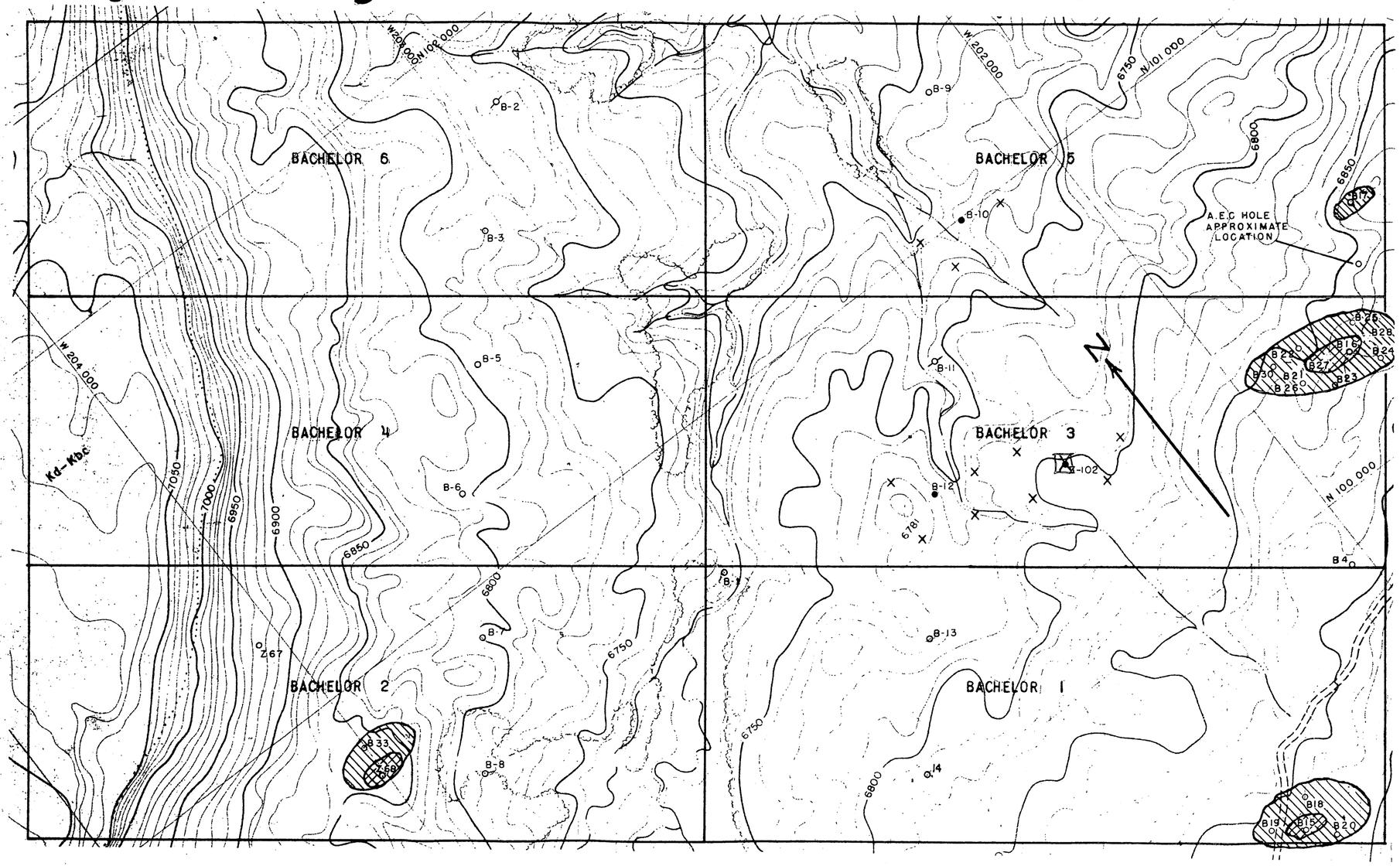
200 0 400 FEET

CONTOUR INTERVAL 10 FEET

Figure 3. MAP OF PART OF BULL CANYON DISTRICT SHOWING LOCATION OF PROPOSED DRILL HOLES ON BACHELOR GROUP OF CLAIMS, W. A. GREER, SAN MIGUEL COUNTY, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3555 REVISED SEPTEMBER 1955



EXPLANATION

Kd-Kbc	CRETACEOUS DAKOTA-BURRO CANYON
Jmb	JURASSIC MORRISON BRUSHY BASIN MEMBER
	FORMATION CONTACT
	INFERRED MINERALIZED GROUND
	INFERRED ORE
	DRILL HOLES. HOLES WITH NUMBERS PREFIXED Z DRILLED BY ATOMIC ENERGY COMMISSION. HOLE NUMBERS B-2 THRU B-14 DRILLED UNDER D.M.E.A. CONTRACT, STAGE I. ALL OTHER HOLES DRILLED BY W. A. GREER
o	BARREN
ø	WEAKLY MINERALIZED
●	ORE-BEARING
X	LOCATION OF PROPOSED STAGE II DRILL HOLE

Note: TOPOGRAPHY, GEOLOGY AND CLAIM BOUNDARIES FROM APPLICANTS MAP

200 0 400 FEET
CONTOUR INTERVAL 10 FEET

SECTION 15 (UNSURVEYED)
T. 45 N., R. 18 W.
N.M.P.M.

Figure 1. MAP OF PART OF BULL CANYON DISTRICT, SHOWING LOCATION OF STAGE I DRILL HOLES AND PROPOSED STAGE II DRILL HOLES ON BACHELOR GROUP OF CLAIMS, W. A. GREER (FOUR CORNERS EXPLORATION CO.) SAN MIGUEL COUNTY, COLORADO

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

DEPARTMENT OF THE INTERIOR
Minerals Administration
NOV 1 - 1954

224 New Customhouse
Denver 2, Colorado

October 28, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region 1V

Subject: (Uranium), Application of W. A. Greer
Bachelor Group
San Miguel and Montrose Counties, Colorado

Enclosed are 3 copies of the subject application in the amount of $112,809.69. One copy of the application is being retained in this office.

W. H. King

Enclosures

...MENT OF THE INTERIOR
...Minerals Administration
NOV 1 - 1954

502 Aliso Drive
Albuquerque, New Mexico
October 28, 1954

Mr. W. H. King, Executive Officer
Defense Minerals Exploration Administration
New Customhouse Building
Denver, Colorado

Dear Sir:

Transmitted herewith are four copies of an application for D.M.E.A. loan on the Bachelor Group of Claims in the Bull Canyon Area, San Miguel and Montrose Counties, Colorado.

The application brochure was prepared by Geo-Engineering, Grand Junction, Colorado, who will act as my agents in performing the exploration work. I therefore request and authorize the Defense Minerals Exploration Administration to address all correspondence regarding this application to: Mr. Louis P. Gaggini, Geo-Engineering, 304 Main Street, Grand Junction, Colorado.

I also hereby appoint Geo-Engineering as my agents for collection of the amounts due under the exploration project contract requested by the application transmitted herewith, and I am desirous of having all checks payable under the contract made out to myself and Geo-Engineering jointly.

Very truly yours,

W. A. Greer

W. A. Greer

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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

Not to be filled in by applicant

Docket No. 3555
Metal or Mineral Uranium
Date Received
Estimated Cost $112,810
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1 - 1954

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: W. A. Greer, Jr. dba Alisa Op. ~~421 Grove N. E.~~, Albuquerque, New Mexico. Please address all correspondence regarding application to Geo-Engineering, 304 Main St., Grand Junction, Colorado.

(*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 Bachelor No. 1 thru No. 6 are recorded in Telluride, San Miguel County, Colorado. Book 174 Pages 518 thru 520

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lease shown as Exhibits No. 3 and 4.

(*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 Exhibits No. 3 and 4

(*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.

16—66551-1

EXHIBIT 1

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

(*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 30 days and be completed within 12 months from the date of an exploration project contract.

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

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?

[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 Oct. 27, 1954

W. A. Greer
(Applicant)

By .....

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
NOV 1 - 1954

G E O - E N G I N E E R I N G

APPLICATION FOR DMEA PROJECT ON THE BACHELOR GROUP

Prepared for
Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

By

GEO-ENGINEERING
304 Main Street
Grand Junction, Colorado

GEO-ENGINEERING
304 Main Street
Grand Junction, Colorado

October 6, 1954

APPLICATION FOR DMEA PROJECT ON THE BACHELOR GROUP PREPARED FOR
W. A. GREER
502 Alisp Drive
Albuquerque, New Mexico

DEPT. OF THE INTERIOR
Bureau of Mines
Bureau Mineral Administration
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LIST OF SCHEDULES

Title	Schedule No.
Summary of Costs	1
Estimate of Amounts to be paid to Independent Contractors	2
Estimated Costs under Heading 6 (b), 6 (c), 6 (9) Form MF-103	3
Drilling Summary	4

LIST OF EXHIBITS

Title	Exhibit No.
Completed form MF-103	1
Quit Claim Deed, Moss to Rosenquist	2
Lease Agreement from Homer N. Rosenquist to Louis P. Gaggini	4
Form MF-203 Owners consent ;to lien	5
Logs of Diamond Drill holes drilled near Bachelor claims	6 - 13 incl.
Explanation of U.S.G.S. Drill logs	14

LIST OF FIGURES

Title	Figure No.
Maps of Uravan Mineral belt showing position of Plate 1 of DMEA Application on Bachelor Group	1
Maps showing dominent orientation of fisil logs and rolls	2
Topographical maps of Bull Canyon area	3

packet

List of Plates

Claim maps of Bachelor Group showing proposed holes and drilling tabulation	Inside back cover pocket

DMEA FORM 6 REFERENCE SLIP

REV. 12-56 DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO:	INITIALS	DATE
1. ~~Mr. Murphy~~	Murphy	3/22
2. Mails & Files		
3.		
4.		
5.		
FROM:		3/22

FOR: Check items for action desired

____ Action ____ Reply for signature of _____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS: No answer required, Govt's royalty rights are protected in this lease.

Murphy

INT.-DUP. SEC., WASH., D.C. M25803

DMEA 3555
Idm-E 791
W.A. Greer

LEASE AGREEMENT

THIS AGREEMENT OF LEASE, made and entered into this _____ day of August, 1958 between Homer N. Rosenquist, P. O. Box 446, Nucla, Colorado, Samuel C. Polk, c/o Homer N. Rosenquist, Nucla, Colorado and Guy B. Dyer, Jr., of Dove Creek, Colorado hereinafter called Lessors and Ed Robinett, Frosty Thompson, Earl Randolph and Marvin Randolph, partners for the purpose of this lease and operations only, doing business as Bachelor Mines of Dove Creek, Colorado hereinafter called Lessee's.

WITNESSETH THAT

WHEREAS, Lessors are the owners of mining claims hereinafter described, all situate in the Lower San Miguel Mining District in San Miguel County, Colorado, to-wit:

NAME OF CLAIMS	BOOK	PAGE
Bachelor	174	518
Bachelor No. 2	174	519
Bachelor No. 3	174	519
Bachelor No. 4	174	520
Bachelor No. 5	174	520
Bachelor No. 6	174	521

and

WHEREAS, Lessors are desirous of leasing said claims to the Lessee upon the terms and conditions hereinafter recited, and the Lessee is willing to accept said lease upon said terms and conditions,

ACCORDINGLY, in consideration of the payment of Ten Dollars ($10.00) and other good and valuable consideration by the Lessee to the Lessors, the receipt of which is hereby acknowledged, and the futher consideration of the royalties to be paid, and the covenants and agreements to be kept and performed by the Lessee as hereinafter set forth, the Lessors do hereby lease unto the Lessee all of the above described mining claims,

TO HAVE AND TO HOLD unto the Lessees for a term of one (1) year from the date hereof and so long thereafter as the minimum work provisions hereinafter set forth are complied with by the Lessees, unless sooner forfeited through a violation of any covenant hereinafter required to be

performed by the Lessee, with the right to surrender this lease as hereinafter set forth.

IN CONSIDERATION THEREOF the Lessee covenants and agrees with the Lessors as follows:

1. To enter upon said mining claims and commence road work and exploration and development thereof through the medium of shafts, crosscuts, drifts and exploratory drilling within thirty (30) days from the date hereof, and to continue such operations continually throughout the term of this lease, doing not less than seventy five (75) 8-hour man shifts of labor per month each and every month during the term of this lease, and if ore is encountered in commercial quantities the Lessee further agrees that it will, within a reasonable time thereafter, commence mining operations to extract such ore and shall operate the same continuously throughout the term of this agreement, adverse weather and acts beyond the control of the Lessees excepted. Commercial ores, as used in this lease, shall be defined as ore that can be sold in excess of the price of the cost of extracting the same. Lessee shall furnish Lessors with copies of all ore assay sheets and drill logs of exploratory drilling, and tracings of the Lessee's maps showing Lessee's operations upon the leased property. It is agreed and understood that all operations of the Lessee on said property shall be conducted in a miner-like fashion, having due regard to the development of the property and to the production of the greatest amount of ore and to the preservation of the property.

2. The Lessee agrees to timber wherever it may become necessary, in accordance with good and safe mining; to keep at all times the drifts, shafts, tunnels, and other workings thoroughly drained and clear of loose rocks and rubbish, unless prevented by extraordinary mining casualty; and to stow no waste underground except with the consent and under the direction of the Lessors, and to keep said leased premises in an otherwise safe and proper condition; and shall permit the Lessors or their agents full and free access to said claims for the purposes of inspection and otherwise, all at the risk of the inspector.

3. To pay the Lessors fifteen per cent (15%) of the gross proceeds received from the sale of ores mined and sold from said claims in accordance with the schedule of prices heretofore established by the Atomic Energy Commission or other purchaser empowered by law to purchase such ores. No exploratory of development allowance which shall be paid to the Lessee by any governmental or other agency as to the property embracing said mining claims shall be deemed to constitute a portion of the gross consideration for the purposes of determining a royalty payable hereunder, nor shall any royalties be paid on any amount received by the Lessee as an allowance for transportation costs, but any premium or bonus payment paid to the Lessees in connection with production and sale or disposal of minerals and ores extracted from said mining claims and based upon the quality and/or quantity of the ores and minerals so produced shall be deemed as a part of the gross consideration and shall be included as a part of the gross consideration in the computation of the royalty payments set forth hereunder. It is mutually agreed between the parties hereto that there is an outstanding D. M. E. A. loan in the approximate amount of eleven thousand dollars ($11, 000) outstanding against the above described mining claims and it is mutually agreed between the parties hereto that the Lessees will pay five per cent (5%) of the gross proceeds received from the sale of the ores to the repayment of said loan in accordance with the D. M. E. A. contract and upon completion of the payment to the D. M. E. A. the royalty reserved to the Lessors shall be increased two and 1/2 % (2 1/2%) ~~[illegible]~~ but not to exceed ~~[illegible]~~ (17 1/2%).

4. The royalties payable hereunder to the Lessors shall be payable on the fifteenth (15th) day of each calendar month in respect to the gross return from sales or disposals which shall have been received by the Lessees during the preceeding month. The payments shall be in money only, and paid to such Bank as the Lessors may from time to time designate, and, at the option of the Lessors, they may elect to receive payment directly from the ore buyer. Lessee further agrees that it will make application for bonus payments each month following a sale of ores and that the royalties payable on such bonus payments shall be made immediately upon their receipt.

5. So long as this lease may be in effect, the Lessees shall do and perform, within the time prescribed by law, and before April 1st of each year, the annual labor for the retention of the possessory rights upon said mining claims, and shall make and file an affidavit so showing not later than May 1st of each year, and furnish a copy thereof to the Lessors.

6. The Lessees shall carry on all mining operations in strict conformity with the laws and regulations pertaining to such operations and shall pay all State and Federal taxes upon the operations hereunder, including, but not limited to, any production taxes, and shall save and keep harmless Lessors from any and all liability of every kind and character arising out of any mining operations hereunder, and shall, upon the request of the owners, deposit with the owners an amount sufficient to pay the production taxes on said claims.

7. The Lessee shall pay as due all claims for work done, services rendered or material furnished to the leased premises, and shall hold the Lessors harmless from any liability arising out of any operations under the lease. The Lessees shall defend all suits or claims at their own expense and shall keep the leased premises free from any liens, the Lessees shall post, and keep posted, in a conspicious place or places, at or near all parts of the premises where operations under this lease are in progress; notices on non-liability reciting in substance that the premises are leased and that neither the Lessors nor the premises may be held liable for any claims of any kind arising out of the Lessee's operations.

8. The Lessees shall have the right to surrender this lease at any time upon giving the Lessors at least thirty (30) days written notice of surrender or cancellation as hereinafter provided and the Lessees shall have all of their machinery, equipment, and personal property removed from said claims upon the expiration of the thirty (30) days notice provided that Lessee shall have paid all rentals and royalties then due the Lessors.

9. Lessees shall not have the right to assign or sub-lease all or any part of the leased premises except with the prior written consent of the Lessors.

10. Upon violation by the Lessees of any of the covenants of the within lease, the terms of this lease shall, at the option of the Lessors, expire, and said mining claims shall become forfeited to the Lessors and the Lessors or their agent may thereupon enter said mining claims and dispossess all persons occupying the same, or, upon the option of the Lessors, Lessees and all persons found in occupation thereof may be proceeded against as guilty of unlawful detainer; provided, however, that if said lease is forfeited upon the election of the Lessors by reason of failure of the Lessees to perform the covenants thereof, the Lessors shall give the Lessees at least thirty (30) days notice in writing by registered mail, sent to the Lessees at Dove Creek, Colorado, notifying it of the failure to perform, default or other breach, and upon the failure or refusal by the Lessees to cure and correct said default within said thirty (30) day period from the receipt of such notice, Lessees shall surrender and deliver up the possession of all of said mining claims, and its rights under this lease shall thereupon cease and terminate. In no event shall two notices be required to the Lessees, and upon the failure to correct said default within the specified time said lease shall be null, void and of no further effect. It is mutually agreed between the parties that at the time the Lessees shall surrender and deliver up possession of said property as provided above the Lessees shall have removed all of their mining equipment, machinery and personal property from said claims.

11. Time is the essence of this agreement but the Lessees shall not be liable for the failure of default in the performance of any of the terms and conditions herein caused by walkouts, strikes, the authority and orders of government, the forces of nature, unavoidable accidents, or for other causes beyond the control of the Lessees, which could not have been reasonably anticipated or avoided.

12. All drilling and exploration as provided in this lease shall be done in a workmanlike manner in accordance with good exploration and drilling practice, and any drilling shall be completed penetrating the known ore horizons.

13. The Lessees assumes full responsibility in case of accident to the Lessees, their agent or any person employed on the leased premises and agrees to hold the Lessors harmless from any suits for injury or accident arising out of employment. The Lessees shall apply for and maintain at all times Workmen's Compensation Insurance pursuant to the laws of the State of Colorado, and shall comply in all respects with any state of/and Federal laws pertaining to employment of persons in mining operations.

14. Any written notices provided herein shall be sent by registered or certified mail, return receipt requested, and addressed as follows:

To Lessors: c/o Homer N. Rosenquist, Box 448, Nucla, Colorado

To Lessees: c/o Marvin Randolph or Ed Robinett, Dove Creek, Colorado.

Either party may change the name or address above by written notice to the other party. Notices shall be effective when deposited in the U. S. Mail.

15. It is mutually agreed between the Lessees and the Lessor, Homer N. Rosenquist that for each twenty five hundred dollars ($2500) in equipment the Lessees place upon the said mining claims free and clear of all liens and encumberances the Lessor, Homer N. Rosenquist will convey to them an undivided one (1) per cent interest in the said mining claims and the equipment so designated shall become the property of the Lessor, Homer N. Rosenquist and shall remain on the property at the termination of this lease and it is further mutually agreed that this provision shall be in force and effect up to the total sum of twenty five thousand dollars ($25000) in mining equipment.

16. This Agreement shall be binding and extend to the assigns, successors and heirs of the respective parties hereto.

IN WITNESS WHEREOF, the parties hereto have set their hands the day and year first above written.

Homer N. Rosenquist

Samuel C. Polk & Dora Polk
by Homer N. Rosenquist

Guy B. Dyer, Jr.

LESSORS

GEO-ENGINEERING
304 Main Street
Grand Junction, Colorado

October 6, 1954

APPLICATION FOR DMEA PROJECT ON THE BACHELOR GROUP PREPARED FOR

W. A. GREER
502 Aliso Drive
Albuquerque, New Mexico

RECEIVED

INTRODUCTION

This report, prepared by Geo-Engineering for the purpose of applying for DMEA loan on the Bachelor group of claims, is prepared for W. A. Greer who has signed the MF 103, attached as Exhibit 1. Numbers and letters in front of the heading of the report refer to parts of the MF 103.

ABSTRACT

This report, with Form MF-103 (numbers and letters in front of headings used in this report refer to parts of Form MF-103) attached as Exhibit 1, is an application for a Defense Mineral Exploration Administration exploration project contract of the short form or unit cost type. A $112,809.69 project is proposed for exploring uranium lands in San Miguel County, Colorado (see Exhibit 1). A total of 26,730 feet of diamond core drilling is proposed on the Bachelor group of claims in the Bull Canyon area, (see Figure 2). A unit cost of $4.153 per foot is estimated for the work. Not included in this unit cost is an estimated $1800.00 for custom assaying which is, however, included in the total proposed expenditure. One hole totaling 245.5 feet has been drilled prior to DMEA participation for assessment work in 1953-54. Twenty five percent, or $28,202.42 of the total expenditure, will be born by Mr. W. A. Greer, the applicant, leaving $84,607.27 to be loaned by DMEA. Locations for 36 holes which have been previously determined are shown on Figure 3. As the work progresses, however, it will likely become evident that some of the proposed holes might fall in areas geologically unfavorable for ore. Mr. W. A. Greer would, therefore, like the privilege of deciding whether or not any previously proposed hole should be drilled. It is requested that the footage saved, when proposed holes are omitted, be transferred, with the permission of the DMEA Field Team, to other parts of the Bachelor group which might be more favorable for ore.

The Bachelor group, because it is located within the Uravan Mineral Belt, can be compared favorably with the best uranium land on the Colorado Plateau (see Figure 1). Skilled labor, materials and equipment necessary for the project are readily available in the Naturita-Uravan District, which is near the heart of the uranium region. Personnel of Geo-Engineering, who will act as consulting geologists for the exploration project, have had almost 11 years' experience in uranium exploration and mining, with

a good record of discoveries and correct appraisals of speculative areas.

1. NAME OF APPLICANT

a. W. A. GREER - See form MF-103 attached as Exhibit 1
b. Omitted - not a corporation or partnership
c. Omitted - same reason as above
d. Omitted - same reason as above

2. GENERAL

The following report is written in accordance with the instructions on Form MF-103 of the Defense Minerals Exploration Administration and is intended to become an integral part of the enclosed application.

The letters and numbers used as headings for the parts of this report refer to the letters and numbers used on Form MF-103.

3. PROPERTY RIGHTS

a. b. Legal Description and Name of Property

The land, on which the exploration work is to be performed, consists of 6 adjoining unpatented mining claims which shall be referred to in this report and future correspondence as the Bachelor Group. The claims are located in the Wedding Bell area of Bull Canyon in Section 14, T45N, R18W, N. M. P. M., in the lower San Miguel Mining District of San Miguel County, Colorado. Their position with respect to the G. L. O. Grid is shown on Figures 2 and 3.

← Name of prop.

c. Interest

Mr. W. A. Greer has a lease on the Bachelor Group from Mr. Homer N. Rosenquist of Naturita, Colorado, owner of the property (see Exhibits 2 and 3). The lease, a copy of which is included as Exhibit 3, was originally in favor of Louis P. Gaggini, one of the writers of this report, as Lessee. The document included as Exhibit 4 assigns the lease to W. A. Greer.

d. Outstanding Liens

The only obligations against the property are the royalty obligations agreed to in documents included as Exhibits 3 and 4. The lien of the Government for money loaned by the DMEA is, however, consented to by Mr. Homer N. Rosenquist, owner of the property, and is to remain in effect under terms set forth in Form MF-203, Owners Consent to Lien (see Exhibit 5).

e. Record of Title

All transactions affecting title to the claims are recorded in the office of the County Recorder of San Miguel County at Telluride, Colorado. The 6 Bachelor claims were discovered and located on the 5th day of October, 1949, and recorded on the 2nd day of December, 1949, by Homer N. Rosenquist and J. B. Moss. These certificates are recorded in Book 174 on pages 518 to 521, inclusive. A Quitclaim Deed, dated May 4, 1954, and recorded in Book 212 on page 395 at Telluride, Colorado, conveys the one-half interest of J. B. Moss to Homer N. Rosenquist (see Exhibit 2).

Mr. Rosenquist filed amended location certificates, pursuant to Public Law 250, for the Bachelor and Bachelor #2 claims on the 17th day of November, 1953, and on Bachelors #3, #4, #5 and #6 on the 18th day of November, 1953. These certificates are recorded in Book 226 on pages 248 to 253, inclusive.

Plate 1 shows the overlapping claims called Lower Radium Hills 38, 39, 40, 41 and 42. These were located after the Bachelor claims. They are recorded at Telluride, Colorado, in Book 335 on pages 375, 475, 476, 477 and 482.

Rosenquist to Gaggini, Book 223, page 146, June 14, 1954.

Gaggini to Greer, Book 223, page 149, June 14, 1954.

4. PHYSICAL DESCRIPTION OF PROPERTY

a. Operations

There are no mine workings on the claims. Logs from 7 drill holes on the Lower Radium Hill claims that join the Bachelor Group on the south are shown as Exhibits 6, 7, 8, 9, 10, 11 and 12. Exhibit 14 explains the symbols and abbreviations used on the drill logs.

Hole B No. 1 was drilled prior to June 30, 1954. The log of this hole is shown as Exhibit 13.

b. Production and Ore Reserves

There has been no past production and there are, at present, no proven ore reserves on the Bachelor Group.

c. Geologic Features

Stratigraphy: The proposed drill holes will be collared in the Brushy Basin Member of the Morrison Formation. All holes will be drilled to the red clay underlying the sandstone lenses, which occurs at the center of the Morrison Formation near the top of the Salt Wash Member. Sandstone lenses occurring in the central stratigraphic zone mentioned above have been the host rocks for at least 90% of the Morrison uranium production. Sandstones were cut at this stratigraphic zone by all of the holes shown as Exhibits 6 through 12. No attempt was made to separate the members of the Morrison on the section in Plate 1. There are some ore horizons in the Brushy Basin Member that have been productive. These will, of course, be tested in the proposed program incidental to the exploration of ore in the deeper and more productive horizons.

Formations older than the Morrison are not differentiated or discussed in this report as they do not have any bearing on the exploration project.

Structure: The regional dip of this section of the Bull Canyon area is 5% to the northeast. Information taken from the U. S. G. S. Geologic Quadrangle Map of the Bull Canyon Quadrangle was used for the purpose of projecting ore horizons to calculate the estimated drilling depths given in Exhibit 4 and shown in Plate 1.

Ore Deposits of the Bull Canyon District are, on the average, much larger than most of the Morrison uranium deposits. The presence of gray-green mudstone at the base of a potentially ore-bearing sandstone has been an excellent guide to ore. Drilling close to holes which cut one foot or more of gray-green mudstone at the base of sandstones occurring at the main ore horizon has, in every case experienced by the writers, led to the discovery of an ore body.

Justification of Exploration: The Bachelor Group is located within the Uravan Mineral Belt, the area which is generally recognized as containing most of the more valuable uranium ore bodies in the Morrison Formation (see Figure 1). Recent exploration drilling performed by the Plateau Uranium Mining Corpora-

tion has been encouraging. The logs of these holes are given as Exhibits 6 through 12. The area was withdrawn by the A. E. C. on January 4, 1952, and is still withdrawn for further government drilling. The DMEA project proposed, therefore, is a good proposition for the government in that Mr. W. A. Greer will assume 25% of the exploration costs and will probably eventually repay the total cost at the rate of 5% on subsequent production.

It is the opinion of the writers that $112,809.69 can be spent for exploration drilling on the Bachelor Group with reasonable assurance that a 5% royalty on the ore discovered will reimburse the total cost.

d. Accessibility

The Bachelor Group lies about 16 miles airline from Naturita, Colorado, and is 30 miles over a graveled, all-weather road from the Vanadium Corporation of America (V. C. A.) mill at Naturita. It is approximately 45 miles from the U. S. Vanadium Company mill at Uravan.

Supplies for all necessary equipment could be obtained either at Naturita or Uravan. There are postoffices, permanent settlements and motor freight depots at both places. Railroad and airline terminals are located at Grand Junction, Colorado, which lies at a distance of 175 miles by road and 65 miles by air.

e. Availability of Manpower, Equipment, Supplies, Etc.

Manpower skilled in performing the type of drilling planned is readily available in the area, as are dependable outlets for materials and supplies.

Most of the equipment to be used in the project will be supplied by private contractors.

Geo-Engineering, a professional engineering firm in which the writers are copartners, will supply surveying instruments and transportation for technical personnel pursuant to the agreement included as Exhibit 4. Geo-Engineering has principal offices at Norwood, Colorado, 50 miles from the property, and at Grand Junction, 175 miles from the Bachelor Group. A bulldozer, complete with operator, can also be rented at Norwood. Water for drilling will be hauled from the Delores River, San Miguel River or closer

reservoirs. There are no power lines in the area, but no immediate need for electricity is anticipated as no camp will be established until mining operations are begun. The San Miguel Power Association, Incorporated, R. E. A., Nucla, Colorado, plans to erect a 44,000 volt system in the area during 1954-55.

5. THE EXPLORATION PROJECT

a. See MF-103, Exhibit 1 - Will Explore for Uranium

b. Proposed Work

Drills for the project will be provided by private drilling companies under contracts.

It is estimated that it will take 12 months to complete the project if one drill is employed. The employment of more than one drill would result in inadequate geological control, wasted footage and an increase in exploration costs per ton of ore discovered.

Proposed holes are shown on Plate 1. Estimated hole depths are listed in the tabulation as ~~Exhibit~~ Sch. 4. Although only 36 holes are shown and tabulated on the map, it is estimated from the writers' experience that at least 10 holes per claim will be required to even sparsely explore the property. Intelligent selection of locations for 60 holes is, however, impossible at this stage. It is recommended, therefore, that a DMEA contract be allowed for a 60 hole project but that the selection of locations for the 24 Stage II holes be made with the approval of the DMEA Field Team after data from some of the preliminary drilling has been accumulated. It is anticipated that most of this Stage II drilling will be around Stage I holes that have penetrated ore. Certainly all of the Stage II locations will be in areas where Stage I drilling has revealed favorable geology.

Logging and Sampling: A Sampler who will also act as a field assistant for surveying will be employed to supervise the logging and sampling. An accurate log will be kept by the driller and all barren core will be arranged on the ground and properly marked so that the geologist or sampler can accurately check the driller's log. Core from each run will be carefully dropped out of the core barrel into a wooden trough provided for the purpose by the drilling contractor. The sampler or other competent individual will then examine the core, using a field gamma ray detecting device.

If any trace of mineralization is found the complete core 'run' will be arranged in a core box provided with a hinged lid, and will be kept until such time as the geologist will have been able to properly sample the core.

Each sample will be carefully described by the geologist in a bound field book as it is placed in the sample sack. Core losses will be pro-rated proportionately regardless of lithology. No more than 1 foot of core will be included in 1 sample. All samples will be sent to commercial assayers for percentage determination of U_3O_8, V_2O_5, and $CaCO_3$.

Geologic Control of Drillings: Mr. Greer asks the privilege of not drilling any of the proposed holes shown in Figure 3 if, in the opinion of the comapny's manager, they fall in an area which, based on previous drilling information, is considered unfavorable. Footage thus saved would be used in more favorable areas, at locations approved by the DMEA Field Team. The criteria used to determine unfavorable area will, in general, be the same as those used by the U. S. G. S. and the U. S. A. E. C. in their drilling programs. These are discussed in a report by Doris Blackman Wier (Wier, Doris Blackman, 1952, Geologic Guides to Prospecting for Carnotite Deposits on Colorado Plateau, U. S. Geological Survey Bulletin 988-B), and the reader is referred to this writing for the information lacking in the brief discussion given below.

Previous experience in the Bull Canyon area has taught the writers that, although all of the criteria listed by Mrs. Wier are important, sandstone thickness and color of basal mudstone are by far the best guides in this area.

When Stage I holes penetrate one foot or more of the gray-green mudstone at the base of a potentially ore bearing sandstone which is over 30 feet thick, Mr. W. A. Greer might recommend to the DMEA Field Team Stage II drilling around such holes.

The Drilling Plan recommended to the DMEA and Mr. W. A. Greer is as follows:

1. The 35 proposed holes shown on Figure 3 should be drilled at the sites selected unless previous information makes it advisable to modify this plan.

2. Hole B-1 has been drilled. Since this preceded DMEA participation, the cost of this hole and drill site preparation is not included in the estimated cost of the proposed DMEA

project (see Schedule 1).

3. Proposed holes B2 to B36 are "wildcat" holes recommended to find favorable areas or to eliminate large areas as being unfavorable.

4. Stage II drilling should be recommended to DMEA as soon as the location of any of the 24 holes recommended can be intelligently determined.

5. Stage II drilling should be performed only in those areas which can be recommended as favorable. The proposed Stage I drilling is sufficient to produce the negative information necessary to delineate unfavorable areas.

6. All deposits of ore or uraniferous and/or vanadiferous sandstone encountered should be tested by drilling at 70 to 100 feet intervals as this is the minimum spacing which will permit a satisfactory determination of tonnage and grade. (The usual 50 foot pattern is not recommended here because of drilling depths).

c. See MF-103, attached as Exhibit 1.

d. Ability of Applicant

Mr. W. A. Greer has been engaged in uranium exploration and mining in the Grants' District since 1951. The Blue Peak Mining Company with which Mr. Greer was associated shipped the first load of sandstone ore to the Shiprock Buying Station from the Grants' District in 1951. Mr. Greer and other members of his family own the claims from which Oscar Manol is producing approximately 50 tons of ore per day from the claims at the present time.

Geo-Engineering, a firm of professional engineers and geologists, with offices conveniently located at Norwood, will act as consultants to Mr. W. A. Greer for this DMEA Project.

One of the writers, Louis P. Gaggini, who is Chief Geologist for Geo-Engineering, began working in uranium in 1943, as geologist for the Union Mines Development Corporation, a contractor for the United States Army Manhattan Engineering Project. Subsequent experience in carnotite exploration included almost two years with the Exploration Branch of the Atomic Energy Commission in Grand Junction and six months with the United States Vanadium Company. Following his employment with the United States Vanadium Company, Mr. Gaggini was for two years Mining Superintendent of the Dulaney Mining Company, where he was in charge of all mining and exploration. This company is at present mining large

tonnages from ore bodies which were discovered during that period. From August, 1952, to February, 1954, Mr. Gaggini was manager of the Colorado Uranium Division of the J. R. Simplot Company. During this period Mr. Gaggini successfully prepared applications for and administered for several months two large DMEA projects.

Another writer is Harold A. Culp, geologist and geophysisist, and a copartner in Geo-Engineering with Mr. Gaggini and Mr. Lewis D. Anderson. Since graduating with a degree in economic geology from Oregon State College in 1941, Mr. Culp has, in addition to uranium, worked with gold, oil, copper, cobalt and tungsten; this includes 6 years' experience in metal mining and 5 years of geophysical prospecting in oil and mining. In addition to mine management for others, he has operated a mine in which he shared a 1/3 investment interest. His work has included the preparation of Defense Minerals Exploration Administration projects and, after approval of loan applications by that agency, supervision of the project. During 1953-54, Mr. Culp was project geologist and then acting superintendent of the Bull Canyon Mines of the J. R. Simplot Company.

Lewis D. Anderson, mining engineer, is a graduate from the Colorado School of Mines (registered mining engineer #1844 in Colorado). From December, 1946, through 1948, Mr. Anderson worked as engineer and shift boss for the Resurrection Mining Company at Leadville, Colorado. From January, 1949, through April, 1950, he worked as mining engineer in the General Chemical Division of Allied Chemical and Dye. He was mine foreman of the Rico-Argentine Mining Company, Rico, Colorado, from June, 1950, to October, 1951. Mr. Anderson then accepted employment as Division Engineer for the Dulaney Mining Company in the Gateway, Dove Creek, Monticello and Norwood areas. From June, 1952, to 1954, Mr. Anderson's duties as mining engineer covered both the milling and the mining of uranium-vanadium ores and included jurisdiction over the United States Vanadium Company's uranium operations in the Edgemont, South Dakota area.

6. ESTIMATE OF COSTS

It is the desire of Mr. W. A. Greer that this exploration project contract be placed on a unit cost basis. Schedule 1 gives the exact amount bid per unit by Mr. Greer for performing the exploration work. Custom assaying is not included in the cost per foot for drilling because of the difficulty in making an accurate estimate. The $6.00 per sample figure bid for custom assaying is the exact amount which will be charged to Mr. Greer.

a. Independent Contracts

All drilling and bulldozer work will be performed by

Independent Contractors.

Drilling will be done by private contactor. The prices quoted by firms active in the uranium field are given in Schedule 2 in the unit cost column and in Schedule 4. Estimate for the cost of the holes proposed for Stage II drilling is based on an estimated depth of 500 feet making a cost of $1,176.25 per hole or a total of $28,230.00 for all Stage II drilling (see Schedule 2).

Reaming is quoted at $1.50 per foot. Several drilling contractors familiar with the Bull Canyon area were contacted for estimates of the amount of reaming which might be required. All of them suggested that at least 15% of the total footage might have to be reamed. Since the holes to be drilled in the proposed program are rather deep, it seems reasonable to estimate 4,010 feet of reaming and to allow $6,015.00 to cover the cost thereof (see Schedule 2).

Bulldozer and Tractors are readily available at Norwood, Colorado, for about $100.00 per day. Because of the many hole locations which will be selected from results of previous drilling, it will be necessary to have a bulldozer hauled to the group at least 6 different times at a cost of about $100.00 for each round trip. It is estimated that the tractor will work at least 10 days during each visit to the property.

b. Labor Supervision Consultants

Geo-Engineering will supervise, direct, and act as geological consultants for $650.00 per month and reasonable expenses (see Exhibit 4). A draftsman and stenographer will be employed on a part time hourly basis to prepare necessary mapsand reports (see Schedule 3). The field assistant will be employed by Geo-Engineering or Mr. W. A. Greer at a minimum of $14.00 per day, to help with the surveying and to act as a sampler.

c. Operating Materials and Supplies

$150.00 per month is estimated for the cost of map reproduction and office supplies.

$20.00 per month is estimated for the cost of field supplies (see Schedule 3).

d. Operating Equipment

All operating equipment will be provided by independent contractors or by Geo-Engineering.

e. Rehabilitation and Repairs

None needed.

f. New Building Improvements and Installations

None needed.

g. Miscellaneous

$100.00 per month is allowed to cover office and miscellaneous supervision to be performed by the personnel employed by Mr. W. A. Greer (see Schedule 3).

Payroll taxes on the field assistant, draftsman and typist are estimated at 10%.

The cost of analytical work is not oovered in the cost per foot. A separate unit cost of $6.00 per sample is added on Schedule 1.

h. Contingencies

Independent Contractors vary the charge for drilling with the depth of the hole (see Schedule 1). Hole depths for Stage II drilling in Schedule 2 were proportioned to Stage I drilling. A glance at Plate 1 will show that it is possible that some of the Stage II drilling will exceed 700 feet. Cost of drilling in the 700 to 800 foot interval is $4.75 per foot whereas the most expensive category used in the estimate is $4.25 per foot for the 600 to 700 foot interval.

Estimates to cover payments to contractors for trail building and drill site preparation may be inadequate as they are based on an hourly rate for tractor and bulldozer only. It is possible that some of the trails crossing the conglomerate ledges of the Burro Canyon Formation might require rock drills and blasting.

In view of the above, it seems reasonable to add for contingencies, 15% to the estimate of amounts to be paid to independent contractors.

Labor Supervision and Consultants payments are on a monthly or hourly basis. Any event which might prolong the project will increase the cost of this item. 10% is added to cover these possible increases.

Operating Material and Supplies are estimated at a minimum. The destruction of a few core boxes or some other unforseen consumption of materials and supplies might easily increase the cost of this item 20%.

GEO-ENGINEERING
304 Main Street
Grand Junction, Colorado

APPLICATION FOR DMEA PROJECT ON THE BACHELOR GROUP PREPARED FOR W. A. GREER, 502 ALISO DR., ALBUQUERQUE, NEW MEXICO

Miscellaneous costs are estimated at $154.[illegible] per month. 50% is added to this item for contingencies.

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APPLICANT'S SHARE OF COST

In accordance with Defense Mineral Exploration Administration regulations, Mr. W. A. Greer is prepared to assume 25% of the cost of the project in the following manner:

The company will perform all of the necessary work and pay for all of the labor, materials and supplies used. Reimbursement by DMEA will be in accordance with Schedule 1, less 25% (i.e., the amount to be loaned by the Government for each unit of work performed will be 25% less than the amounts shown on Schedule 1).

Respectfully submitted,

GEO-ENGINEERING

By_____
LOUIS P. GAGGINI

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Summary of Costs

	Units	No. of Units	Cost Per Unit	Total Cost Each Item	Grand Totals
a. Independent Contracts See Schedule 2	Feet	26,730	2.833	75,717.50	
b. Labor Supervision and Consultants (see Schedule 3)	Feet	26,730	0.65	17,374.50	
c. Operating Materials and Supplies (see Schedule 3)	Feet	26,730	0.068	1,817.64	
d. Operating Equipment	None				
e. Rehabititation and Repairs	None				
f. New Buildings, Improvements, etc.	None				
g. Miscellaneous (see Schedule 3)	Feet	26,730	0.066	1,764.18	
h. Contingencies					
For (a) above 15%				11,357.63	
For (b) above 10%				1,737.45	
For (c) above 20%				363.53	
For (g) above 50%				882.09	
Calculated Unit Cost (26,730 Feet)			4.153	111,014.52	
Calculated Cost of Project using Unit cost bid and before allowance for analytical work	Feet	26,730	4.153		111,009.69
Analytical					
U_3O_8 Analysis	Sample	300	3.50	1,050.00	
V_2O_5 Analysis	Sample	300	1.50	450.00	
$CaCO_3$ Analysis	Sample	300	1.00	300.00	
				1,800.00	1,800.00
Cost of Project during DMEA participation					112,809.69
Less 25% to be paid by W. A. Greer					28,202.42
Amount of DMEA Loan requested					84,607.27

BRUNING COPYFLEX 289-5

Estimate of Amounts to be paid to Independent Contractors

Explanation	Units	No. of Units	Cost Per Unit	Total Cost Each Item	Grand Totals
Drilling Contractor					
Stage I (see Schedule 4)	Feet	14,730		34,872.50	34,872.50
Stage II Drilling					
24 Holes @ 500 feet					
Non Core Drilling	Feet	6,360	2.00	12,720.00	
0-200' Core Drilling	Feet	840	2.25	1,890.00	
200-300' Core Drilling	Feet	1,920	2.50	4,800.00	
300-400' Core Drilling	Feet	1,680	2.75	4,620.00	
400-500' Core Drilling	Feet	720	3.25	2,340.00	
500-600' Core Drilling	Feet	360	3.75	1,350.00	
600-700' Core Drilling	Feet	120	4.25	510.00	
700-800' Core Drilling	Feet		4.75		
Total Stage II Drilling		12,000		28,230.00	28,230.00
Reaming		4,010	1.50	6,015.00	6,015.00
Bulldozer and Tractor Contractor					
Moving on and off property round trip		6	100.00		600.00
Rental with operator	Day	60	100.00		6,000.00
Total estimate amounts to be paid Independent Contractors	Feet	26,730			75,717.50
Calculated Average Cost Per Foot			2.833		

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Estimated Cost Under Headings 6(b), 6(c), 6(g) Form MF-103

Explanation Heading Letter	Cost Per Hour	Cost Per Day	Cost Per Month	Cost For Project	Calc. Cost For MF-103 Heading
(b) Labor, Supervision, and Consultants					
Geo-Engineering Fees			650.00	7,800.00	
Geo-Engineering expenses		10.00	250.00	3,000.00	
Draftsman 48 hrs/month	3.00		144.00	1,728.00	
Typist 24 hrs/month	2.20		52.80	633.60	
Sampler and Field Assistant		14.00	350.00	4,200.00	
Total Under 6b of MF-103 (26,730 Feet)				17,361.60	0.65
(c) Operating Materials and Supplies					
Office supplies and map and drill log reporoductions for monthly reports and other correspondence with DMEA			150.00	1,800.00	
Survey stakes, timber crayon, Water bags and other field supplies.				20.00	
Total Under 6c of MF-103 (26,730 Feet)				1,820.00	0.068
(g) Miscellaneous					
W. A. Greer expense for accounting, etc.			100.00	1,200.00	
Payroll taxes estimated at 10% of $546.80			54.68	656.16	
Total Under 6g, MF-103 (26,730 Feet)				1,756.16	0.066

Schedule 4

HOLE NO.	ESTIMATED TOTAL DEPTH	ESTIMATED NO. CORE DRILLING	ESTIMATED CORE DRILLING 0-200'	ESTIMATED CORE DRILLING 200-300'	ESTIMATED CORE DRILLING 300-400'	ESTIMATED CORE DRILLING 400-500'	ESTIMATED CORE DRILLING 500-600'	ESTIMATED CORE DRILLING 600-700'
B 2	340	140	60	100	40			
B 3	360	160	40	100	60			
B 4	460	260		40	100	60		
B 5	490	290		10	100	90		
B 6	420	220		80	100	20		
B 7	370	170	30	100	70			
B 8	320	120	80	100	20			
B 9	300	100	100	100				
B 10	370	170	30	100	70			
B 11	410	210		90	100	10		
B 12	640	440				60	100	40
B 13	490	290		10	100	90		
B 14	360	160	40	100	80			
B 15	650	450				50	100	50
B 16	480	280		20	100	80		
B 17	400	200		100	100			
B 18	340	140	60	100	40			
B 19	640	440				60	100	40
B 20	400	200		100	100			
B 21	360	160	40	100	60			
B 22	690	490				10	100	90
B 23	560	360			40	100	60	
B 24	390	190	10	100	90			
B 25	320	120	80	100	20			
B 26	330	130	70	100	30			
B 27	360	160	40	100	60			
B 28	420	220		80	100	20		
B 29	300	100	100	100				
B 30	330	130	70	100	30			
B 31	370	170	30	100	70			
B 32	500	300			100	100		
B 33	340	140	60	100	40			
B 34	360	160	40	100	60			
B 35	460	260		40	100	60		
B 36	400	200			100	100		
Totals	14730	7730	980	2370	2060	910	460	220
Price/ft		2.00	2.25	2.50	2.75	3.25	3.75	4.25
Total Price Drilling	$34872.50	$15460.00	$2205.00	$5925.00	$5665.00	$2957.50	$1725.00	$935.00

THIS DEED, Made this 4th day of May in the year of our Lord one thousand nine hundred and fifty-four between J. B. MOSS of the Panama Canal Zone of the first part, and HOMER N. ROSENQUIST of the County of Montrose and State of Colorado, of the second part.

WITNESSETH, That the said party of the first part, for and in consideration of the sum of One Dollar, to the said party of the first part in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, has remised, released, sold, conveyed and QUIT-CLAIMED, and by these presents does remise, release, sell, convey and QUIT-CLAIM unto the said party of the second part, his heirs and assigns forever, all the right, title, interest, claim and demand which the said party of the first part has in and to the following described mining claims situate, lying and being in the Lower San Miguel and Bull Canyon District of San Miguel and Montrose County and State of Colorado, to-wit:

DEPARTMENT OF THE INTERIOR
Lease Minerals Administration
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Batchelor # 1
Batchelor # 2
Batchelor # 3
Batchelor # 4
Batchelor # 5
Batchelor # 6

Slickrim

TO HAVE AND TO HOLD THE SAME, together with all and singular the appurtenances and privileges thereunto belonging or in anywise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever, of the said party of the first part, either in law or equity, to the only proper use, benefit and behoof of the said party of the second part, and his heirs and assigns forever.

IN WITNESS WHEREOF, The said party of the first part has hereunto set hand and seal the day and year first above written.

/s/ J. B. Moss (SEAL)

Signed, Sealed and Delivered in the Presence of)

/s/ Lena E. Burchett)

/s/ Helen M. Geasy)

State of Colorado,)
) ss.
County of San Miguel)

Filed for record June 17, 1954
Book 212 Page 395

Charles C. Carriere
Recorder

Exhibit 2

NO. 115111 DATE: JUNE 14, 1954 TIME: 11:23 A.M. Charles Carriere
Book 223 Page 146 Recorder

MINING LEASE

THIS AGREEMENT, Made and entered into in duplicate as of March 15, 1954, between HOMER N. ROSENQUIST, of Naturita, Colorado, first party, hereinafter called Lessor, and LOUIS P. GAGGINI, of Norwood, Colorado, second party, hereinafter called Lessee, WITNESSETH:

In consideration of the sum of $1.00, in hand paid by Lessee to Lessor, the receipt of which is hereby acknowledged, and of the further royalty payments and covenants to be paid and performed by Lessee, Lessor does hereby lease unto Lessee the following described mining claims in Lower San Miguel Mining District, County of San Miguel, State of Colorado, to-wit:

Name of Claim	Location Certificate recorded in Book	Page
Slick Rim		
Bachelor	174	518
Bachelor #2	174	519
Bachelor #3	174	519
Bachelor #4	174	520
Bachelor #5	174	520
Bachelor #6	174	521
Pines	175	136
Pines #2	175	137
Pines #3	175	137

TO HAVE AND TO HOLD Unto Lessee for the term of 10 years from date hereof, unless sooner forfeited through the violation of any covenant herein required to be paid, kept and performed by Lessee, and with the right in Lessee to surrender this lease; all as hereinafter set forth.

IN CONSIDERATION Of such lease, Lessee covenants and agrees with Lessor as follows:

1. To cause to be paid a royalty of 12½% of the proceeds of ores mined and sold from any of said claims, including 12½% of any bonus payments paid by the A. E. C., less, however, development and haulage allowances.

2. Within 60 days of the date hereof to enter upon the Slick Rim Claim as above described and thereafter, with reasonable diligence, to perform a minimum of 2,000 feet of exploratory drilling. Within 120 days of the date hereof to enter upon any one or more of the other claims as above described and thereafter, to drill an aggregate of 36 exploratory drill holes each of which intersect the ore horizon.

3. To keep full and accurate records of all operations carried on hereunder, including drilling records, maps and assays open to the inspection of Lessor at all reasonable times, and to permit Lessor full and free access

Exhibit 3

to said claims for the purpose of inspection.

4. In the event of the discovery of commercial ores, to mine the same with due and reasonable diligence so as to take out the greatest amount of ore possible; to carry on mining operations in strict conformity with all laws and regulations pertaining to such operations; to carry Workmen's Compensation Insurance; and to pay all State and Federal taxes and exactions under operations hereunder, including any production taxes; and to save and keep harmless Lessor from any and all liability of every kind and character arising out of his mining operations hereunder.

5. So long as this lease may be in effect to do and perform, within the time prescribed by law, the annual labor required for the retention of possessory rights upon said mining claims, and to make and file affidavit so showing, beginning with the period ending June 30, 1954.

IT IS MUTUALLY AGREED Between the parties hereto:

1. That Lessee shall have the right to surrender this lease at any time upon giving Lessor at least 30 days written notice, sent by registered mail to him at Naturita, and, upon such surrender or cancellation as hereinafter provided, Lessee shall have the right, within a reasonable time, to remove his machinery, equipment and personal property upon said claims, but Lessor shall keep and retain, as its sole property, all royalty payments theretofore made, and Lessee shall have no claim thereto.

2. That upon violation by Lessee of any of the covenants in this lease, the term thereof shall, at the option of Lessor, expire, and the same and said mining claims shall become forfeited to Lessor, and Lessor may thereupon enter upon said mining claims and dispossess all persons occupying the same, or, at its option, Lessee and all persons found in occupation thereof may be proceeded against as guilty of unlawful detainer; provided, however, that if said lease is forfeited upon the election of Lessor by reason of the failure of Lessee to perform any covenant thereof, Lessor shall give Lessee at least 30 days notice in writing, by registered mail, sent to him at the above address notifying him of such failure to perform and setting out in such notice the substantial facts as to any such default or breach within 30 days from the receipt of such notice, Lessee shall

surrender and deliver up the possession of all of such mining claims, and his rights under this lease shall thereupon cease and determine.

3. Lessee shall have the right to transfer and assign this lease ~~and the option xxxxxxxxxxxxxxxxxxxxxxxxxxxx~~ and all of his right thereunder without the consent of Lessor.

4. In the event deposits of ore in commercial quantities are discovered on the Slick Rim Claim through the activities of Lessee hereunder, the Lessor shall have the first refusal of an operating agreement to mine and work such deposits and to be paid therefor 70% of net mill returns, exclusive of haulage and development allowances, but inclusive of production bonus. The said haulage allowance shall be applied on the cost of transporting ores to mill or buying station and development allowance shall be used to reimburse Lessee for all drilling performed on said claim. After such drilling expenses have been recouped by Lessee, the drilling allowance shall then be applied to reimbursing Lessor for drifting and other development work performed on the claim.

5. Lessor represents that he holds valid title to the above described claims under the mining laws of the United States of America and the State of Colorado and has full power and authority to execute these presents. In case Lessor should own a less interest in the above described claims than the entire and undivided estate therein, then the royalties herein provided shall be paid to Lessor only in proportion which his interest bears to the whole undivided estate.

IT IS FINALLY AGREED That each of the terms and conditions herein shall inure to and be binding upon the successors and assigns, heirs and personal representatives of the parties hereto.

WITNESS The names of the parties.

Homer D. Rosenquist
Lessor

Louis P. Fagnini
Lessee

NO. 115112 DATE: JUNE 14, 1954 TIME: 11:24A.M. Charles C. Carriere
Book 223 Page 149 Recorder

ASSIGNMENT OF MINING LEASE

THIS INDENTURE, Made this 4th day of June, 1954, by and between LOUIS P. GAGGINI, of Norwood, Colorado, (hereinafter sometimes referred to as "Assignor") and W. A. GREER (hereinafter sometimes referred to as "Assignee"),

W I T N E S S E T H:

FOR AND IN CONSIDERATION Of the payment of Four Thousand Dollars ($4,000.00) and of the further royalty payments and covenants herein specified to be paid and performed by Assignee, the Assignor has agreed to, and by these presents does hereby sell, assign and transfer unto the Assignee, that certain mining lease executed on the 15th day of March, 1954, by and between Homer N. Rosenquist as Lessor and Louis P. Gaggini as Lessee, which lease covers the following described unpatented mining claims situated in the unorganized Bull Canyon Mining District in the County of San Miguel and State of Colorado. to-wit:

Name of Claim	Location Certificate recorded in Book	Page
Bachelor	174	518
Bachelor # 2	174	519
Bachelor # 3	174	519
Bachelor # 4	174	520
Bachelor # 5	174	520
Bachelor # 6	174	521
Pines	175	136
Pines # 2	175	137
Pines # 3	175	137

A copy of the mining lease above described is attached hereto and incorporated herein by reference.

TO HAVE AND TO HOLD Unto the said Assignee, their successors, heirs and assigns for the full unexpired term of said lease, subject nevertheless, to the rents, royalties, covenants, conditions and provisions contained in said lease and contained in these presents.

The parties hereto, for themselves, their heirs, executors, administrators, successors and assigns, hereby covenant with one another as follows:

1. Assignee coventants and agrees that, during the term of these presents, it will pay the rents or royalties and taxes, and perform the covenants

Exhibit 4

incumbent upon the lessees by the terms of the attached lease herein assigned and will at all times during such term indemnify the assignors from liability or loss for non-payment of the rents or royalties and the non-performance of such covenants or any of them.

2. In addition to the duties and payments provided in paragraph 1 above, there shall be reserved and paid unto Assignor a royalty of ten per cent from the proceeds received from ore mined and sold from the above claims, such proceeds shall include production bonuses but shall exclude development or haulage allowance, provided, however, that in the event Assignee should obtain a D. M. E. A. loan for exploration of the property then the royalties so reserved unto Assignor shall be decreased to five per cent (5%) until such time as said loan has been repaid at which time the said royalty reserved to Assignor shall be ten per cent (10%) as aforesaid.

3. To pay Assignor the sum of $1000.00 on July 1, August 1, and September 1, 1954, which sums together with the $4000.00 consideration paid this day, shall constitute a professional geologist's consultant fee. For these payment Assignor agrees to prepare for the Assignee good and proper application to Defense Minerals Exploration Administration for an exploration project contract for the Bachelor 1 to 6 claims, and to submit the same to Assignee as soon as possible, but not later than August 1, 1954.

4. If a D.M.E.A. contract is approved, Assignor agrees to act as Geological consultant for Assignee so long as the exploration project is active, and shall receive a fee of $1000.00 a month, and reasonable expenses for such services. Assignor shall perform such geological services, from time to time, as may be requested by Assignee in connection with such project.

5. In the event that Assignee shall fail to perform any of the covenants and duties incumbent upon it by the terms of the attached lease or these presents, the Assignor shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a

Exhibit 4

period of twenty (20) days from service thereof, cure or correct such failure to perform. In the event that Assignee shall fail or refuse within said twenty (20) day period to enter in good faith upon the correction of such default in performance and to carry such correction to completion thereafter with due diligence, then the Assignor shall have the privilege, at their option, of declaring this assignment forfeited and null and void.

6. It is understood and agreed between the parties hereto that all mining claims leased by said Rosenquist to Assignor are not assigned by this instrument, the Assignor reserving the Slick Rim Mining Claims. Assignor warrants that there has been no default on his part of the covenants and conditions required to be performed by him under the terms and conditions of said lease with said Rosenquist, and further warrants that he will do no act or thing to cause a forfeiture of said lease with Rosenquist under the terms and provisions thereof.

7. The assignee may terminate and surrender all rights and duties hereunder by giving written notice of their intention to terminate to Assignor at least thirty (30) days before such termination.

8. Any written notice required under the terms of this lease shall be deemed validly served and such service complete when the same has been deposited in the United States mail for transmittal by ordinary mail in a properly stamped and addressed envelope. Notice directed to Assignor shall bear the following address:

Louis P. Gaggini
Norwood, Colorado

Notices directed to Assignee shall bear the following address:

W. A. Greer
502 Aliso
Albuquerque, New Mexico

This Agreement shall be binding upon the parties hereto, their legal representatives, successors, heirs and assigns.

Exhibit 4

IN WITNESS WHEREOF, the parties hereto have subscribed their names in quadruplicate the day and year first above written.

Francis P. Gregson (SEAL)
Lessor

W. A. Green (SEAL)
Lessee

STATE OF COLORADO }
COUNTY OF Denver } ss.

The foregoing instrument was acknowledged before me this 14th day of [illegible], 1954, by Francis P. Gregson and W. A. Green

WITNESS my hand and official seal.

My commission expires July 15, 1955

[illegible]
Notary Public

MF-203
(Revised July 1, 195[illegible]

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Colorado, County of San Miguel, described as follows:1/

Bachelor # 1 - # 6 inclusive Recorded Book 174 Pages 518 - 521 inclusive

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof, there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom, until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions

Dated this 25 day of August, 1954.

Homer N. Rosenquist [Seal]

[Seal]

[Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by the contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

c. Definitions.--As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

d. Lien for Payment.--To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

EXHIBIT 5

PLATEAU URANIUM MINING CORP.

DRILL HOLE LOG

Hole No. RH 1

Graphic Log

Scale 1" =

Date Drilled 3/15 - 4/27/54

Total Depth 314.4

Claim Radium Hill # 46

Type of Drill Core

Collar Elev.

Coordinates

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0	28.0	28							Plugged
28	44	16					Ms/St	R/Gy	Mudstone - Siltstone
44	47.6	3.6					St	R/Gy	Muddy near base
47.6	51	3.4					Ss	Gy	
51	53.6	2.6					Ms	R	
53.6	54.3	.7					Chert	Gn	Very hard
54.3	63.0	8.7					St	R/Gy	
63.0	92.5	29.5					Ms	Gy	
92.5	93.1	.6					Ss	Gn	
93.1	114.2	21.1					Ms	R/Gy	
114.2	128.8	14.6					Ss	Gy	
128.8	144.0	15.2					Ms	R/Gn	
144.0	170.0	26.0					Ss	R	Int. GnMs -Lim.Stain
170.0	172.4	2.4					Congl	Gy	Large Chert Pebbles
172.4	173.0	.6					Ss	R	
173.0	173.8	.8					Congl	R/Gn	
173.8	196.0	22.2					Ss	R/Gy	Limonite Stain
196.0	225.0	29.0					Ms	R/Gy	
225.0	247.0	22.0					Ss	R	Limonite Stain
247.0	258.0	11.0					Ms/St	R/Gy	
258.0	269.0	11.0					Ss	Gy	Limonite Stain
269.0	281.0	12.0					Ss	Gy	Sparce Carbon
281.0	285.0	4.0					Ss	Gy	Abundant Carbon
285.0	286.0	1.0					Ms	Gn	Altered Ms Zone
286.0	307.0	21.0					Ms	R/Gy	
307.0	309.6	2.6					Ss	Gy	
309.6	314.4	4.8					Ms/St	R/Gy	Hole Bottom

Exhibit 6

Hole No.

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

PLATEAU URANIUM MINING CORP.

DRILL HOLE LOG

Hole No. RH2

Graphic Log

Scale 1"=

Date Drilled 4/28 - 5/6/54

Total Depth 300.00

Claim Lower Radium Hill #46

Type of Drill Core

Collar Elev.

Coordinates

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0	150	150.0							Non-Core Bit
150	155.0	5.0					ss	RGY	Limonite Stain
155.0	157.2	2.2					ss	GY	Lim.St. - Ms Pebbles
157.2	166.0	8.8					ss	Gy	Pebble - Int. Ms/Lim.
166.0	175.0	9.0					ms	R/Gm	
175.0	179.6	4.6					ss	Gy	Ms at base
179.6	194.4	14.8					ms	R	
194.4	196.2	1.8					ss	Gy	Cherty
196.2	208.0	11.8					ms/ss	R/Gn	V.F.ss. at base
208.0	210.0	2.0					ss	Gy	Lim. Stain
210.0	247.4	37.4					ss	Gy	M.F. Grain
247.4	257.5	10.1					Ms	Gy/R	
257.5	258.5	1.0					Ms	D Gy	Altered Zone
258.5	274.0	15.5					ss	Gy	Lim. Stain
274.0	279.5	5.5				0.09	ss	D Gy	Radioactive Zone
279.5	285.0	5.5				some	ss	Gy	" "
285.0	287.5	2.5					Ms	Gy/Gn	0.5 ft Carbon
287.5	300.0	12.5					Ms	R	Hole Bottomed

Exhibit 7

Hole No.

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

[illegible]AT[illegible]U URANIUM MINING CORP.
DRILL HOLE LOG

Hole No. RH 3

Graphic Log

Scale 1"=

Date Drilled 5/7 - 5/12/54

Total Depth 294.0

Claim Radium Hill # 43

Type of Drill Core

Collar Elev.

Coordinates

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0	150	150							Solid Bit Non-Core
150.0	151.4	1.4					Ss	Gy	Ms very sparse
151.4	153.3	1.9					St	R/Gn	R predominates
153.3	156.0	2.7					Ss	Gy	
156.0	161.5	5.5					St/Ms	R/Gn	
161.5	167.0	5.5					St	DGy/R	Change to muddy Ss
167.0	171.8	4.8					Ss	Gy	
171.8	189.4	17.6					Ss	DGy/LGy	
189.4	190.4	1.0					St	Gn	Abrupt change to R
190.4	204.1	13.7					St	R	Boomes Greenish at base
204.1	233.6	29.5					Ss	L.Gy	Limonite Stain
233.6	239.0	5.4					Ss	Gy/Dgy	Horizontal Banding
239.0	242.4	3.4					Ss	DGy	
242.4	244.0	1.6					St	DGy	Possible Altered Zone
244.0	246.6	2.6					Ms	R	
246.6	272.5	25.9					Ss	Gy	Limonite Stain
272.5	279.0	6.5					Ss	DGy	C at base of Unit
279.0	281.0	2.0					St	DGy	C at top of Unit
281.0	284.0	3.0					Ss	DGy	
284.0	294.0	10.0					St	DGy/Gn/R	DGy & Gn predominate

Exhibit 8

Hole No.

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

PLATEAU URANIUM MINING CORP.

DRILL HOLE LOG

Hole No. RH 4

Graphic Log

Scale 1" = ...

Date Drilled 5/13 - 5/25/54

Total Depth 400.0

Claim Radium Hill # 44

Type of Drill Core

Collar Elev. .....

Coordinates .....

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0	150.0	150							Solid Bit Non Core
150.0	206.6	56.0					St/Ss	R/Gy	
206.6	209.0	2.4					Ss	R	
209.0	226.6	17.6					Ss	Gy	Lim. Specks
226.6	245.6	19.0					St	R/Gn	
245.6	272.4	26.8					Ss	Gy	Lim. Specks
272.4	280.7	8.3					Ss	Gy	
280.7	285.0	4.3					St	DGy/Gn	Poss. Altered Zone
285.0	307.0	22.0					St	R/Gn	
307.0	311.0	4.0					Ss	R Br	
311.0	328.0	17.0					St	R/Gn	
328.0	342.0	14.0					Ss	L Gy	
342.0	348.5	6.5					Ms/St	R/Gy	
348.5	359.0	10.5					St	R/Gn	
359.0	377.5	18.5					Ss	L Gy	Chert pebbles, Lim.Sp.
377.5	384.0	6.5					St	R/Gn	
384.0	394.0	10.0					Ss	R	Cherty
394.0	397.0	3.0					St	R	
397.0	400.0	3.0					St/Ss	R	Hole Bottomed

Exhibit 9

Hole No. .....

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

PLATEAU URANIUM MINING CORP.

DRILL HOLE LOG

Hole No. RH 5

Graphic Log

Scale 1" = ...

Date Drilled 5/26/54 - 6/9/54

Total Depth 290.0

Claim Radium Hill # 46

Type of Drill Core

Collar Elev. .....

Coordinates .....

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0.0	150.0	150							Solid Bit - Non Core
150.0	168.0	18.0					St	R/Gn	
168.0	179.8	11.8					Ss	Gy	Limonite Sp.
179.8	181.5	1.7				0.02	Ss	P/Gy	Radio Active Zone
181.5	198.0	16.5					St	R/Gn	
198.0	231.0	33.0					Ss	L Gy	Limonite/Chert Pebbles
231.0	242.0	11.0					St	R/Gy	
242.0	260.0	18.0					Ss	L Gy	Limonite
260.0	261.5	1.5					Ss	Gy	Limonite
261.5	275.0	13.5					Ss	Gy	
275.0	290.0	15.0					Ms	Gy/R	

Exhibit 10

Hole No. .....

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

PLATEAU URANIUM MINING CORP.

DRILL HOLE LOG

Hole No. RH 6

Graphic Log

Scale 1" =

Date Drilled 6/10 - 6/16/54

Total Depth 285.5

Claim Radium Hill # 45

Type of Drill Core

Collar Elev.

Coordinates

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0.0	150.0	150							Solid bit - Non Core
150.0	164.0	14.0					Ss	Gy	Limonite Specks
164.0	205.0	41.0					St	R/Gn/Gy	
205.0	212.0	7.0					Ss	R Gy	Limonite Specks
212.0	240.0	28.0					Ss	Gy	Limonite Specks
240.0	242.5	2.5					Ss	Gy	
242.5	249.5	7.0					St	Gy/Gn/R	
249.5	265.0	15.5				0.02	Ss	Gy	Radio Active at base
265.0	267.0	2.0					St/Ms	Gy	
267.0	267.5	0.5					St/Ss	Gy	Large Chert Pebbles
267.5	274.0	6.5					Ss	L Gy	
274.0	285.5	11.5					St	R/Gy	

Exhibit 11

Hole No.

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

PLATEAU URANIUM MINING CORP.
DRILL HOLE LOG

Hole No. RH 7

Graphic Log
Scale 1" =

Date Drilled 6/17/ - 6/25/54
Total Depth 287.0
Claim Radium Hill # 45
Type of Drill Core

Collar Elev.
Coordinates
North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0.0	150.0	150							Solid Bit Non-Core
150.0	168.0	18.0					Ss	R Gy	Sparse Lim. Sp.
168.0	185.0	17.0					St	R/Gn	
185.0	188.4	3.4					Ss	Gn	
188.4	209.0	20.6					St	R	
209.0	230.0	21.0					Ss	Gy	Lim. Sp.
230.0	238.5	8.5					Ss	Gn	Radio Active at 230.0
238.5	242.0	3.5					Ss	Gy	
242.0	251.5	9.5					Ss	Gy	Lim Sp.
251.5	259.0	7.5					St	R	
259.0	266.2	7.2					Ss	Gy	Radio Active at 266.0
266.2	284.5	18.3					Ss	Gy	Radio Active - 277.0,284.0
284.5	287.0	2.5					St	R/Gy	

Exhibit 12

Hole No.

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

W. A. GREER

DRILL HOLE LOG

Hole No. B 1

Graphic Log

Scale 1" = ...

Date Drilled 6/25 - 29/54

Total Depth 245.5

Claim Bachelor 1

Type of Drill Core

Collar Elev. .....

Coordinates .....

North West

FOOTAGE			CHEMICAL ASSAY			RAD.	DESCRIPTION		
From	to	Feet	U_3O_8	V_2O_5	$CaCO_3$	U_3O_8	Rock	Color	Remarks
0	200	200							Non Core Bit
200	218	18					SS	Gy	Lim. Stain
218	221	3					Ms	R/Gn	
221	240	19					SS	Gy	Lim. Stain
240	245.5	5.5					Ms	R	Bottom of Hole

Exhibit 13

Hole No. .....

DUNKIN BLUE PRINT & SUPPLY CO., Grand Junction, Colo.

EXHIBIT 14

EXPLANATION OF U. S. G. S. LOGS

ABREVIATIONS FOR GEOLOGIC AND ASSAY LOGS

Rock Name

CG--conglomerate or conglomeratic
SS --sandstone
MS--mudstone
ST --siltstone
CS --claystone
LS --limestone
CH --chert or cherty

Color Description

Wh--white
Br --brown
R ---red
Gy --gray
Bl - -blue
Gn--green
Yw--yellow
Bk--black
Pp--purple
L ---light
D ---dark

Grain sizes

Wentworth scale (modified)	Millimeters
VF--very fine	0.060 - 0.125
F--fine	0.125 - 0.210
MF--medium fine	0.210 - 0.300
M--medium	0.300 - 0.420
MC--medium coarse	0.420 - 0.600
C--coarse	0.600 - 1.000
VC--very coarse	1.000 - 2.000

Relative abundance
(use only for accessory minerals, carbon and mudstone in sandstone)

N--none
S --sparse
A--abundant

Chemical abbreviations

Cbn--carbon
For all other elements use the standard chemical symbols, Cu for copper, Fe for iron, Mn for manganese, etc.

Classification of mudstone in sandstone

P ----pebbles, round or angular fragments of pebble size (more than 4 mm or 0.15 in.).
G ----granules (less than 4mm or 0.15 in., and more than 2 mm or 0.08 in.).
Fk ---flakes, paper thin, with two longer dimensions.
Sm ---seams, less than 0.1 ft. thick.
Fm---films, usually along lamination or cross-lamination planes.
Int ---interstitial.

Miscellaneous abbreviations

1. fav--favorable
2. semifav--semifavorable
3. unfav--unfavorable
4. alt--altered
5. Bby--Barnaby
6. carn--carnotite
7. cond--condense or condensed
8. disc--discard or discarded
9. frac--fracture
10. grad--gradational
11. itbd--interbedded
12. lim--limonite
13. mot--mottled
14. OBSS--ore-bearing sandstone
15. op--opaques or opaque
16. qtzc--quartzitic
17. H--high)
18. L--low) use only for U_3O_8
19. Tr--trace)

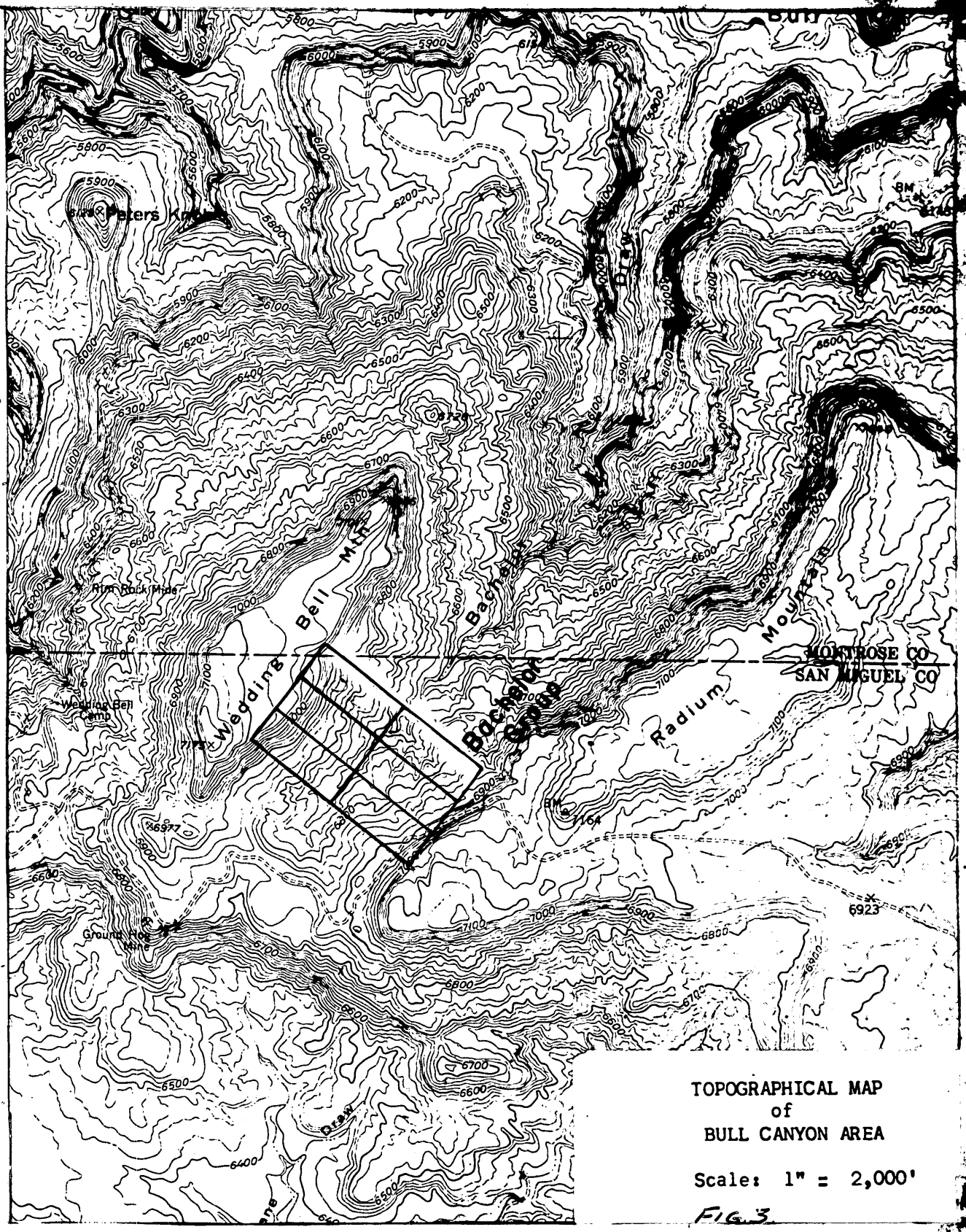
Additional Information for Claim Owners

The additional information contained in this supplement is useful in interpreting the GEOLOGIC AND ASSAY LOG form.

Collar elevation.--Generally this is the elevation above mean-sea level of the drill-hole collar. Elevations marked T (temporary) are estimates. Those marked P (permanent) or those with no letter following the elevation are determined by plane-table survey methods.

Summary of log.--Each of the terms "favorable", "semifavorable," or "unfavorable" sums up the geologic factors that determine whether or not the hole is in ground considered favorable for the presence of ore. For instance, the term "favorable" indicates that the hole is in ground that shows most of the criteria that are present near ore deposits. A favorable hole is not necessarily one that is in mineralized rock.

Gamma-ray. --In the column headed "gamma-ray" the values are given in terms of equivalent U_3O_8 (eU_3O_8) and are determined in the laboratory by a geiger counter. Equivalent U_3O_8 is calculated by converting the geiger-counter reading of counts per minuts to percentage U_3O_8.



TOPOGRAPHICAL MAP
of
BULL CANYON AREA

Scale: 1" = 2,000'

FIG. 3

Applicant

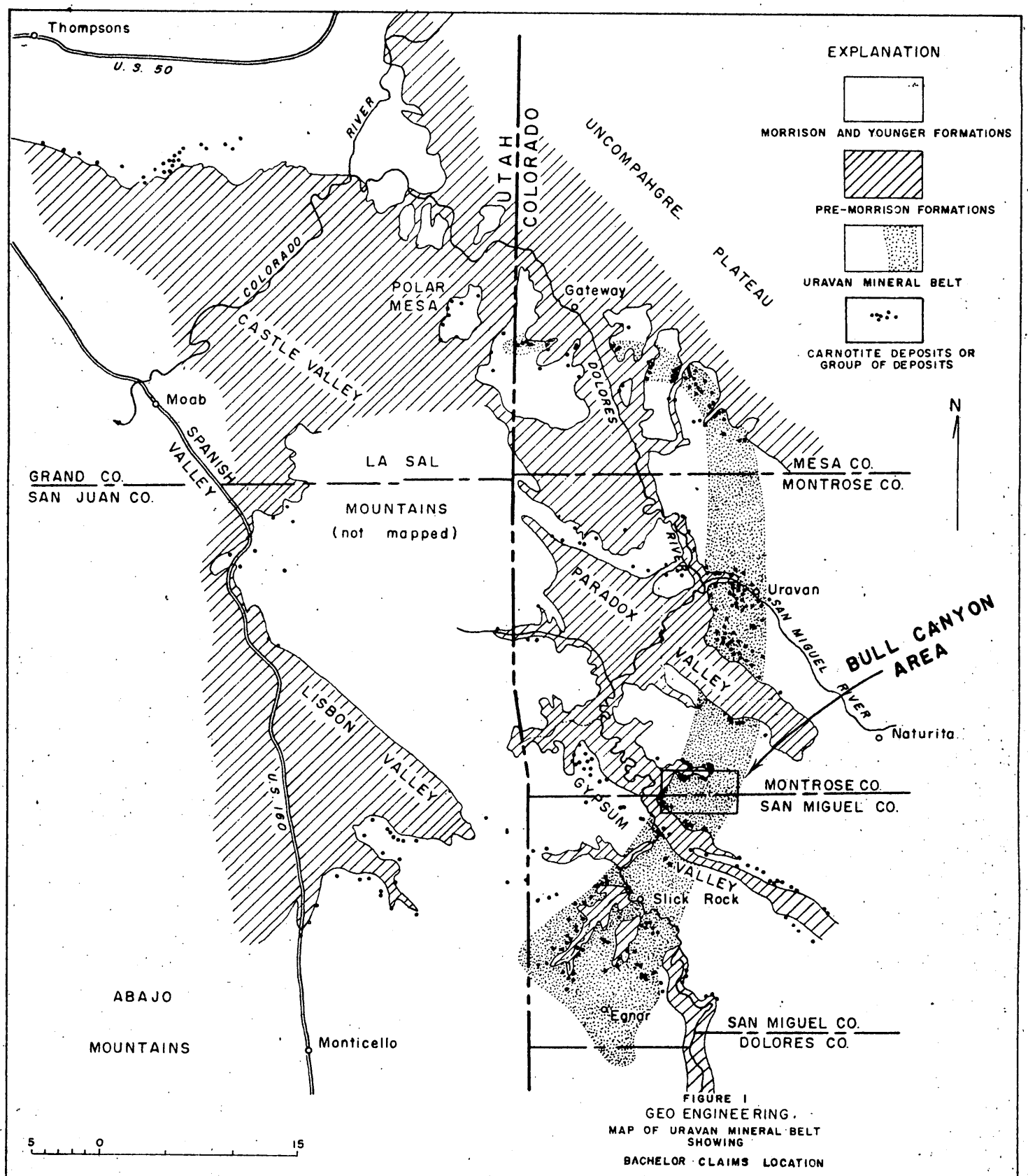


FIGURE 1
GEO ENGINEERING.
MAP OF URAVAN MINERAL BELT SHOWING
BACHELOR CLAIMS LOCATION

FIG. 1

application

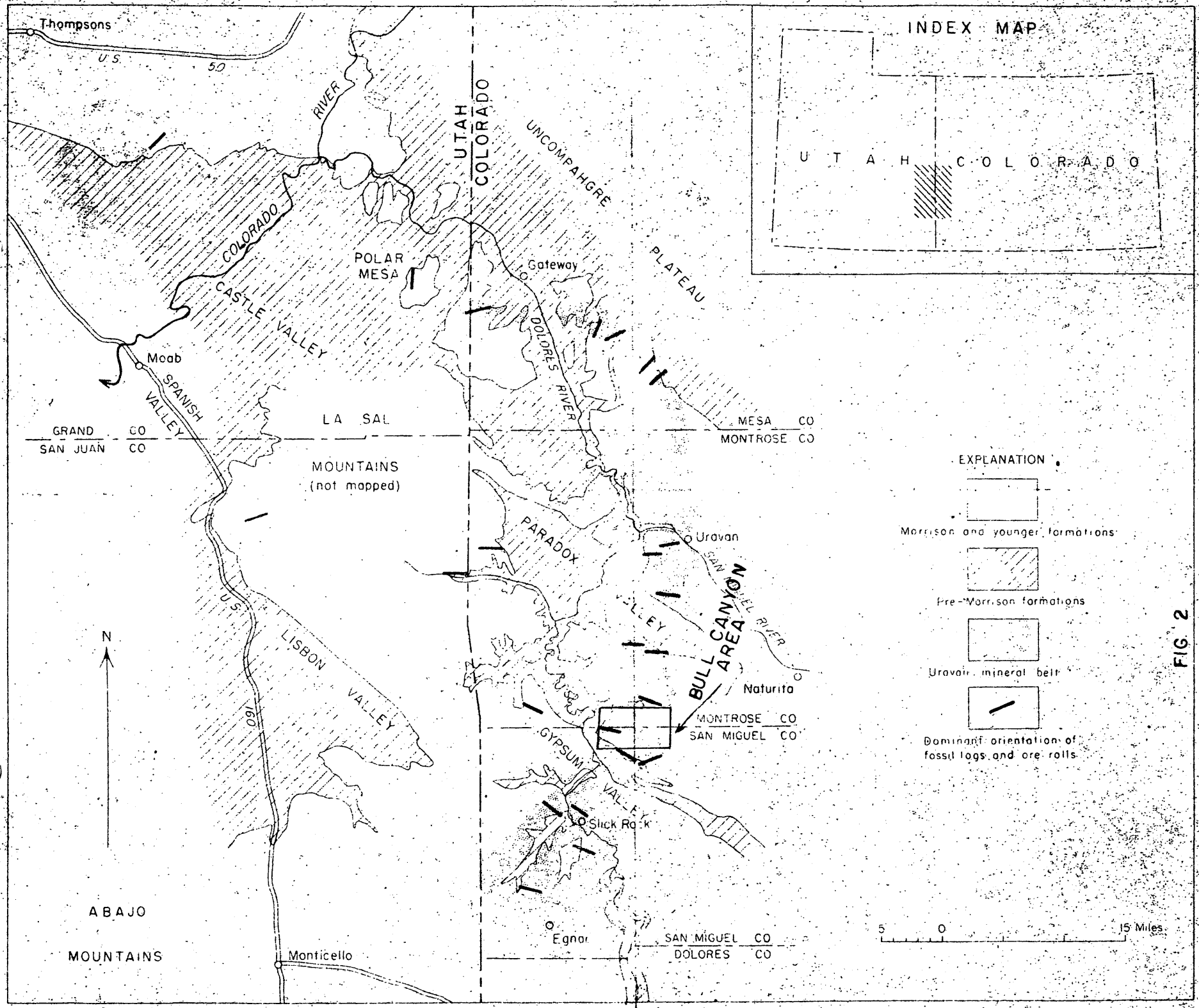


FIG 2

MAP OF PART OF COLORADO AND UTAH SHOWING THE DOMINANT ORIENTATION OF THE FOSSIL LOGS AND ORE ROLLS

Application

4. Certification of Discovery - dated July 16, 1956.

5. Results and Comments:

Most of the known ore deposits in the Bull Canyon mining district occur in the upper series of coalescing sandstone lenses of the Salt Wash member. In the vicinity of the subject property this top series is known as the "Jack Knife sand" and all minable reserves are believed to occur in it.

Three of the 30 holes drilled under the subject contract encountered ore 2 feet or more thick assaying 0.20% U_3O_8 or better. Previous drilling on the property by the AEC had penetrated ore in 3 holes. The Operator drilled 46 close-spaced offset holes in an effort to block out the ore. It was found that mineralization in adjoining holes is not always at the same stratigraphic level and that there is an erratic distribution and lack of continuity in the ore deposits. The Operator has started underground development and mining through a shaft.

The Operator made a conservative estimate of ore reserves based upon 8 ore holes. Four reserve blocks or deposits were estimated to contain a total of 18,82 tons of ore averaging 0.40% U_3O_8 and 2.43% V_2O_5. A calculation of ore reserves based on DMEA drilling alone is not feasible. The field examiners believed that the mode of occurrence of the ore deposits precluded an accurate estimate of reserves. They, therefore, accepted the Operator's estimate, although recognizing that there is an excellent possibility that mined ore may eventually exceed this estimate by a substantial margin.

The exploration was done with two truck-mounted Failing "1500" drill rigs, equipped for either dry or wet, core or non-core drilling. Core recovery was excellent, averaging better than 95%. All holes were probed radiometrically by the Operator and 22 of the 30 holes were also probed with a Gamma-ray unit by the Geological Survey. The Operator's results were substantiated. Over-all performance by the Operator was excellent.

Michael Ching

Michael Ching

[X] Audited

[X] Certified

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of Jan. 4, 1957
Incl. Voucher for March-April, 1956

[ ] Actual Cost

[X] Agreed Unit Costs

Name W. A. Greer

State Colorado

Commodity Uranium

Docket No. 3555

Idm-E No. 791

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Drilling (Specify) Core	5,400	$19,440	4,461.5	$16,061.40	$16,061.40
Drilling (Specify) Non-core	5,900	15,930	6,233.5	16,830.45	16,830.45
Surface Excavation					
Underground Excavation					
Roads and Trails		1,840		1,590.00	1,590.00
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) Chem. Analyses		325		155.00	155.00
Totals		$37,535		$34,636.85	$34,636.85

Prepared by Michael Ching

71626

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/17	Murphy	500
	Hinswel	500
12/17	Talbot	800
	Selfridge	120
12/17	Johnson	110
12/17	Fumich	100
		220

DEC 17 1962

Mr. Homer N. Rosenquist
202 Red Mesa Hghts.
Grand Junction, Colorado

Re: DMEA-3555 (Uranium)
W. A. Greer
Bacheler Claims
Montrose and San Miguel
Counties, Colorado
Contract Idm-E791

Dear Mr. Rosenquist:

In accordance with our letter of December 6, 1962, enclosed is one thermofax copy of the Operator's narrative report and four negatives of the plan and cross-section maps mentioned.

Sincerely yours,

George Fumich, Jr. (glo)

Director

Enclosures

FMMurphy/mm

12-17-62
cc: Director's Reading File
Region III (2)
Docket
Code 500

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/13	[illegible]	200

December 13, 1962

Memorandum

To: Chief, Fiscal Section, Division of Administrative Services, Office of the Secretary

From: Chief, Division of Administrative Management

Subject: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose & San Miguel Counties
Colorado
Contract Idm-E791

A check for $3.00 is enclosed from Homer N. Rosenquist for maps and Operator's Final Report. Please deposit to the credit of 14X0108, Salaries and Expenses, Office of Minerals Exploration, Interior.

Allen S. Dakan

Enclosure

ASDakan/egk (12-13-62)
cc: Director's Reading File

43683

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

DEC 6 1962

OFFICIAL FILE COPY
O. M. E
RECEIVE DEC 12 1962

DATE		
12/13	Murphy	5.00

Mr. Homer N. Rosenquist
202 Red Mesa Hghts.
Grand Junction, Colorado

Re: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel
Counties, Colorado
Contract Idm-E791

Dear Mr. Rosenquist:

In accordance with our letter of November 9, 1962, and your reply we will furnish you a copy of the Operator's Final Report of the work completed under the subject contract upon receipt of $3.00. If you send a check it should be made payable to the Office of Minerals Exploration.

The report consists of four (4) pages of narrative and drill hole data, two (2) plan maps showing the location of the holes and ore bodies, and two (2) cross-section maps showing the drill holes and ore bodies.

Sincerely yours,

George Turnich
Director

Grand Junction
Colorado
Dec. 10, 1962

Dear Sir:-
Inclosing check as above.
Thank you for your consideration.
Yours Truly
Homer N. Rosenquist

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/6	Murphy	500
12/6	Ouellette	500
12/6	Tallent	800
	Selbridge	120
12/6	Johnson	110
12/6	Fumich	100
		220

Mr. Homer N. Rosenquist
202 Red Mesa Hghts.
Grand Junction, Colorado

DEC 6 1962

Re: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel
Counties, Colorado
Contract Idm-E791

Dear Mr. Rosenquist:

In accordance with our letter of November 9, 1962, and your reply we will furnish you a copy of the Operator's Final Report of the work completed under the subject contract upon receipt of $3.00. If you send a check it should be made payable to the Office of Minerals Exploration.

The report consists of four (4) pages of narrative and drill hole data, two (2) plan maps showing the location of the holes and ore bodies, and two (2) cross-section maps showing the drill holes and ore bodies.

Sincerely yours,

George Fumich, Jr.

Director

FMMurphy/mm
12-6-62
cc: Director's Reading File
Region III w/2 copies of incoming ltr and attachments
Docket
Code 500

43683

November 28, 1962

Director
Office of Mineral Exploration
Department of the Interior
Washington 25, D. C.

Re: Bachelor Mine - Montrose and San Miguel Counties, Colorado - Sec. ~~14~~ 15, T 45 N, R. 18 W, NMPM
IDM-E791
DMEA Docket No. 3555

Dear Sir:

As owner of the mining claims included in the foregoing docket number, I would appreciate your sending me the results shown by the core drilling on this property. The DMEA loan has been paid from production and I have been advised by the Region 3 office of OME that all of the records have been sent to Washington.

The actual loan was made by my lessees, Giginni and Greer, but I believe that I signed a consent to this loan. I was the owner at the time of the loan and I am still the owner. For your information I am attaching my Affidavit of Ownership.

This drilling hole information is very necessary for me to evaluate the potential of the property. I want to continue mining on it but cannot do so without such information.

Your office recently refused to give me this information, probably upon the mistaken belief that I had no connection with it. However, I trust that this letter and affidavit will clear up my right to the information. I might point out that much of the repayment of the loan took place after the original applicants, Giginni and Greer, no longer had an interest.

The past delay in receiving this information has thrown me off schedule so I would appreciate your expediting the matter.

Very truly yours,

Homer Rosenquist

Homer Rosenquist

202 Red Mesa Heights
Grand Junction, Colorado

Consent to Lien signed June 29, 1955
Homer Rosenquist

AFFIDAVIT OF OWNERSHIP

STATE OF COLORADO)
) ss.
COUNTY OF MESA)

I, Homer Rosenquist, being duly sworn, do state and allege that I am the owner of the Bachelor Group of mining claims situated in Bachelor Draw, Bull Canyon, Montrose and San Miguel Counties, Colorado, which property is in Sec. ~~14,~~ 13, T 45 N, R 18 W, NMPM. I am the original locater of these claims and have been the record owner since location up to and including the present time. The former lessees, Giginni and Greer, obtained a DMEA loan (IDM-E791) with my consent and approval and said loan has been repaid in full out of production from these claims.

Homer Rosenquist
Homer Rosenquist

The foregoing instrument was acknowledged before me this 29th day of November, 1962, by Homer Rosenquist.

Witness my hand and official seal.

My commission expires June 30, 1963.

Eileen McDermott
Notary Public

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

DOCKET COPY

Ellis

Project Summary Report

By: Michael Ching January 4, 1957

1. Docket No. DMEA-3555 (Uranium)
Contract No. Idm-E791

Operator - W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Property - Six unpatented mining claims, Bachelor, Bachelor Nos. 2-6, situated in sec. 14, T. 45 N., R. 18 W., N.M.P.M., San Miguel and Montrose Counties, Colorado.

Operator's Property Rights -

The claims were leased by Homer N. Rosenquist to Louis P. Gaggini who assigned the lease to W. A. Greer. Owner's Consent to Lien, dated June 29, 1935, signed by Homer N. Rosenquist. Subordination Agreement, dated June 27, 1955, signed by Louis P.Gaggini. Through an Operating Agreeement, dated August 29, 1955, Four Corners Exploration Company is given the management, control and operation of the property.

2. Contract (Short Form) dated April 28, 1955
Contract completion date - June 30, 1956.

Work authorized:

Test the two uppermost sandstone units of the Salt Wash member of the Morrison formation by non-core and core drilling in two stages.

Stage I - 12 holes:

2 bulldozer moves on or off the property @ $50.00/move	$ 100.00	
48 hours bulldozing @ $12.00/hr.	576.00	
2,340 ft. non-core drilling @ $2.70/ft.	6,318.00	
2,160 ft. core drilling @ $3.60/ft.	7,776.00	
25 chemical sample analyses @ $5.00 per sample	125.00	$14,895.00

Work authorized (continued):

Stage II - 18 holes:

6 bulldozer moved on or off the property @ $50.00/move	$ 300.00	
72 hours bulldozing @ $12.00/hr.	864.00	
3,560 ft. non-core drilling @ $2.70/ft.	9,612.00	
3,240 ft. core drilling @ $3.60/ft.	11,664.00	
40 chemical sample analysis @ $5.00/sample	200.00	$22,640.00
Estimated total cost of project		$37,535.00
Government participation @ 75%		$28,151.25

Amendments:

No. 1. Allows offsetting of AEC Hole Z-102 in Stage II.

No. 2. Provides recess from December 17, 1955, to March 31, 1956. Extends completion date from December 31, 1955, to June 30, 1956.

Work completed:

Stage I - 12 holes - Work started August 10, 1955.

3 bulldozer moves @ $50.00 each	$ 150.00	
48 hours bulldozing @ $12.00/hr.	576.00	
2,497 ft. non-core drilling @ $2.70/ft.	6,741.90	
1,896.5 ft. core drilling @ $3.60/ft.	6,827.40	
14 chemical sample analyses @ $5.00 per sample	70.00	$14,365.30

Stage II - 18 holes - Work completed April 30, 1956.

72 hours bulldozing @ $12.00/hr.	$ 864.00	
3,736.5 ft. non-core drilling @ $2.70/ft.	10,088.55	
2,565 ft. core drilling @ $3.60/ft.	9,234.00	
17 chemical sample analyses @ $5.00/sample	85.00	20,271.55
Total cost of project		$34,636.85
Government participation @ 75%		$25,977.64

3. Auditor's Report of Review - dated July 5, 1956.

Total cost as billed by Operator		$34,636.85
Exceptions	None	-
Total accepted cost		$34,636.85
Government participation @ 75%		$25,977.64

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

OFFICIAL FILE COPY
O. M. E.
RECEIVED DEC 3 1962

DATE		
11/3 1962	400	800
		120
	Greer	500
	Murphy	500

Mr. Homer N. Rosenquist
202 Red Mesa Hghts
Grand Junction, Colorado

NOV 9

Re: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Dear Mr. Rosenquist:

This is with reference to your letter of October 22, 1962, to our Region III Acting Field Officer.

Under the subject contract Four Corners Exploration Company completed 30 holes under a contract with W. A. Greer. We have the maps and drill logs relating to these holes submitted by the Operator. However, we cannot release copies of these data to you unless we have the written consent of either W. A. Greer or Four Corners Exploration.

For checking purposes the drill hole logs cover 30 holes: B-2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 41, 42, 43, 44, 46, 47, 48, 50, 55, 56, 57, 71, 74, 76, 70, 72, 73, 75.

In addition to the 30 holes drilled under the contract, the Operator on its own account drilled an additional 46 closely spaced offset holes in order to test the indicated favorable areas. We have no data on these additional holes except the location of a few of the holes that traversed ore.

Sincerely yours,

Frank E. Johnson
ACTING Director

Dear Sir:

W. A. Greer, had an assignment of my original lease to Louis Gagini, & Four Corners Exploration Co. had an assignment from W. A. Greer.
This lease was defaulted by non performance of the above parties in June of 1958 & balance of D.M.E.A. exploration contract was paid out of further production over

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/9	Murphy	500
	Johnson	500
11/9	Talbert	800
	Selfridge	120
11/9	Johnson	110
		100
		220

NOV 9 1962

Mr. Homer N. Rosenquist
202 Red Mesa Hghts
Grand Junction, Colorado

Re: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Ida-E791

Dear Mr. Rosenquist:

This is with reference to your letter of October 22, 1962, to our Region III Acting Field Officer.

Under the subject contract Four Corners Exploration Company completed 30 holes under a contract with W. A. Greer. We have the maps and drill logs relating to these holes submitted by the Operator. However, we cannot release copies of these data to you unless we have the written consent of either W. A. Greer or Four Corners Exploration.

For checking purposes the drill hole logs cover 30 holes: B-2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 41, 42, 43, 44, 46, 47, 48, 50, 55, 56, 57, 71, 74, 76, 70, 72, 73, 75.

In addition to the 30 holes drilled under the contract, the Operator on its own account drilled an additional 46 closely spaced offset holes in order to test the indicated favorable areas. We have no data on these additional holes except the location of a few of the holes that traversed ore.

Sincerely yours,

(signed) FRANK E. JOHNSON (yla)

ACTING Director

cc: Director's reading
Region III (2)
Docket
FMMurphy/mm
11-9-62

43683

Building 20 - Federal Center
Denver 25, Colorado

November 1, 1962

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 5 1962
INITIALS

11/5 800
Breslauer 500
Murphy 500
220

Mr. Homer N. Rosenquist
202 Red Mesa Hgts.
Grand Junction, Colorado

Re: DMEA-3555 (Uranium)
Contract Idm-E791
W. A. Greer
(Bachelor Claims)
Montrose and San Miguel Counties, Colorado

Dear Mr. Rosenquist:

This responds to your letter of October 22, 1962 regarding drill logs and maps pertaining to the captioned contract.

Our records show that this project has repaid the Government, in full, the total amount of Government participation. All of our files on this project have been placed in the Federal Records Center.

Your letter is being forwarded the Washington Office OME for their reply to you.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

cc Chief, Division of Field Operations, OME
w/copies of Homer N. Rosenquist's letter 10/22/62
File
Chron

OFFICE
REGION III
OCT 31 1962
BUREAU OF MINES
DENVER, COLORADO

Amc

Grand Junction
Oct. 22, 1962

Defense Minerals Exploration Adm.
224 New Customhouse
Denver, Colorado

Re: Docket No. D.M.E.A 3553
Contract No. IDM-E791
Bachelor Claims.

Dear Sir:-

I am writing to request that the drill hole log's & map's of this drilling contract be sent to me.
Your record's will show that I am the owner of the Bachelor Claims & while I was to recieve all of the drill logs & map's of this drilling program, from the Four Corners Exploration Co.. They never did furnish me with all the log's.
It will be much appreciated if you will send this material to me.

Yours Truly
Homer N. Rosenquist
202 Red Mesa Hgts.
Grand Junction, Colo.

OME
DEPARTMENT OF THE INTERIOR
NOV 1 1962
REGION III
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED APR 24 1961

DATE	INITIALS	CODE
4/24	gad	200
4/24	[illegible]	800
4/24	[illegible]	500
		820

Selfridge (2)

February 20, 1961

Mr. Waldeck
Bryant, Petric, Waldeck & King
Attorneys at Law
Bryant Building
Montrose, Colorado

Re: EMEA 3555 (Uranium)
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado
Contract Idm 5791

Dear Mr. Waldeck:

Will you please advise the present whereabouts of W. A. Greer or Lewis P. Caggini. I have some information for them which they will be glad to receive.

A self-addressed franked envelope is attached for your reply. Thank you for your trouble in this matter.

Yours very truly,

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

L. P. Caggini
Yuba Consolidated Corp.
Grand Junction, Colo.

OME
DEPARTMENT OF THE INTERIOR
APR 19 1961
REGION III
DENVER, COLORADO

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 23 1961

DATE	INITIALS	CODE
2/23	gad	220
2/23	EW	800
2/23	Murphy	500
		220

Building 20 - Federal Center
Denver 25, Colorado

February 20, 1961

Mr. Homer Rosenquist
Naucla, Colorado

Re: DMEA 3555 (Uranium)
Contract Idn E791
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado

Dear Mr. Rosenquist:

Will you please advise the present whereabouts of W. A. Greer or Lewis P. Gaggini. I have some information for them which they will be glad to receive.

A self-addressed franked envelope is attached for your reply. Thank you for your trouble in this matter.

Yours truly,

Original Signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

HMC/lm
cc Chief, Division of Field Operations, OME (2)
Royalty Corres E791
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

EXTRA COPY O. M. E. RECEIVED APR 24 1961		
DATE	INITIALS	CODE
		800

February 20, 1961

Mr. Waldeck
Bryant, Petrie, Waldeck & King
Attorneys at Law
Bryant Building
Montrose, Colorado

Re: DMEA 3555 (Uranium)
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado
Contract Idm E791

Dear Mr. Waldeck:

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Yours very truly,

Hugh M. Connors

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

L. P. Gaggini
Yuba Consolidated Corp.
Grand Junction, Colo.

OME
DEPARTMENT OF THE INTERIOR
APR 19 1961
REGION III
DENVER, COLORADO

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 23 1961

DATE	INITIALS	CODE
2/23	gad	220
2/23	[illegible]	800
2/23	Murphy	500
		220

Building 20 - Federal Center
Denver 25, Colorado

February 20, 1961

Mr. Homer Rosenquist
Hucla, Colorado

Re: DMEA 3555 (Uranium)
Contract Idn E791
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado

Dear Mr. Rosenquist:

Will you please advise the present whereabouts of W. A. Greer or Lewis P. Gaggini. I have some information for them which they will be glad to receive.

A self-addressed franked envelope is attached for your reply. Thank you for your trouble in this matter.

Yours truly,

[illegible] signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

HMC/lm
cc Chief, Division of Field Operations, OME (2)
Royalty Corres E791
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

EXTRA COPY O. M. E. RECEIVED APR 24 1961		
DATE	INITIALS	CODE
		800

February 20, 1961

Mr. Waldeck
Bryant, Petrie, Waldeck & King
Attorneys at Law
Bryant Building
Montrose, Colorado

Re: DMEA 3555 (Uranium)
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado
Contract Idm E791

Dear Mr. Waldeck:

Will you please advise the present whereabouts of W. A. Greer or Lewis P. Gaggini. I have some information for them which they will be glad to receive.

A self-addressed franked envelope is attached for your reply. Thank you for your trouble in this matter.

Yours very truly,

Hugh M. Connors

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure

L. P. Gaggini
Yuba Consolidated Corp.
Grand Junction, Colo.

OME
DEPARTMENT OF THE INTERIOR
APR 19 1961
REGION III
DENVER, COLORADO

Official
~~EXTRA~~ COPY
O. M. E
RECEIVED FEB 23 1961

DATE	INITIALS	CODE

Building 20 - Federal Center
Denver 25, Colorado

February 20, 1961

Mr. Waldeck
Bryant, Petrie, Waldeck & King
Attorneys at Law
Bryant Building
Montrose, Colorado

Re: DMRA 3555 (Uranium)
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado
Contract Idm E791

Dear Mr. Waldeck:

Will you please advise the present whereabouts of W. A. Greer or Lewis P. Gaggini. I have some information for them which they will be glad to receive.

A self-addressed franked envelope is attached for your reply. Thank you for your trouble in this matter.

Yours very truly,

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure
HMC/lm
cc Chief, Division of Field Operations, OME
Royalty Corres E791
Chron

D. WARREN CRISJOHN
GUY B. DYER, JR.

Telephone LOgan 5-3438

CRISJOHN & DYER
ATTORNEYS AT LAW
Post Office Box 608
CORTEZ, COLORADO

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 23 1961
Dolores County, Colorado, Office
Dove Creek Yorktown 5-2911
DATE
OME
DEPARTMENT OF THE INTERIOR
JAN 12 1961
REGION III
DENVER COLORADO

January 21, 1961

U. S. Department of the Interior
Office of Minerals Exploration
Building 20 - Federal Center
Denver 25, Colorado

Attention: Mr. H. M. Connors, Acting Field Officer, OME

Re: Docket DMEA 3555, Bachelor claims

Dear Mr. Connors:

In reply to your letter of January 19, 1961, I do not know the present whereabouts of W. A. Greer or Lewis P. Gaggini, but I suggest that you contact Mr. Waldeck of Bryant, Petrie, Waldeck & King, Attorneys at Law, Bryant Building, Montrose, Colorado, who represented Mr. Gaggini in the past or Mr. Homer Bousquist of Nucla, Colorado, who is the owner of the Bachelor claims.

The last information that I had on Mr. Gaggini was that he was in Grand Junction, Colorado, and the last information that I had as to the whereabouts of Mr. Greer was that he was in Albuquerque, New Mexico.

I am sending a copy of this letter together with a copy of your letter to Mr. Waldeck in Montrose, Colorado.

Very truly yours,

CRISJOHN & DYER

By Guy B. Dyer, Jr.
Guy B. Dyer, Jr.

GBD:ls

c/c Mr. Bill Waldeck

OFFICIAL FILE COPY
O. M. E
RECEIVED JAN 23 1961

DATE	INIT.	CODE
1-23	gad	770
1/23		800
	Murphy	
		220

Building 20 - Federal Center
Denver 25, Colorado

January 19, 1961

Mr. Homer Rosenquist
202 Red Mesa Heights
Grand Junction, Colorado

Re: Docket DMEA 3555 (Uranium)
Contract Idn E791
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado

Dear Mr. Rosenquist:

If you know the present whereabouts of W. A. Greer or Lewis P. Gaggini will you please advise this office. I have some news for them which they will be glad to receive.

Thanking you for your trouble in this matter, I am

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

HMC/lm
cc Chief, Division of Field Operations OME (2)
Royalty Corres E791
Chron

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 23 1961

DATE	INIT.	CODE
1-23	gad	220
1-23	[illegible]	800
"	[illegible]	~~500~~
		220

Building 20 - Federal Center
Denver 25, Colorado

January 19, 1961

Mr. Guy B. Dyer, Jr.
P. O. Box 608
Cortez, Colorado

Re: Docket DMEA 3555 (Uranium)
Contract Idm E791
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado

Dear Mr. Dyer:

If you know the present whereabouts of W. A. Greer or Lewis P. Gaggini will you please advise this office. I have some news for them which they will be glad to receive.

Thanking you for your trouble in this matter, I am

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

HMC/lm
cc Chief, Division of Field Operations, OME
Royalty Corres E791
Chron

OFFICIAL FILE COPY
O. M. E
RECEIVED JAN 23 1961

DATE	INITIALS	AMT.
1-23	gad	1200
1/23	[illegible]	800
"	[illegible]	~~600~~
		220

Building 20 - Federal Center
Denver 25, Colorado

January 19, 1961

Mr. Irving Rapaport
Four Corners Exploration Company
1125 College Place
Grand Junction, Colorado

Re: Docket DMEA 3555 (Uranium)
Contract Idn E791
W. A. Greer
(Bachelor claims)
Montrose and San Miguel Counties, Colorado

Dear Irving:

If you know the present whereabouts of W. A. Greer or Lewis P. Gaggini will you please advise this office. I have some news for them which they will be glad to receive.

Thanking you for your trouble in this matter, I am

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

HMC/lm
cc Chief, Division of Field Operations OME (2)
Royalty Corres. E791
Chron

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
1/16	Murphy	500
	[illegible]	500
1/16	Talbert	800
1/16	[illegible]	130
"	Johnson	110
1-16	gad	220
1-17	gla	500
		220

JAN 1 6 1961

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: DMKA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

The Acting Director's letters to Mr. W. A. Greer and Mr. Louis P. Gaggini, mailed December 29, 1960, have been returned unclaimed. These letters are enclosed. If possible, please ascertain the proper addresses for both parties and forward the letters to them.

/s/ George C. Selfridge

(HB)

Enclosures

FMMurphy/WRGriswold/gla
1-16-61
cc to: Director's Reading File
Review Committee
Docket
Chron

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
/13	Murphy	500
	Kivahl	500
1/13	Falkner	800
		130
		110
		220

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

The Acting Director's letters to Mr. W. A. Greer and Mr. Louis P. Gaggini, mailed December 29, 1960, have been returned ~~for the reasons indicated on the envelopes.~~ unclaimed. These letters are enclosed. ~~Please ascertain the proper addresses for both parties and forward~~ by personal the letters to them.

Enclosures
FMMurphy/gla
1-31-61
cc to: Director's Reading File
Review Committee
Docket
Code 500
Chron

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/28	Murphy	500
	Williams	500
12/29	Talbert	800
12/29	GCS	130
12/29	On leave	110
12/29	Cae	220
		225

DEC 29 1960

Mr. Homer N. Rosenquist
202 Red Mesa Heights
Grand Junction, Colorado

Re: IMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Dear Mr. Rosenquist:

Enclosed is a copy of a self-explanatory letter of today to Mr. W. A. Greer under the subject contract.

This correspondence relates to the Owner's Consent to Lien signed by you on June 29, 1955, under the IMEA program which has now been succeeded by the Office of Minerals Exploration program.

Sincerely yours,

/s/ George C. Selfridge

Acting Director

Enclosure

FmMurphy/gla
12-28-60
cc to: Director's Reading File
Region III (2)
Docket
Code 500
Chron

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/28	Murphy	500
	Brown	500
12/29	Talbert	800
12/29	[illegible]	190
12/29	[illegible]	110
12/29	Coe	220
		225

DEC 29 1960

Mr. Louis P. Gaggini
304 Main Street
Grand Junction, Colorado

Re: DMEA-3555 (Uranium)
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Dear Mr. Gaggini:

Enclosed is a copy of a self-explanatory letter of today to Mr. W. A. Greer under the subject contract.

This correspondence relates to the Subordination Agreement signed by you on June 27, 1955, under the DMEA program which has now been succeeded by the Office of Minerals Exploration program.

Sincerely yours,

/s/ George C. Selfridge (JHB)

Acting Director

Enclosure

FMMurphy/gla
12-28-60
cc to: Director's Reading File
Region III (2)
Docket
Code 500
Chron

43683

Building 20 - Federal Center
Denver 25, Colorado

Cy sent to 800

OFFICIAL FILE COPY
O. M. E
RECEIVED DEC 2 1960

12/2 Cal 210
~~Murphy 500~~
220

November 29, 1960

D. Ornella
Administrative Assistant
Vanadium Corporation of America
Durango, Colorado

Re: Docket DMFA 3555 (Uranium)
Contract Idm E791
W. A. Greer
Four Corners Exploration Co.
(Bachelor Claims)
Montrose & San Miguel Counties, Colorado

Dear Mr. Ornella:

Thank you for your letter of November 28, 1960 regarding the balance due the Government in Royalty from the captioned property.

Our records, which are subject to audit, show the following:

$ 25,977.64	Amount the Government expended
25,485.51	Amount of Royalty paid through October 1960
492.13	Balance of Royalty due the Government

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer
OME, Region III

cc Bachelor Mines
Dove Creek, Colorado

E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Chief, Division of Field Operations OME (2)
Royalty Corres E 791
Chron

VANADIUM CORPORATION OF AMERICA

DURANGO, COLORADO

November 28, 1960

OME
DEPARTMENT OF THE INTERIOR
NOV 29 1960
REGION III
DENVER, COLORADO

Executive Officer
O. M. E. Field Team
Region III Office of Minerals Exploration
Building 20, Denver Federal Center
Denver, Colorado

E 791

RE: Bachelor Mines
Bachelor Claim
Montrose County, Colorado

Gentlemen:

The subject shipper advises that the balance due on the subject loan amounts to $664.30 as of November 1, 1960.

Vanadium Corporation of America has been making payment directly to you at the rate of 5% based on the gross value of the ore delivered.

Please advise whether or not the foregoing balance is correct so that we may be guided accordingly in making the final payment.

We will appreciate your advice by return mail in order that we may be able to correctly affect the November ore settlement.

Very truly yours,

VANADIUM CORPORATION OF AMERICA

D. Ornella

D. Ornella
Administrative Assistant

DO:hc W.O. 2

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

DEC 2 1960

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-3555 (Uranium)
W. A. Greer
Bachelor claims
Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Reference is made to your November 29 letter to the Vanadium Corporation of America furnishing the status of the subject project account as shown on your records. On the bottom of a copy furnished this Division you have written "Will you please check this?"

This is to advise that our records are in agreement with the figures stated in your letter upon inclusion of the royalty of $814.70 submitted for deposit by your November 14 abstract of remittances no. 11-3.

EDTalbert/ama
December 2, 1960

Copy to: Docket
Director's Reading File
CA & A Division

43683

UNION CARBIDE NUCLEAR COMPANY • DIVISION OF UNION CARBIDE CORPORATION

P. O. BOX 1049, GRAND JUNCTION, COLORADO

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 21 1960

DATE	INITIALS	CODE
3/21	RCW	225
3/23	[illegible]	800
	~~Murphy~~	~~500~~
		225

March 10, 1960

United States Department of Interior
Office of Minerals Exploration
Building 20 - Federal Center
Denver 25, Colorado

Re: Docket #DMEA 3555 (Uranium)
Contract #IDM - E791
W. A. Greer
Four Corners Exploration Co.
Bachelor Claims, Montrose & San Miguel
County, Colorado

Gentlemen:

Reference is made to your inquiry of March 7, 1960 regarding settlement sheet on three loads of material received at our Uravan plant January 21st and January 23rd, 1959.

This material did not meet the minimum specifications of A.E.C. Circular 5, revised, or our minimum specifications and it was rejected. For this reason, no settlement sheet was made.

Yours very truly,

J. H. Frazier
Ore Buyer

JHF:jk

2 copies to Chairman
3-17-60

DME

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
		800
10/15	C	220
10/16	Ching	700

OCT 15 1958

Mr. Donald T. Finch
OME Auditor
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA-2515 (Uranium)
Pat Ambrose
Contract No. Idm-E440

Docket No. DMEA-3555 (Uranium)
W. A. Greer
Contract No. Idm-E791

Dear Mr. Finch:

A comparison of "Royalty Report Summary -- Region III as of September 30, 1958" with the royalty records of this office indicates differences as follows:

Contract No.	Operator	Royalty Collected Region	Royalty Collected Washington
E440	Pat Ambrose	$6,909.29	$7,034.19
E791	W. A. Greer	15,324.74	15,199.84

Will you please investigate and advise.

Also, a copy of Certificate of Deposit No. 52 has not been received in this office. Please furnish us with one.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers
Contract Administration
and Audit Division

P. S. Also, please furnish copy of Certificate of Deposit No. 54.

CEFisher/GMcC
October 15, 1958

cc: Docket
Director's Reading File, and Mr. Chambers

8623

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 10 1960

DATE	INIT.	CODE
3-10	gad	110
3/10		800
		225

Building 20 - Federal Center
Denver 25, Colorado

March 7, 1960

Bachelor Mines
Dove Creek
Colorado

Re: Docket No. DNRA-3555 (Uranium)
Contract No. Idm-E791
W. A. Greer - Four Corners Exploration Co.
(Bachelor claim), Montrose and
San Miguel Counties, Colorado

Gentlemen:

Will you please forward this office two (2) copies of the legal instrument which gives you the right to mine and remove ore from the captioned property.

We need this information to bring our records up to date.

Very truly yours,

J. W. Townsend
Executive Officer, OME
Field Team, Region III

HMC/ms

cc: Chmn. Op. Comm (2)
Roy cor E791
Chron

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 10 1960

DATE	INITIALS	CODE
3-10	gad	220
3/10	[illegible]	800
~~3/10~~	~~Murphy~~	~~500~~
		225

Building 20 - Federal Center
Denver 25, Colorado

March 7, 1960

Union Carbide and Nuclear Corp.
Uravan
Colorado

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-E791
W. A. Greer --
Four Corners Exploration Co.
(Bachelor claim), Montrose and
San Miguel Counties, Colorado

Gentlemen:

The Atomic Energy Commission's records show that in the first quarter of 1959 a shipment of 36.18 tons containing 62.69 pounds of U_3O_8 and 800.84 pounds of V_2O_5 was received by you from Bachelor mines.

Will you please forward this office three (3) copies of the settlement sheet for this liquidation.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

HMC/ms

cc: Chmn. Op. Comm. (2)
Chron
Royalty corres E791

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 13 1957

DATE	INITIALS	CODE
9/13	G	220
9/13	Fisher	800
		225

224 New Customhouse
Denver 2, Colorado

September 10, 1957

Memorandum

To: DMEA/G. Jct., Att: M.H. Salsbury

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

Subject: Docket DMEA 3555 (Uranium) Contract Idm-E791, Four Corners Exploration Co. (W. A. Greer), Bachelor Claims, San Miguel County, Colorado

In reply to your memorandum of August 30, 1957, it is understandable that you experienced confusion in trying to reconcile AEC statistical production records with production records sent to you with our memorandum of July 12, 1957.

The figures appearing on our royalty record cards are derived from the actual vouchers. Knowing the difference in the vouchering system of the two agencies, we do not expect the AEC production records to agree, item by item, with those maintained in the royalty records computed at this office. We do, however, request that the engineer seek to reconcile the two sets of figures in their entirety.

From Table I, attached to your August 30 memorandum under the heading, "Lots in Denver records which do not correspond to any of the above.", the first three lots do correspond with liquidation number 8254 listed under your heading, "Shipments in period July 1 - December 31, 1956 which do not correspond." Similarly under your heading, "Lots in Denver records which do not correspond to any of the above.", lots dated 11-27/11-30-56 do correspond to purchaser lots starting 78209 and ending 78254. Also lots shown on our records as 11-30/12-31-56 do correspond to purchaser lots starting 78349 and ending 78891. Further lots shown on our records as 1-27/1-31-57 and 1-28/2-27-57 are reported by liquidation number 2-1612.

In view of reconcillation, which incidentally agrees with the records of the Contract Administration and Audit Division prepared in conjunction with the First Royalty Audit Certificate dated June 25, 1957, it is suggested that you proceed with the Semiannual Report on the subject project for the period January 1, 1957, thru June 30, 1957.

From the content of your memorandum and the first summary of production on Table I, the figure 2045.48, dry tons, of production in essence is correct. Actually, some lots included under Vanadium Corporation of America settlement sheet, for period 6-28/7-27-57, are production made during the report period. However, in that these lots are included with lots received after July 1, 1957, and reported under one settlement sheet, it will simplify matters to report this production with the next Semiannual Report.

We note that lots 0085 and 0090, listed in the first summary of production on Table I, were reported subsequent to the first interim royalty report which was reconciled three ways: (1) Operator's records, (2) AEC records, and (3) DMEA records in Denver.

E. N. Harshman

E. N. Harshman

MHM:eh

cc: Sec. Op. Comm. (2)) W/cy of Salsbury's
Semiannual Report File E791) 8/30/57 memo
Marshall
Finch
Chron.

DMEA
ARTMENT OF THE INTERIOR
SEP 3 - 1957
REGION III
DENVER, COLORADO

P. O. Box 300
Grand Junction, Colorado

August 30, 1957

Memorandum

To: M. H. Marshall

Through: Executive Officer,
DMEA Field Team,
Region III

From: M. H. Salsbury

Subject: Docket No. DMEA 3555 (Uranium), Contract Idm-2 791, Four Corners Exploration Co. (W. A. Greer), Bachelor claims, San Miguel County, Colorado. Conciliation of AEC production records with shipments on which DMEA royalties have been paid.

The shipments from the subject property on which DMEA royalties have been paid total 3,330.817 tons according to Sheet no. 1 of DMEA production records on the subject project furnished by the Denver office. The total on AEC records including a shipment of 326.165 tons received between 5/28 and 6/27/57 (AEC records show liquidation number 0090), is 3,380.07 tons, a discrepancy of 43.25 tons.

Shipments through liq. no. 77470 (liq. no. 0204 in AEC records) as shown in both records agree, as do five of nine shipments since January 1957. The tonnages of other shipments do not agree in the two records, and the point where the discrepancy comes in is not clear. Table 1 attached is compilation of AEC records from January 1--June 30, 1957. For previous AEC record see table attached to Semiannual Report of Certified Project on the subject property for July 1--December 31, 1956.

M. H. Salsbury
M. H. Salsbury,
Mining Engineer

MHS/bh
Attachment

P.S. DMEA royalty review dated June 25, 1957 confirms AEC production records through liquidation No. 0083 (corresponding to shipment dated 3/28 to 4/27/57 on Denver production records). Two additional shipments in the period shown on AEC records = liq no. 0085 (4/28 to 5/27/57 and liq. No. 0090 (5/28 to 6/27/57)

MHS

Table 1. -- Shipments from Bachelor claims according to AEC records for period January 1, 1957 to June 30, 1957.

Liq.No.	Date	Lot as described in royalty record	Dry tons	%	U_3O_8 lbs.	%	V_2O_5 lbs.	Mill 1/
8608	1-57	1-1/1-27-57	309.74	0.39	2406.21	2.22	13764.00	15
1612	2-57	?	333.99	0.51	3397.84	3.05	20345.00	15
7188	3-57	7188	120.61	0.30	716.31	1.72	4160.35	11
7207	3-57	7207	269.45	0.37	2029.77	2.13	12010.99	11
0003	3-57	2-28/3-15-57	57.03	0.37	425.28	2.28	2601.00	15
0083	4-57	3-28/4-27-57	292.50	0.47	2735.09	2.85	16650.00	15
0085	5-57	4-28/5-27-57	334.00	0.60	3992.48	3.67	24485.00	15
0090	6-57	5-28/6-27-57	328.16	0.62	4037.64	3.56	23385.00	15
Total 1-1/6-30-57			2045.48	0.48	19740.62	2.87	117401.34	

1/ Mill 15 is Vanadium Corporation of America, Naturita, Colorado.
Mill 11 is Union Carbide Nuclear Company, Uravan, Colorado.

Shipments in period July 1 -- December 31, 1956 which do not correspond.

8254	11-56	?	201.87	0.39	1581.28	2.14	8638.00	
8375	12-56	?	501.80	0.36	3652.91	1.95	19659.00	

Lots in Denver records which do not correspond to any of the above.

10-26/10-31-56	17.279
10-26/11-15-56	94.583
11-16/11-27-56	90.006
11-27/11-30-56	43.316
11-30/12-31-56	415.162
1-27/1-31-57	84.645
1-28/2-27-57	249.344

OFFICIAL FILE COPY

Date	Surname	Code
7/8	C.E.F	800
7-9	C	220
		225

JUL - 8 1957

Mr. Donald T. Finch
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Royalty Audit Report
Idm-E791, DMEA-3555
W. A. Greer

Dear Mr. Finch:

Your First Royalty Audit Report and Certificate pertaining to the subject contract are approved for normal distribution after changing the date "July 7, 1956" to "July 5, 1956" in the fourth paragraph of the report. This change has been made on the Washington office copies of the audit report.

Sincerely yours,

SIGNED

Jay L. Chambers, Director
Contract Administration
and Audit Division

CEFisher/wb/ama
July 8, 1957

Copy to: Docket
Admr. Reading File
Mr. Chambers

OFFICIAL FILE COPY
D M E A
RECEIVED JUN 13 1957

DATE	INITIALS	CODE
6/13	C	220
6/14	[illegible]	800
6/11	[illegible]	700
		225

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

June 11, 1957

Mr. C. T. Langlais
1125 College Place
Grand Junction, Colorado

Re: Docket DMEA 3555 ~~(Uranium)~~, Contract Idm-E791, W. A. Greer ~~(Bachelor Claims)~~ Montrose and San Miguel Counties, Colo.

Dear Mr. Langlais:

Enclosed are the copies of load detail sheets covering shipments of 1-1/27/57 through and including 4/27/57, which you sent to this office by your letter of June 8, 1957. We appreciate your loaning us this data from your files.

Load detail sheets are part of the evidence of sales on DMEA production which are required to be submitted with royalty payments, when payments are based on settlement sheets which cover a series of individual shipments.

For future shipments you are requested to instruct your purchaser to furnish us with four copies of a load detail sheet when applicable. This will assure the Operator and the Government of accuracy and serves as a permanent record which may be subjected to inspection in the future.

Very truly yours,

W. H. KING

W. H. King
Executive Officer, DMEA
Field Team, Region III

Enclosures

MHM/vj
cc: Royalty File E791)
Sec. Opr. Comm. (2) w/cys of Operator's ltr dtd 6/8/57
DMEA/DFC (2)) & Load detail sheets
Finch)
Marshall
Chron.

F. O. MANOL
IRVING RAPAPORT

FOUR CORNERS EXPLORATION COMPANY

210 PETROLEUM BUILDING
GRAND JUNCTION, COLORADO
TELEPHONE CH 3-1322

BRANCH OFFICES
BOX 116, GRANTS, N. MEX.
BOX 63, NATURITA, COLO.

WE HAVE MOVED
NEW ADDRESS - 1125 COLLEGE PLACE
NEW PHONE NO. - CH. 2-7758

DMEA
DEPARTMENT OF THE INTERIOR
JUN 10 1957
REGION III
DENVER, COLORADO

June 8, 1957

NOTE

Mr. B. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 3555 (Uranium), W. A. Greer (Bachelor Claims), Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Dear Mr. Harshman:

In reply to your letter of June 5, 1957, we are herewith submitting our copies of load detail sheets received from the Vanadium Corporation of America, Durango, Colorado. These load sheets cover shipments of 1-1/27/57 thru and including 4/27/57.

After preparing duplicates from these sheets we would appreciate your returning ~~them to us since~~ these are the only record of the detail we have on file.

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 13 1957

DATE	INITIALS	CODE

Very truly yours,

C. T. Langlais

CTL:lav

PS: Please note change of address. Any future correspondence relative to settlements should be addressed to me at this new address.

PROTOCOL TO
WO (2)
DMEA/DFC
FINCO

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 7 1957

DATE	INITIALS	CODE
6/10	[illegible]	220
6/10	[illegible]	800
		225

224 New Customhouse
Denver 2, Colorado

June 5, 1957

Mr. C. T. Langlais
Four Corners Exploration Company
210 Petroleum Building
Grand Junction, Colorado

Re: Docket DMEA 3555 (Uranium), W. A. Greer (Bachelor Claims), Montrose and San Miguel Counties, Colorado
Contract Idm-E791

Dear Mr. Langlais:

Our records indicate that no load detail sheets were received for the following liquidations issued by Vanadium Corporation of America, Durango, Colorado:

Date	Gross Wt.
1-1/1-27-57	743470 lb.
1-27/1-31-57	179780 "
1-28-2-27-57	707060 "
2-28-3-15-57	120610 "
3-28-4-27-57	613780 "

Please send us one copy of each of applicable load sheets.

For the sake of expediency, you may choose to loan us your personal copies, whereupon we will duplicate enough copies to meet our requirements and return your copies by certified mail.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

MHM/vj

cc: Royalty File E791
Sec. Opr. Comm. (2)
Konselman (2)
Finch
Marshall
Chron.

224 New Customhouse
Denver 2, Colorado

March 21, 1957

FILE COPY
DMEA
RECEIVED MAR 25 1957

DATE	INITIALS	CODE
3/26	C	220
3/26		800
		225

Mr. C. T. Langlais
Four Corners Exploration Company
210 Petroleum Building
Grand Junction, Colorado

Re: Royalty Payments, Docket DMEA 3555 (Uranium) Contract Idm-E 791 W. A. Greer (Bachelor Claims) San Miguel & Montrose Counties, Colorado

Dear Mr. Langlais:

We appreciate receipt of your letter of March 18, 1957, explaining the reason why our records are not in accord with yours.

We will not be permitted to adjust our records: however, until you provide this office with four copies of the corrected settlement sheet for production originally covered by settlement sheet dated 11-30-12-31-56.

Very truly yours,

Original signed by
E. N. HARSHMAN

By E. N. Harshman
Acting Executive Officer

MHM:eh
cc: Royalty File E 791
Ch. Op. Comm. (2)) W/Copy dated
J. F. Shaw (2)) 3/18/57
Marshall
Chron.

C. MANOL
IRVING RAPAPORT

FOUR CORNERS EXPLORATION COMPANY
210 PETROLEUM BUILDING
GRAND JUNCTION, COLORADO
TELEPHONE CH 3-1322

BRANCH OFFICES
BOX 116, GRANTS, N. M.
BOX 63, NATURITA, COLO.

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 25 1957

DMEA
DEPARTMENT OF THE INTERIOR
MAR 19 1957
REGION III
DENVER, COLORADO

DATE	INITIALS	CODE
3/26	C	230
		800
		225

March 18, 1957

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Royalty Payments, Docket DMEA 3555 (Uranium), Contract Idm-E 791, W. A. Greer (Bachelor Clai San Miguel & Montrose Counties, Colorado

Dear Mr. Harshman:

I believe I have found the difficulty why our records do not agree with yours.

The VCA settlement of 11-30/12-31/56 showed U_3O_8 value of $11,439.02. No doubt you received a copy of this exact settlement since the above figure is what you are using to determine that we owe additional royalties on bonus paid us.

This settlement was corrected to us and apparently not to you. They had overpaid us $1,346.17 in this settlement as this amount was previously paid in settlement of 11-27-/11-30/56.(U_3O_8 value)

After we found this error we asked for a corrected settlement and to also inform you of this error, however, they apparently haven't done this. The corrected amount of value of U_3O_8 was $10,092.85 which we based our bonus payment on.

The overpayment was deducted from our settlement of 1-1/1-27,1957, which you probably have a copy of.

In view of this we feel that we have made payments for bonuses received correctly.

The fact that you did not receive a corrected settlement showing the correct amount would certainly indicate we had not properly paid.

Trusting this explanation will assist you in making the adjustme in your records to indicate that we have made payments on all o our bonus receipts. Our application to A.E.C., dated 2/12/57 for bonus of $2,788.81; settlement sheet 1/1-1/27/57 has not ye been paid to us by A.E.C.

Very truly yours,

C. T. Langlais

CTL:lav

PHOTOCOPY MADE
WO(2)
SHAW(2)

Row F 791

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 18 1957

DATE	INITIALS	CODE
3/18	C	220
3/19	EEA	800
		225

224 New Customhouse
Denver 2, Colorado

March 15, 1957

Mr. C. T. Langlais
Four Corners Exploration Company
210 Petroleum Building
Grand Junction, Colorado

Re: Royalty Payments, Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims), San Miguel & Montrose Counties, Colorado

Dear Mr. Langlais:

In reply to your letter of March 13, 1957, our records show report of production covered by settlement sheet dated 11-27/11-30-56 having "proceeds of uranium of $1,346.17", but no report of production covered by settlement sheet dated 12/1-12/31/56 having "proceeds of uranium of $10,092.85".

In its place, we have report of production covered by settlement sheet dated 11-30-12-31-56 with a contained U_3O_8 value of $11,439.02. We assume that your referral to "proceeds of uranium" and our "U_3O_8 Value" are the same.

If we understand your letter of March 13 correctly, your recent check for $571.95 was submitted as royalty for AEC bonus payments received on production covered by two settlement sheets, one having a U_3O_8 value of $1,346.17, the other having a U_3O_8 value of $10,092.85. The royalty thus was calculated as follows:

Date of S.S.	Bonus Payment	Roy. Due	Roy. Paid
11-27/11-30-56	$1,346.17	$ 67.31	$ 67.31
11/27-11/30/56	10,092.85	504.64	504.64
		$571.95	$571.95

Balance of Royalty Due $0.00

Calculations from settlement sheets that we have received indicate additional royalty of $67.31 is due the Government as follows:

Date of S. S.	Bonus Payment	Roy. Due	Roy. Paid
11-27/22-30-56	$1,346.17	$ 67.31	None
11-30-12-31-56	11,439.02	571.95	$571.95
		$639.26	$571.95

Balance of Royalty Due $67.31

By coincidence, your check for $571.95 agrees with the amount of royalty due on production covered by settlement sheet dated 11-30-12-31-56, and is credited as payment of bonus royalty due thereon.

We hold that on the basis of records available our computation is correct and the Government is still due $67.31 on this production.

If you differ from our viewpoint, please furnish four copies of a settlement sheet dated 12/1-12/31/56 with four copies of AEC form "Application for Bonus Payment' showing request for bonus payment of $10,092.85. At the same time you may wish to clarify the relationship of this settlement to the one we have which shows a contained U_3O_8 value of $11,439.02.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

MHM/vj

cc: Royalty File E791
Corres. File E791)
Chair. Opr. Comm. (2) w/cy Oper. ltr dtd 3/13/57
J. F. Shaw (2))
Marshall
Chron.

F. O. MANOL
IRVING RAPAPORT

FOUR CORNERS EXPLORATION COMPANY

210 PETROLEUM BUILDING
GRAND JUNCTION, COLORADO

TELEPHONE CH 3-1322

BRANCH OFFICES
BOX 116, GRANTS, N. M.
BOX 63, NATURITA, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
MAR 14 1957
REGION III
DENVER, COLORADO

March 13, 1957

Mr. E. N. Harshman
Acting Executive Officer, DMEA
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 3555(Uranium)
Contract Idm-B791, W.A.Greer
(Bachelor Claims(San Miguel
& Montrose Counties, Colo.

Dear Mr. Harshman:

On February 28, 1957, we forwarded our check number #1016, in the amount of $571.95.

In reviewing this payment we find that it was in payment of two applications for bonus on two different settlements.

Settlement dated 11/27-11/30/56 had proceeds of uranium of $1,346.17; and settlement dated 12/1-12/31/56 had proceeds of uranium of $10,092.85. Combining these two bonus settlements to us and issuing our 5% from them totaled $571.95, which was recently received by you.

It was our error in not marking this payment to you that it included two different settlements.

We have yet to receive our last bonus settlement from A.E.C, applied for on February 12, 1957.

We are sorry that by this error it may have caused you some inconvenience.

Very truly yours,

C. T. Langlais

CTL:lav

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 18 1957
DATE | INITIALS | CODE

PHOTO CATO
CAMM(2)
CORRESP
SHAW(2)

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 14 1957

DATE	INITIALS	CODE
3-14	C	220
3/15		800
		225

224 New Customhouse
Denver 2, Colorado

March 12, 1957

Mr. C. T. Langlais
Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

Re: Docket DMEA 3555 (Uranium), Contract Idm-8791, W. A. Greer (Bachelor Claims) San Miguel & Montrose Counties, Colo.

Dear Mr. Langlais:

We have received a letter dated March 9, 1957 from Mr. John W. Blackburn, Mines Auditor, Vanadium Corporation of America, which indicates that on February 25 you directed inquiry regarding the payment of certain royalties due the Government. The royalties referred to by you were paid to this office by VCA at the time the applicable settlement sheets were submitted. The Vanadium Corporation of America has at all times been cooperative in making full payments promptly to the Government on behalf of Operator's participation in the Defense Minerals Exploration Administration program.

If you will reread our letter of February 20, 1957 (photocopy enclosed), you will note that our request for additional royalties on production covered by settlement sheets dated 11-27/11-30-56, 11-30-12-31-56 and 1/1-27-57 was made, not because of insufficient payments made by VCA but rather because our records indicate you have or will receive additional proceeds, for which the Government is due royalty, on this production in the form of bonus payments from the Atomic Energy Commission. Requests for royalties pertaining to such payments are directed to and must be paid directly by the Operator.

Since writing our letter of February 20, we have received additional royalties due from the AEC bonus payment on production covered by settlement sheet dated 11-30-12-31-56. This payment

amends our request of February 20, thus, royalty is still due on AEC bonus payments from production covered by settlement sheets dated 11-27/11-30-56 and 1-1/27-57 respectively.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer, DMEA
Field Team, Region III

Enclosure

cc: Vanadium Corporation of America

MHM/vj

cc: Royalty File E791
Corres. File E791)
Chair. Opr. Comm. (2))w/cy of related corres.
J. F. Shaw (2))
Marshall
Chron.

VANADIUM CORPORATION OF AMERICA

DURANGO, COLORADO

March 9, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 14 1957

DATE	INITIALS	CODE

DMEA
OF THE INTERIOR
1957
ION
COLORADO

Mr. W. M. Traver, Executive Officer
Defense Minerals Exploration Administration
204 New Custom House
Denver, Colorado

Dear Mr. Traver:

We are sending you a photo copy of a letter dated February 25th from Four Corners Exploration Company stating that you have never received royalty payments due for the following periods:

11-27/11-30-56	$128.65
11-30/12-31-56	$1076.86
1-1/1-27-57	$822.27

Enclosed are photo copies of the cancelled checks which your agency has endorsed. There must be some other question concerning these royalties since they were paid and have been received by your agency. If there is, please do not hestiate to contact us.

Very truly yours,

VANADIUM CORPORATION OF AMERICA

by John Blackburn

John W. Blackburn,
Mines Auditor

JWB:mab
encls.

cc: P. Edwards
Four Corners Exploration Co.

CC TO
CORRESP
PHOTO CY TO:
CHAIRMAN OPR COMM
SHAW (2)

VANADIUM CORPORATION OF AMERICA
DURANGO, COLORADO

March 9, 1957

DMEA
DEPARTMENT OF THE INTERIOR

Mr. C. T. Langlais
Four Corners Exploration Co.
205 Petroleum Building
Grand Junction, Colorado

Dear Sir:

We have your letter of February 25th addressed to Mr. Page Edwards.

The three items which you mention as royalties due the Defense Minerals Exploration Administration were paid on schedule and we have the cancelled checks in our file. They are properly endorsed by D.M.E.A. and it is therefore hard for us to believe that they never received them. As further proof of our statement, we are enclosing photo copies of all three checks.

Very truly yours,

VANADIUM CORPORATION OF AMERICA

John W. Blackburn,
Mines Auditor

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 14 1957

DATE	INITIALS	CODE

JWB:mab
encls.

cc: P. Edwards
D.M.E.A.

DMEA
DEPARTMENT OF THE INTERIOR
FEB 25 1957
REGION III
DENVER, COLORADO
OFFICIAL FILE COPY
DMEA
RECEIVED MAR 14 1957

DATE	INITIALS	CODE

February 25, 1957

Mr. Page Edwards
Vanadium Corporation of America
Durango, Colorado

Dear Mr. Edwards:

We are in receipt of a letter from Mr. W. M. Traver, Executive Officer of the Defense Minerals Exploration Administration(DMEA) in Denver stating that they have not received royalties due on settlements dated:

11-27/11-30-56	8378	128.65
11-30/12-31-56	8487	1076.86
1-1/ 1-27-57	8612	822.27

The following are deductions made [illegible] favor of DMEA for the following settlement

11-27/11-30-56	$ 128.
11-30/12-31-56	1,076.86
1-1/ 1-27- 57	822.27

Would you please have someone check on these deductions and advise Mr. Traver.

Very truly yours,

C. T. Langlais

C. T. Langlais

OFFICIAL FILE COPY
D M E A
RECEIVED FEB 25 1957

DATE	INITIALS	CODE
2/25	C	220
2/26	G.E.P.	800
		225

224 New Customhouse
Denver 2, Colorado

February 20, 1957

Mr. C. T. Langlais
Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

Re: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims) San Miguel & Montrose Counties, Colo.

Dear Mr. Langlais:

Inspection of records at this office indicate that your eligibility to receive AEC bonus payments concluded with shipments of ore covered by settlement sheet dated 1/1-27-57, which was issued by the Vanadium Corporation of America.

Our records also indicate that the Government is due royalty on AEC bonus payments received by you for this mentioned production, as well as production covered by VCA settlement sheets dated 11-27/11-30-56 and 11-30-12-31-56 respectively.

You are therefore requested to submit one copy of the AEC form "Application for Bonus Payment", which reflects application for bonus payments on the above noted production, and royalty check in the appropriate amount.

Checks should be made payable to the Defense Minerals Exploration Administration and sent at once to the Executive Officer, DMEA Field Team, Region III, 224 New Customhouse, Denver 2, Colorado.

Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E791
Corres. File E791
Chair. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

OFFICIAL FILE COPY DMEA RECEIVED JAN 7 1957		
DATE	INITIALS	CODE
1-8	C	220

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

Date: January 7, 1957

DMEA Docket No. 3555
DMEA Contract No. Idm-E791
Commodity Uranium
Name of applicant W. A. Greer
Name of property Bachelor claims
Location of property Montrose and San Miguel counties, Colorado
Estimated cost of project $34,636.85

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

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

1. Date of subject document: 12/21/56. 2. Date received by reviewer: 1-3-57

3. Prior reports on this property known to reviewer: Yes ☐ No ☐

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

5. Information available on past production: Yes ☐ No ☐

6. Other pertinent factors known to reviewer: Yes ☐ No ☐

7. Explain items marked yes above:

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

9. Action advised:
   a. Obtain information from applicant ☐
   b. Refer to Field Team ☐
   c. Denial ☐
   d. Agree with Field Team ☒
      i. Consult with Mr. _____ at _____ ABC office.
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another examination ☐
   h. Approval ☒

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

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

1/14 4207 800 225

224 New Customhouse
Denver 2, Colorado

January 4, 1957

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: Change of Address, Docket DMEA-3555 (Uranium) Contract Idm-E791
W. A. Greer (Bachelor Claims) San Miguel & Montrose Counties, Colo.

Enclosed is a photocopy of a letter dated December 28, 1956 from Mr. C. T. Langlais, which advises that correspondence for requests be brought to his attention, addressed to Four Corners Exploration Company, 205 Petroleum Building, Grand Junction, Colorado.

Original signed by
W. M. TRAVER

W. M. Traver

Enc.

MHM:bh

cc-Royalty File E-791 w/orig. of Langlais' letter
Corres. File E-791 w/photocopy " "
Sec., Op. Comm. (2) " " "
Harshman " " "
Hasler " " "
Shaw (2) " " "
Townsend " " "
Chron.

F. C. MANOL
IRVING RAPAPORT

FOUR CORNERS EXPLORATION COMPANY

205 PETROLEUM BUILDING
GRAND JUNCTION, COLORADO
TELEPHONE 1774

BRANCH OFFICES
BOX 116, GRANTS, N. M.
BOX 63, NATURITA, COLO.

DMEA
DEPARTMENT OF THE INTERIOR
DEC 31 1956
REGION III
DENVER, COLORADO

December 28, 1956

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

Re: Docket DMEA 3555 (Uranium)
Contract Idm-B791
W.A.Greer (Bachelor Claims)
San Miguel and Montrose
Counties, Colorado

Dear Mr. Traver:

I have, this date, as requested in your letter of December 27, again requested the Vanadioum Corporation of America to submit four (4) copies of the load detail and settlement sheets accompanied by their check to you.

Enclosed are copies of letters that were written to them in request of additional copies which are to be submitted direct to your office.

Since all records are kept at this office, please address all correspondence for requests to this office to my attention rather than that of Mr. Greer's. Incidentally the reason your letter of him was returned by the Post Office department is due to the fact that it was incompletely addressed, and since the Post Office no longer had a directory service, the letter was returned. Mr. Greers correct address is: 502 Aliso Drive N. E. , Albuquerque, New Mexico. The street direction was ommitted on your envelope.

I am sure that Mr. Page Edwards of the Vanadium Corporation office will see to it that all future settlements to you will be made up in its proper number.

Very truly yours,

C. T. Langlais

C. T. Langlais

PHOTO COPY TO:
CORRESP. FILE E 791
SEC OPR COMM (2)
JF. SHAW (2)
[illegible]MAN

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

204 New Customhouse
Denver 2, Colorado

December 27, 1956

RECEIVED
DEC 31 1956
DMEA

Mr. C. T. Langlais
Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

Re: Docket DMEA 3555 (Uranium)
Contract Idm-E791
W.A. Greer (Bachelor claims)
San Miguel and Montrose
Counties, Colorado

Dear Mr. Langlais:

Enclosed is our letter of December 11, 1956, concerned with settlement sheets on the referenced contract, to Mr. W. A. Greer, 502 Aliso Drive, Albuquerque, New Mexico which, as indicated by the attached envelope, was returned unclaimed by the Post Office.

Correspondence in our files indicates that you have in the past taken care of such matters. Will you, therefore, please furnish a reply to our letter of November 14, 1956, copy of which is attached to the enclosed letter of December 11, 1956.

For your further information, a photo copy of our letter of November 8, 1956, to Mr. Greer, referred to in the letter of November 14, 1956 is also enclosed.

Please advise us of the correct address for Mr. W. A. Greer.

Yours very truly,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enclosures

WMT:jy
cc: Roy. File E791
Corresp. E791
Sec.Op.Comm. (2)
Shaw (2)
Marshall
Chron.

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

224 New Customhouse
Denver 2, Colorado

December 20, 1956

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. S. Greer (Bachelor Claims) Montrose and San Miguel Counties, Colorado

Dear Mr. Greer:

Enclosed is a photocopy of a letter dated November 16, 1956 for which we have not received your reply.

Please submit the required number of the requested statement by return mail.

Yours very truly,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enclosure

MHM/vj

cc: Royalty File E791
Corres. File E791
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

RECEIVED
DEC 31 1956
D.M.E.A.

ACTION ON INT M
OR FINAL FIELD TEAM REPORT

Date 12-28

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. Division
6. Docket Control Mails and Files

3555

Note comments in report regarding:

1. One reserve data
2. Certified 7/16/56
3.
4.

and take appropriate action.

- - - - - - - -

Action taken by Division

Robert L. Adams

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

RECEIVED DEC 21 1956 D.M.E.A.

224 New Customhouse
Denver 2, Colorado

December 17, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 3555 (Uranium), Contract No. Idm-E791, W. A. Greer (Bachelor claims), Montrose and San Miguel Counties, Colorado - FINAL REPORT.

Enclosed are the original and three copies of a joint final engineering and geologic report, dated December 10, 1956, prepared by M. H. Salsbury, Mining Engineer, Bureau of Mines, and Carl H. Roach, Geologist, Geological Survey, and transmittal thereof, dated December 14, 1956, from E. N. Harshman and John F. Shaw, pertaining to work completed under the subject contract.

The original and one copy of the Operator's final report were forwarded to you by memorandum of June 13, 1956.

Final payment to the Operator was processed by this office July 5, 1956, in conformance with the Report of Review of reported project costs, by the Contract Administration and Audit Division, dated July 5, 1956.

The exploration work completed consisted of 4,461.5 feet of core drilling, 6,233.5 feet of plug drilling, and incident bulldozer work and chemical analysis of samples at a total cost of $34,636.85, towards which the Government contributed 75%, or an amount of $25,977.64.

The exploration work completed under the DMEA contract resulted in a discovery or development of a significant quantity

FINAL REPORT

Reviewed by
DMEA OPERATING COMMITTEE
12-28-56
(date)

of uranium ore, on which a Certification was issued July 16, 1956.

W. M. Traver

E. N. Harshman

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
DEPARTMENT OF THE INTERIOR
DEC 14 1956
REGION III
DENVER, COLORADO

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
December 14, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: DMEA Docket 3555 (Uranium) Contract Idm-E791, W. A. Greer (Four Corners Exploration Company) Bachelor Group of Claims, San Miguel and Montrose Counties, Colorado.

Enclosed are the original and nine copies of a Joint Final Engineering and Geologic Report on the above project, made by M. H. Salsbury and Carl H. Roach.

W. A. Greer applied for DMEA aid to explore the subject property in November 1954. He subsequently made an operating agreement with Four Corners Exploration Company, which was named as operator in the contract signed April 28, 1955.

The contract was of the fixed-unit-cost type, and provided for 11,300 feet of core and noncore drilling to be done in 30 holes, drilled in two stages. Drilling started August 10, 1955 and was recessed December 17, 1955. During that period all of the stage I program and part of the stage II program was completed. Drilling was resumed April 9, 1956, and the stage II portion of the program was completed April 30, 1956.

The final approved cost of the project was $34,636.85 and payment was made by the government on a basis of 75 percent participation, or in the amount of $25,977.64.

It is estimated that a reserve of 1882 tons of uranium ore, valued at $145,835.00, was discovered as a result of drilling by AEC (1 hole), the operator (4 holes without DMEA assistance) and the 30 DMEA project holes.

A Certificate of Discovery was issued on July 16, 1956. A shaft was sunk to the ore bed, and ore production was in progress by August 1956.

Reviewed by
DMEA OPERATING COMMITTEE
12-28-56
(date)

Robert W. King for
E. N. Harshman
Member Field Team

John F. Shaw
John F. Shaw
Supervising Mining Engineer

JFS:sh
Enc.
cc: 9 -- Idm-E971 --- Chron

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT FINAL REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

DMEA 3555

CONTRACT Idm-E791

W. A. GREER (FOUR CORNERS EXPLORATION COMPANY)

Bachelor Group of Claims

San Miguel and Montrose Counties, Colorado

Uranium

Joint Final Engineering and Geologic Report

By

M. H. Salsbury
Mining Engineer
Bureau of Mines

Carl H. Roach
Geologist
Geological Survey

December 10, 1956

Reviewed by
DMEA OPERATING COMMITTEE
12-28-56
(date)

DMEA 3555
CONTRACT Idm-E791

W. A. GREER (FOUR CORNERS EXPLORATION COMPANY)
BACHELOR GROUP OF CLAIMS
SAN MIGUEL AND MONTROSE COUNTIES, COLORADO

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Ore reserves.....8
The project.....11
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Discussion of conclusions.....15

ILLUSTRATIONS

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1. Location map, Bachelor Group, W. A. Greer, San Miguel and Montrose Counties, Colo. (DMEA 3555).....16

2. Map showing structure contours on the base of the "Jack Knife Sand", Bachelor Group of Claims, Four Corners Exploration Company, Montrose County, Colo.....16

3. Map showing thickness of the "Jack Knife Sand", Bachelor Group of Claims, Four Corners Exploration Company, Montrose County, Colo.....16

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DMEA 3555
CONTRACT Idm-E791

FOUR CORNERS EXPLORATION COMPANY
BACHELOR GROUP OF CLAIMS
SAN MIGUEL AND MONTROSE COUNTIES COLORADO

RECEIVED DEC 21 1956 DMEA

INTRODUCTION AND SUMMARY

W. A. Greer, 502 Aliso Drive, Albuquerque, New Mexico, applied to the Defense Minerals Exploration Administration in November 1954, for assistance to explore for uranium in the Salt Wash member of the Morrison formation on the Bachelor group of claims, Bull Canyon district, San Miguel and Montrose Counties, Colorado. A field examination was made on January 5, 1955, by a Region III DMEA examining team consisting of M. H. Salsbury, U. S. Bureau of Mines, and A. F. Holzle, U. S. Geological Survey. A. E. Flint, project chief for the U. S. Geological Survey in the Bull Canyon area, and Louis P. Gaggini, representing the applicant, participated. A joint report recommending a drilling project was submitted.

On April 28, 1955, a contract (Idm-E791) with fixed-unit-cost provisions calling for 5,900 feet of noncore and 5,400 feet of core drilling, in 30 holes and two stages of drilling, was signed. The estimated maximum cost was $37,535.00 with Government participation at 75 percent or $28,151.25. The original applicant had, in the meantime, made an operating agreement with Four Corners Exploration Company, Grants, New Mexico, and Grand Junction, Colorado. The latter firm was designated as the operator. Drilling was started August 10, 1955, and continued until December 17, 1955. Stage I and part of Stage II were completed in this period.

The project was in authorized recess from December 17, 1955, to April 9, 1956, because of adverse winter weather conditions. Drilling was resumed on the latter date, and stage II was completed April 30, 1956.

Project drilling and additional drilling done by the operator resulted in discovery of a small ore reserve. Using the results of DMEA drill holes, one hole drilled by the Atomic Energy Commission, and from holes drilled by the operator, a reserve of 1,882 tons of uranium ore with an average content of 0.396 percent U_3O_8 and 2.387 percent V_2O_5 and an estimated gross value of $145,835.00, was calculated.

A shaft has been completed to the ore horizon and mining operations were in progress as of August 1956.

The DMEA Grand Junction office recommended a certification of discovery on June 13, 1956. Certification of discovery was made on July 16, 1956.

A Report of Review by the Contract Administration and Audit Division was made July 5, 1956. The total accepted cost was $34,636.85, and final payment was made on that basis bringing Government participation at 75 percent to $25,977.64.

It was concluded that exploration accomplished under the DMEA project had been adequate for the purpose of establishing the presence of significant amounts of ore in small, numerous but discontinuous deposits. Further drilling would have been in the nature of development. The operator accomplished a considerable amount of additional close-spaced drilling without Government assistance, but was able to block out only small additional reserves because of the erratic distribution of mineralization. It was also concluded that further drilling was not likely to

result in disclosure of more measured or indicated reserves, and development by underground methods was started. No additional exploration with Government assistance is recommended. Further exploration by the operator should probably be carried on by underground methods in conjunction with a mining operation.

LOCATION AND ACCESSIBILITY

The Bachelor group of claims consists of a block of six unpatented claims, mostly in San Miguel County, Colorado, but a corner of Bachelor No. 6 claim is in Montrose County. The claims lie in Bachelor Draw, a tributary of Bull Canyon, in Sec. 14, T. 45 N., R. 18 W., New Mexico Principal Meridian (fig. 1) and are reached by traveling southwest from Naturita, Colorado, over either of two routes: (1) 28 miles over graveled Colorado State Highway 90 and the Joe Dandy access road; or (2) over graveled Colorado State Highway 80 and the access road north over Monogram Mesa, a distance of 35 miles. Naturita is 151 miles over hard-surfaced highways from Grand Junction, Colorado, the nearest major source of supplies. There are no unusual problems of ore marketing, access, supply, labor, or housing in the area.

PROPERTY AND OWNERSHIP

The Bachelor group consists of 6 claims located by J. B. Moss, Jr., and Homer N. Rosenquist (fig. 2). The group was leased for a 10-year period beginning March 15, 1954, to Louis P. Gaggini who assigned the lease to W. A. Greer. The six claims were located on October 5, 1949, and recorded on December 2, 1949, on pages 518 to 521, Book 174, San Miguel County records, in Telluride, Colorado. Subsequent amended locations and assignments of ownership and leases appeared to be in

order. Portions of 5 junior locations, Radium Hill claim Nos. 38, 39 40, 41 and 42, overlapped part of the Bachelor claims, but the owner, Sabre Uranium Corporation, did not claim the area in conflict.

HISTORY

Mining for vanadium in the area date from pre-World War I days. Exploration and mining for uranium dates from the World War II period. A number of small and medium size deposits, within two miles of the Bachelor group, have been or are being mined. Individual ore bodies have as many as several hundred tons each, and the production from different mines has ranged from 80 to 7,000 tons with a content ranging from 0.20 to 0.34 percent U_3O_8 and 1.38 to 1.98 percent V_2O_5. Several mines, including the Rim Rock and Jack Knife, were in operation at the time of the field examination. Only two holes had been drilled on the Bachelor claims at that time, and no ore had been discovered on them or on any adjoining claims where limited amounts of drilling had been done. Before the DMEA project was approved, several more holes were drilled on the property to satisfy lease terms, and other holes were drilled by the Atomic Energy Commission which had undertaken a project in the area. Ore was found in several of these holes.

W. A. Greer did not explore the claims under the DMEA contract, but made an agreement with the Four Corners Exploration Company of Grants, New Mexico, and Grand Junction, Colorado, a partnership consisting of F. O. Manel and Irving Rapaport. Under the agreement Four Corners Exploration Company assumed full responsibility, technically and financially, for exploration and development of the Bachelor group. Operation of the project under this agreement, dated August 29, 1955, was not authorized

by the Government until November 1955. Payment of accepted claims for work accomplished up to that time was then authorized.

GEOLOGY

The Bachelor group of claims is located on the northeast flank of Gypsum Valley, a large Salt anticlinal structure, in Montrose County, Colorado. Sedimentary rocks of the Jurassic Morrison and Cretaceous Burro Canyon and Dakota formations crop out on, or near, the subject property. The rock strata dip about 2° to the northeast.

The Jurassic Morrison formation is divided into two members in the Bull Canyon mining district. The upper member is called the Brushy Basin member and the lower member is called the Salt Wash member. The Brushy Basin member is about 350 feet thick in the vicinity of the Bachelor group of claims. It consists mainly of varicolored mudstone and shale with minor amounts of interbedded conglomerate, fine-grained sandstone, and thin layers of limestone. In places in Bull Canyon, a few small isolated occurrences of mineralized material have been discovered; however, they are insignificant and the Brushy Basin member was not considered as an objective of the exploration program conducted on the Bachelor group of claims.

The Salt Wash member directly underlies the Brushy Basin member with a gradational contact that is very difficult to determine accurately. It is about 350 feet thick in the vicinity of the subject property, and consists mainly of fluviatile sandstones interbedded with minor amounts of mudstone. The sandstone occurs as ledges which are traceable for considerable distances along the outcrop. Actually, the ledges of sandstone are composed of a series of coalescing sandstone lenses, each lens

of sandstone being partly surrounded by mudstone. Generally the sandstone lenses contain several mudstone "splits", but in some places the entire thickness of the lens is made up of massive sandstone. In local areas within individual sandstone lenses, much carbonaceous material is present. The mudstone immediately underlying the sandstone lenses is normally red; however, in the vicinity of ore deposits the underlying mudstone is altered to gray or green to a depth which ranges from a few inches to as much as 5 or 10 feet. The texture of the sandstone varies from very fine-grained, almost quartzitic in places, to coarse-grained and locally conglomeratic, and its color varies from red through shades of brown and yellow to dark gray.

On the Bachelor group of claims the Salt Wash member is composed of five and possibly six sandstone ledges or "rims". Most of the known ore deposits in the Bull Canyon mining district occur in the upper series of coalescing sandstone lenses of the Salt Wash member. In the vicinity of the subject property this top series of coalescing sandstone lenses has been named the "Jack Knife sand", because of the nearby Jack Knife ore deposit found in that unit. Near the subject property the series of sandstone lenses underlying the "Jack Knife sand" has been numbered the "Third Rim" and some very small deposits have been found in it. However, all minable reserves in the vicinity of the subject property are believed to occur in the "Jack Knife sand" and it was the main objective of the exploration program.

The Cretaceous Burro Canyon formation is about 150-200 feet thick and overlies the Morrison formation. It consists mainly of conglomerate and coarse-grained sandstone interbedded with minor amounts of green mudstone. The Burro Canyon forms a prominent ledge around the high mesas of the area.

The Dakota formation overlies the Burro Canyon formation. It is composed of medium- to coarse-grained sandstone with minor amounts of green mudstone and low-rank coal. The Dakota formation has been eroded over much of the area and only a few small outcrops remain.

ORE DEPOSITS

Several small uranium ore deposits are known in the vicinity of the Bachelor group of claims, and these deposits tend to occur in clusters. Both oxidized and unoxidized ore deposits have been discovered in Bull Canyon; however, most of the ore deposits are highly oxidized.

The exploration program conducted on the Bachelor group of claims was successful, and discovered a small ore deposit on the Bachelor No. 3 claim (fig. 2). Figure 2 shows that the ore deposit has been localized along the south flank of an east-trending channel scour at the base of the "Jack Knife sand." Figure 3 is an isopachus map of the area showing how the ore deposit has been localized along the flank of the thicker axis of the channel scour, where the "Jack Knife sand" is thinning rapidly. A study of the geologic logs of the drill holes adjacent to and in the ore deposit reveals that a prominent green mudstone split is intimately associated with the ore deposit. Also a map of the thickness of altered green mudstone at the base of the "Jack Knife sand" reveals that the position of the ore deposit coincides with an area having the greatest thickness of green mudstone. The ore deposit also appears to be related to a local thinning of the mudstone interval between the "Jack Knife sand" and the underlying "Third Rim sand" unit. Possibly the thin mudstone interval represents a "puncture point" where fluids were exchanged between the two adjacent sand units. The physical

features of the host rock discussed above have been observed to be related to the spacial distribution of other ore deposits in the Bull Canyon Mining District, and are thought to be good guides to ore in that area.

Both oxidized and unoxidized ore minerals were discovered by drilling on the Bachelor group of claims. In the oxidized parts of the ore deposit, the ore consists mainly of carnotite with minor amounts of slightly oxidized vanadium minerals. The unoxidized ore is black and consists mainly of uraninite and montroseite with minor amounts of sulphides. Sparse amounts of $CaCO_3$ are associated with both the unoxidized and oxidized ore. Small amounts of gypsum are associated with the oxidized ore.

ORE RESERVES

The operator made an ore reserve estimate based on data from three DMEA drill holes, one Atomic Energy Commission drill hole, and four company holes in which DMEA did not participate (fig. 4). The estimate was very conservative. An elongation of individual deposits along a northwest axis was assumed from the probably habit of deposition. Actually, drilling was not on close enough centers to serve as a basis for a measured reserve calculation. The operator assumed the ore extended only 25 feet northwest or southeast of ore holes, and only 10 feet northeast or southwest of ore holes where adjoining holes were not of ore grade. A cutoff grade of 0.20 percent U_3O_8, and ore thickness of at least 2 feet was used. The estimate therefore does not take into account lower-grade material into which the ore may grade.

A calculation of ore reserves based on DMEA drilling alone is not attempted because no adjoining DMEA holes penetrated ore-grade material.

The known erratic distribution and lack of continuity in ore deposits in this area, as indicated by the fact that mineralization in adjoining holes is not always at the same stratigraphic level, preclude extension of ore limits beyond those defined by the operator, although it is recognized that there is an excellent possibility that mined ore may eventually exceed reserve tonnages by a substantial margin.

The operator's reserve calculations were based on eight ore holes, of which Nos. B-12, B-46 and B-47 were DMEA holes. There are four reserve blocks as shown in figure 4. The chemical analyses of drill core on which reserves were based are as follows:

Hole No.	Depth of Mineralization feet	Thickness of Mineralization feet	Content Percent U_3O_8	Content Percent V_2O_5
		Reserve Block I		
64	291.5-292.3	.8	0.11	1.56
	292.3-293.3	1.0	0.31	1.97
	300.0-301.0	1.0	0.17	.80
B-46	296.0-298.5	2.5	0.06	.19
	298.5-299.0	0.5	0.16	.38
	299.0-300.0	1.0	1.01	1.61
	300.0-301.0	1.0	0.99	4.10
	301.0-302.0	1.0	0.57	3.10
	302.0-305.0	3.0	0.35	3.07
	305.0-306.3	1.3	0.35	3.08
	306.3-306.9	0.6	0.07	0.44
61	298.5-301	2.5	0.13	1.66
68	296.0-296.5	0.5	0.06	0.18
	296.5-298.5	2.0	0.35	1.48
	298.5-299.5	1.0	0.15	0.11
		Reserve Block II		
B-47	291.5-292.0	0.5	0.04	0.19
	292.0-293.0	1.0	0.85	5.49
	293.0-294.0	1.0	1.28	8.10
82	272.0-274.0	2.0	0.28	2.05
		Reserve Block III		
B-12	271.3-274.3	1.0	0.88	5.19
	274.3-275.0	0.7	0.13	0.73

Hole No.	Depth of Mineralization feet	Thickness of Mineralization feet	Content Percent U_3O_8	Content Percent V_2O_5
		Reserve Block IV		
Z102	309 —309.5	0.5	0.29	1.71
	309.5—310.0	0.5	0.22	0.74
	310.0—311.0	1.0	0.24	1.94
	311.0—311.5	0.5	0.09	1.59

Reserves calculated from drill hole data:

Block	Tons	Percent U_3O_8	Percent V_2O_5
I	1,280	0.28	1.73
II	307	0.64	4.0
III	243	0.74	4.3
IV	52	0.22	1.5
Total	1,882	0.40	2.43

Development work done from the shaft sunk near hole No. B-12 has since exposed a pod of ore around the drill hole from which it has been possible to mine 75 tons of ore, compared to 243 tons in the calculated reserve. However this is not necessarily all the ore which will be found in the vicinity of hole No. B-12, because there is a thin stringer of ore exposed which will be followed and may lead to additional minable ore.

Development of Reserve block I has resulted in production of 400 tons of ore to date with a content of about 0.39 percent U_3O_8 and 2.00 percent V_2O_5. The block has not been completely developed as yet and is likely to produce at least the calculated reserve (1280 tons). Reserve block II has been opened up by a drift driven to the vicinity of hole No. B-47. A section of ore with an east west dimension of 50 feet was found in the floor of the workings, 8 feet lower than the ore in hole No. B-47. The east west dimension of the ore body is considerably more

than was assumed in making the reserve calculation which may therefore be too low. Several mineralized occurrences have been found in the workings which do not appear to bear any relation to mineralization found in drill holes and which may lead to hither to unknown ore bodies.

In summary, it appears that a justified reserve calculation based on drill holes on no less than 50 foot centers in an area of erratic and discontinuous deposition will result in a total which is likely to be wide of the mark.

THE PROJECT

The Bachelor claims were considered to be favorable for the occurrence of uranium ore on two counts. First, even though the results of a few drill holes had failed to penetrate sandstone lenses of favorable thickness, the claims were essentially unexplored. They were located along a mineralized trend that could be projected from the Rim Rock mine to the west. Second, there had been substantial total production from nearby mines in the Salt Wash horizon it was proposed to explore, although individual deposits had been small. The applicant had proposed a project requiring 26,730 feet of noncore and core drilling in 60 holes at an estimated cost of $112,809.60. Government participation at 75 percent would have been $84,607.20. This amount was excessive, in the opinion of the examining team, in view of the probable size of ore occurrences. At a field conference a revised program, approved by the applicant, was considered and made the basis for the project which was incorporated in Contract Idm-E791. Stage I consisted of a maximum of 4,500 feet of drilling in 12 holes on 300-foot centers northeast and southwest, and 1,000-foot centers southeast and northwest

(fig. 4). Stage II consisted of a maximum of 6,800 feet of drilling in 18 holes to explore favorable areas found in stage I. No stage II hole was to be closer than 100 feet to any previously drilled hole. Before work under the contract was started, narrow thicknesses of ore were found in hole No. Z-68 drilled by the Atomic Energy Commission on Bachelor No. 2 claim and in hole No. Z-102 on Bachelor No. 3 claim (fig.2). Because of this mineralization, the operator requested authorization to perform second stage drilling around holes other than stage I DMEA holes. As recommended by the Grand Junction DMEA office, Amendment No. 1, dated October 17, 1955, was made permitting offsetting of A.E.C. hole No. Z-102, inasmuch as not all of stage II footage was needed to offset stage I holes.

Stage I drilling resulted in discovery of sufficient mineralization to justify offsetting in two holes. Accordingly 4 holes were authorized and drilled around hole No. B-12, 3 around hole No. B-10, and 4 around A.E.C. hole No. Z-102. The work approval was dated September 26, 1955, and confirmed verbal approval given September 12, 1955.

The operator closely followed DMEA drilling with other offset holes, on as close as 50-foot centers, in an effort to block out ore but with indifferent success.

Based on the results of DMEA and company drilling, a thickened lense or channel of Salt Wash sediments was delineated trending northeast and southwest. This is demonstrated in an isopachus map (fig. 3).

The position of known ore on the flank of the channel suggested that further drilling along the unexplored flanks was justified. Accordingly, the operator requested authorization of 7 stage II holes, at sites on the probable position of the flanks of the channel. These were

authorized verbally on November 4, 1955, and confirmed in writing by the DMEA Field Team on November 29, 1955. Three holes were drilled prior to the authorized recess starting December 17, 1955, and ending March 31, 1956. The four remaining holes were drilled in April 1956.

Of the 18 stage II holes, three penetrated mineralized material of ore-grade and thickness, (more than 0.10 percent U_3O_8 over one foot thick) ten were mineralized, and five were barren as indicated by chemical analyses of cores and/or radiometric probing of holes. On the basis of sand thicknesses and presence of underlying green mudstone rather than mineralization alone, the operator classed 14 holes as favorable or semi-favorable.

Table I is a summary of drilling results.

The 12 stage I holes and 18 stage II holes were the maximums specified in the contract. Termination of the contract with Certification of Discovery was recommended by the Grand Junction DMEA office on June 13, 1956. The contract was terminated and Certification of Discovery issued on July 16, 1956.

The operator's narrative report for March-April 1956, included a complete analyses of the project and was accepted as a final report by the DMEA Field Team.

A Report of Review by the Contract Administration and Audit Division was submitted July 5, 1956. The total accepted cost was $34,636.85. Payments to the operator totaled 75 percent of this amount or $25,977.64.

It was established that small ore bodies of minable grade and thickness are present on the property. Even through considerable drilling on 50-foot centers in addition to DMEA drilling was accomplished, the operator was able to calculate only a small reserve in four small ore

bodies. Two of these were based on one ore hole each, one on two ore holes, and one on four holes (fig. 4). An elongation of individual deposits in a northwest-southeast direction was assumed. Thickness and grade of ore in the several ore holes was very erratic. It is the opinion of the examining team that no more than an inferred reserve is represented by the operator's calculations. An independent calculation of reserves has not been attempted in this report. The operator's figures are predicted on an assumption that mineralization is all in the same Salt Wash unit and that there is continuity of ore-grade mineralization between adjoining ore holes. Section prepared by the operator based on geologic logs from holes Nos. B-68, B-61, B-46 and B-46 indicate that mineralization in hole No. B-68 is higher in the section than that in holes No. B-46 and B-61; also, in a northeast direction, the ore body splits into two layers (Hole No. B-64). Even though discontinuity is indicated by these data, tonnage has been calculated as for a continuous ore body. On the other hand, the known habit of ore occurrences in this area is for numerous small bodies, and there are probably occurrences on the Bachelor claims to which no clue is given by exploration to date. None of these facts form a good basis for ore reserve calculations.

SUMMARY OF FACTUAL DATA

A summary of factual data is given in Table II.

TABLE II — SUMMARY OF FACTUAL DATA

Docket DMEA 3555, Contract Idm-E794, W. A. Greer (Four Corners Exploration Company)

Contract Item	Unit	Maximum Fixed Unit Cost	Claimed Units	Claimed Cost	Approved By Inspector Units	Approved By Inspector Cost	Contract Maximum Units	Contract Maximum Cost	Excess Claimed Over Contract Amount Units	Excess Claimed Over Contract Amount Cost
STAGE I										
Bulldozer moves	each	$50.00	3	$150.00	3	$150.00	2	$100.00	1 1/	$50.00
Bulldozer work	hour	12.00	80.33	910.00	80.33	910.00	48	576.00	32.67 2/	344.00
Noncore drilling	foot	2.70	2,497	6,741.90	2,497	6,741.90	2340	6,318.00	157 3/	333.90
Core drilling	foot	3.60	1,896.5	6,827.40	1,896.5	6,827.40	2160	7,776.00	—	—
Chemical analyses for U_3O_8 & V_2O_5	each	5.00	50	264.24	14	70.00	25	125.00	25	139.24 4/
Totals Stage I				$14,893.54		$14,699.30		$14,895.00		
STAGE II										
Bulldozer moves	each	$50.00	—	—	—	—	6	$300.00	—	—
Bulldozer work	hour	12.00	67	$737.00	67	$737.00	72	864.00	—	—
Noncore drilling	foot	2.70	3,736.5	10,088.55	3,736.5	10,088.55	3,560	9,612.00	176.5 5/	476.55
Core drilling	foot	3.60	2,565	9,234.00	2,565	9,234.00	3,240	11,664.00	—	—
Chemical analyses for U_3O_8 & V_2O_5	each	5.00	18	90.00	17	85.00	40	20.00		5.00 4/
Total Stage II				$20,149.55		$20,144.55		$22,640.00		
Total for Project				$35,043.09		$34,843.85		$37,535.00		
Disallowance by inspector		$199.24								
Additional disallowance by Field Team 2/		300.63								
		$499.87		$499.87		$300.63				
				$34,543.22		$34,543.22				
Allowed claim for bulldozing at maximum unit cost 3/				93.63		93.63				
Eligible for Payment				$34,636.85		$34,636.85				

Government participation at 75 percent——$25,977.64

Reimbursement to operator as per Report of Review——$25,977.64

TABLE II — (continued)

Overall cost of drilling per foot $\frac{\$34,636.85}{10,695} = \$3.24$

1/ Operator claimed 1 more bulldozer move in stage I than the allowable maximum of 2, but it was determined in the field that one bulldozer move should have been claimed under stage II.

2/ Operator claimed 80.33 hours bulldozing in stage I and 67 hours in stage II. The claim for stage I was for 32.33 hours more than the allowable maximum. It was established that the 32.33 hours should have been claimed under stage II but with the 67 hours originally claimed in stage II, the total claim would have been 99.33 hours. The excess of 27.33 hours in excess of the allowable maximum of 72 hours in stage II was therefore disallowed.

3/ The operator originally claimed payment for bulldozing at $11.00 and 11.33 per hour. The allowable fixed cost unit price for bulldozing in the contract was $12.00. The operator therefore made an additional claim, which was allowed, for $93.63, the difference between the cost of 120 hours of bulldozing at $12.00 per hour, or $1,440.00, and the amount previously allowed, $1,346.37.

4/ Claims for chemical analyses not supported by certified assay certificates were not allowed.

5/ Claims for noncore drilling in both stages were in excess of estimated amounts. However the allowable maximum footages and costs in each stage were for combined noncore and core footages, and these were not exceeded.

Exploration was carried on with two truck-mounted Failing "1500" drill rigs, equipped for either dry or wet, noncore or core drilling. The equipment, which included two pickup trucks and a water truck, was furnished by Four Corners Exploration Company. All was adequate for the work required.

Core recovery was excellent throughout the project. Holes were probed radiometrically by the operator, and 22 out of 30 holes were probed by the Gamma-ray unit of the Geological Survey. Results reported by the operator were substantiated.

DISCUSSION OF CONCLUSIONS

Performance under the supervision of Forrest Fincher, field superintendent and geologist for Four Corners Exploration Company, was excellent. Experienced drill crews were used, and satisfactory core recovery and drilling performance resulted. Technical supervision by Mr. Finch was also satisfactory. Progress in the last 30 days of operation in 1955 was poor. An effort was made to complete the project drilling before closing down for the winter and, as a result, it was continued three or four weeks longer than was advisable. Difficulty with engine starting, frozen grease, cooling water and drilling water, and failure of machinery parts were experienced under low-temperature conditions.

Results of exploration showed rather conclusively that it is perhaps impossible and certainly uneconomical to block out any measured, or even indicated, reserves by means of development drilling on centers as close as 50 feet. The operator drilled a total of 76 holes including 30 DMEA holes at an estimated cost of $90,000.00 in an attempt to develop indicated

reserves which would justify further development by a shaft operation. The effort was unsuccessful. It was finally decided that a shaft would be sunk anyway, on the assumption that experience in nearby mines has indicated that total production is likely to exceed the ore which can be blocked out by a large enough margin to justify the development costs.

TABLE 1. - Summary of drilling under Docket DMEA 3555, Contract Idm-E791, W. A. Greer (Four Corners Exploration Co.)

Hole No. "B" prefix omitted	Elev. of collar (feet)	Non-core depth (feet)	Core depth (feet)	Total depth in feet: By geol. log	Total depth in feet: By drillers log	Total depth in feet: By USGS radiometric log	MINERALIZATION IN CORE: Depth in feet: From	To	Thickness	Chemical analyses: percent U_3O_8	Chemical analyses: percent V_2O_5	PROBING BY OPERATOR: Depth in feet: From	To	Percent eU_3O_8	PROBING BY GEOLOGICAL SURVEY: Depth in feet: From	To	Percent eU_3O_8	PROBING BY A.E.C. UNIT: Depth feet	Counts Per Second	CLASSIFICATION OF HOLE BY OPERATOR[4]
STAGE I																				
2	6771	193.0	202.0	395.0	395.0		308.0	309.7	1.7	0.03-0.07	0.05									Mineralized
3	--	268.5	123.5	392.0	392.0		Barren													Favorable
5	6790	230.0	149.0	380.0	380.0[1]		Barren													Unfavorable
6	6804	231.0	155.0	386.0	386.0	384.0	Barren													Favorable
7	6800	200.0	184.0	384.0	384.0		272.6	273.5	0.9	0.08-0.22	0.73				274.1	275.4	0.08			Mineralized
8	6792	210.0	132.5	342.5	342.5	351.0	Barren						nil		Barren					Favorable
9	6715	169.0	174.0	343.0	343.0	328.0[2]	Barren						nil		Barren					Favorable
10	6726	163.0	183.5	346.5	346.5	346.5	333.8	334.5	0.7	0.16	0.05				335.0	337.0	0.21			Low grade ore
							334.5	336.6	2.1	0.12	0.07									
11	6741	190.0	162.5	352.5	352.5	352.5									251.3	252.1	0.011	252.0	700	Mineralized (?)
12	6775	242.5	118.5	361.0	361.0	350.0[2]	264.6	271.3	5.7	0.03-0.05	0.38				270.7	273.2	0.074			Ore
							271.3	274.3	3.0	0.88	5.19									
							274.3	275.0	0.7	0.03-0.13	0.45									
13	6768	185.0	155.0	340.0	340.0		313.0	313.5	0.5	0.08	0.13									Mineralized
14	6813	215.0	157.0	372.0	372.0	367.0[2]	Barren								Barren					Favorable
STAGE II																				
41	6755	206.5	149.5	356.0	356.0							336.0	337.0	0.03-0.05	337.9	338.5	0.06	336.0	1100	--- Favorable
42	6765	198.5	152.0	350.5	350.5		Barren						nil		254.0	321.8	<0.01[5]			Favorable
43	6774	222.5	141.5	364.0	364.0		Barren					282.0		0.04				283.0	1900	Highly favorable
												282.5	284.0	0.08-0.09	336.7	337.6	0.04			
44	6766	214.0	146.0	360.0	360.0		Barren						nil		306.9	353.0	<0.01			Favorable
46	6794	231.0	148.0	379.0	379.0		296.0	297.5	1.5	0.05	0.18	277.0	280.5	0.06-0.09	292.2	293.9	0.046			Ore
							297.5	298.5	1.0	0.08	0.20	281.0	297.0	0.10-0.15[3]	295.9	297.2	1.00			
							298.5	299.0	0.5	0.16	0.38	298.0	306.0	0.15-0.80	297.2	299.8	0.27			
							299.0	300.0	1.0	1.01	1.61	306.5	308.0	0.07-0.10	299.8	300.9	0.55			
							300.0	301.0	1.0	0.99	4.43									
							301.0	302.0	1.0	0.57	3.10									
							302.0	305.0	3.0	0.35	3.07									
							305.0	306.3	1.3	0.35	3.08									
							306.3	306.9	0.3	0.07	0.44									

TABLE 1. - (Continued)

Hole No. "B" prefix omitted	Elev. of collar (feet)	Non-core depth (feet)	Core depth (feet)	Total depth in feet: By geol. log	By drillers log	By USGS radiometric log	MINERALIZATION IN CORE: Depth in feet: From	To	Thickness	Chemical analyses: percent U_3O_8	percent V_2O_5	PROBING BY OPERATOR: Depth in feet: From	To	Percent eU_3O_8	PROBING BY GEOLOGICAL SURVEY: Depth in feet: From	To	Percent eU_3O_8	PROBING BY A.E.C. UNIT: Depth feet	Counts Per Second	CLASSIFICATION OF HOLE BY OPERATOR 4/
47	6775	221.5	146.5	368.0	368.0		291.5	292.0	0.5	0.04	0.19	0	289.0	0.03-0.05 3/						Ore
							292.0	293.0	1.0	0.95	5.49	290.0	292.0	0.08-0.11						
							293.0	294.0	1.0	1.28	8.10	292.5	296.0	0.16-0.82						
							294.0	295.0	1.0	Tr.		296.5	298.0	0.06-0.09						
												298.0	344.0	0.04-0.05 3/						
												344.0	348.0	0.10-0.22						
48	6795	222.5	166.0	388.5	388.5	388.5	[illegible]					276.0	277.0	0.07-0.08	275.2	276.1	0.08	276.0	1700	Highly favorable
												294.5		0.10	292.8	293.5	0.14	294.0	2300	
50	6781	232.0	138.0	370.0	370.0	370.0						283.5	284.0	0.06-0.07	258.6	260.0	0.032			Highly favorable
															264.4	266.1	0.03			
															271.2	272.0	0.074	282.5	1300	
55	6720	191.5	143.5	335.0		335.0						325.0		0.02-0.03	322.8	323.5	0.026	324.5	600	Semi-favorable
56	6738	201.5	139.0	340.5	340.5	340.5		Barren				nil			261.7	339.0	<0.013			Semi-favorable
57	674●	201.5	144.5	346.0	346.0			Barren				nil								Semi-favorable
71	6780	200.5	142.0	342.5	342.5		326.8	328.0	1.2	0.17	0.80									Highly mineralized
							328.0	330.0	2.5	0.03	0.11									
74	--	210.0	143.5	353.5	353.5	353.5						[illegible]		[illegible]	333.5	334.4	0.023			
												329.5		0.03	336.8	337.8	0.032	338.0	775	Semi-favorable
															346.0	346.7	0.047			
												338.0	338.5	0.03						
76	6740	207.0	128.0	335.0	335.0	338.0						257.5		0.05	257.4	258.0	0.31	257.0	2400	Mineralized
												258.0		0.14	318.0	318.8	0.09	318.5	1500	
												319.0	319.5	0.04-0.07	319.5	320.2	0.10			
70	6807	247.0	122.0	369.0	369.0	369.0	331.5	332.0	0.5	0.05	nil									Mineralized
												329.0		0.06	329.0	329.9	0.047			
							352.8	353.9	1.1	0.01	0.17									
72	6745	177.0	140.0	317.0	317.0	317.3	307.0	307.9	0.9	0.12	0.06	307.0		0.12	304.9	305.9	0.13			Mineralized
															305.9	307.5	0.025			
73	6743	195.0	133.0	328.0	328.0	330.0						319.0	319.5	0.05	316.8	317.8	0.032			Barren
75	6721	157.0	142.0	299.0	299.0	302.0	280.5	281.0	0.05	0.11	0.36	280.5	281.0	0.105	277.6	278.6	0.064			Mineralized
Totals		6,233.5	4461.5	10,696.0																
Total claimed		6,233.5	4461.5	10,695.0																

1/Depth claimed was 279 feet.

2/Hole was blocked at this depth or higher when logged by U.S.G.S. Gamma-ray unit

3/Radiometric reading by probe may have been caused by radon gas.

4/A.E.C. classification of drill holes:
Less than 0.02 percent U_3O_8 or 0.1 percent V_2O_5 - barren (may be favorable if rock units and alteration indicate)
0.02 percent U_3O_8 or 0.1 percent V_2O_5 and up to 0.10 percent U_3O_8 and 1.00 percent V_2O_5- mineralized
0.10 percent U_3O_8 or 1.00 percent V_2O_5 in thickness of more than 1 foot - ore

5/ < "less than"

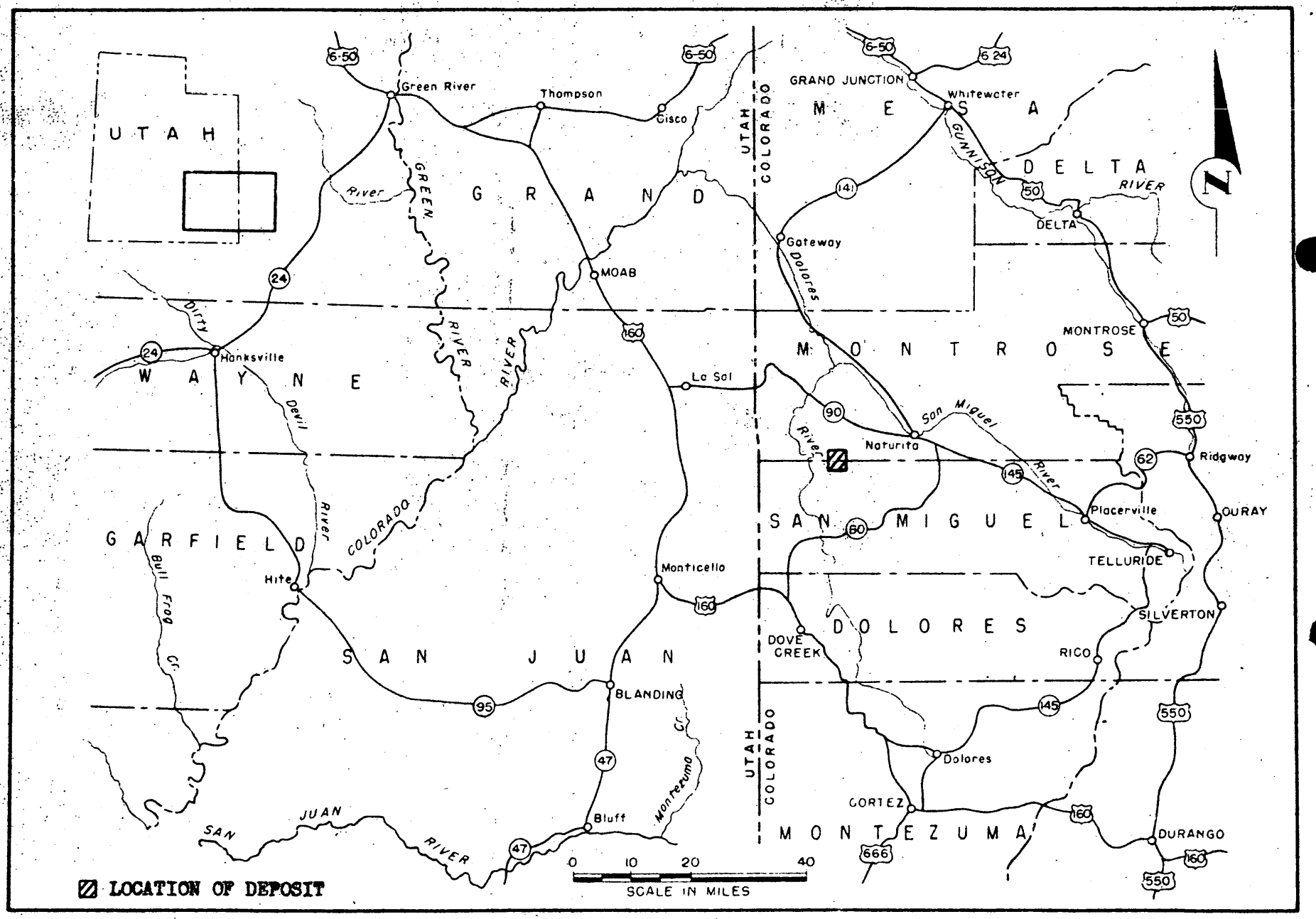
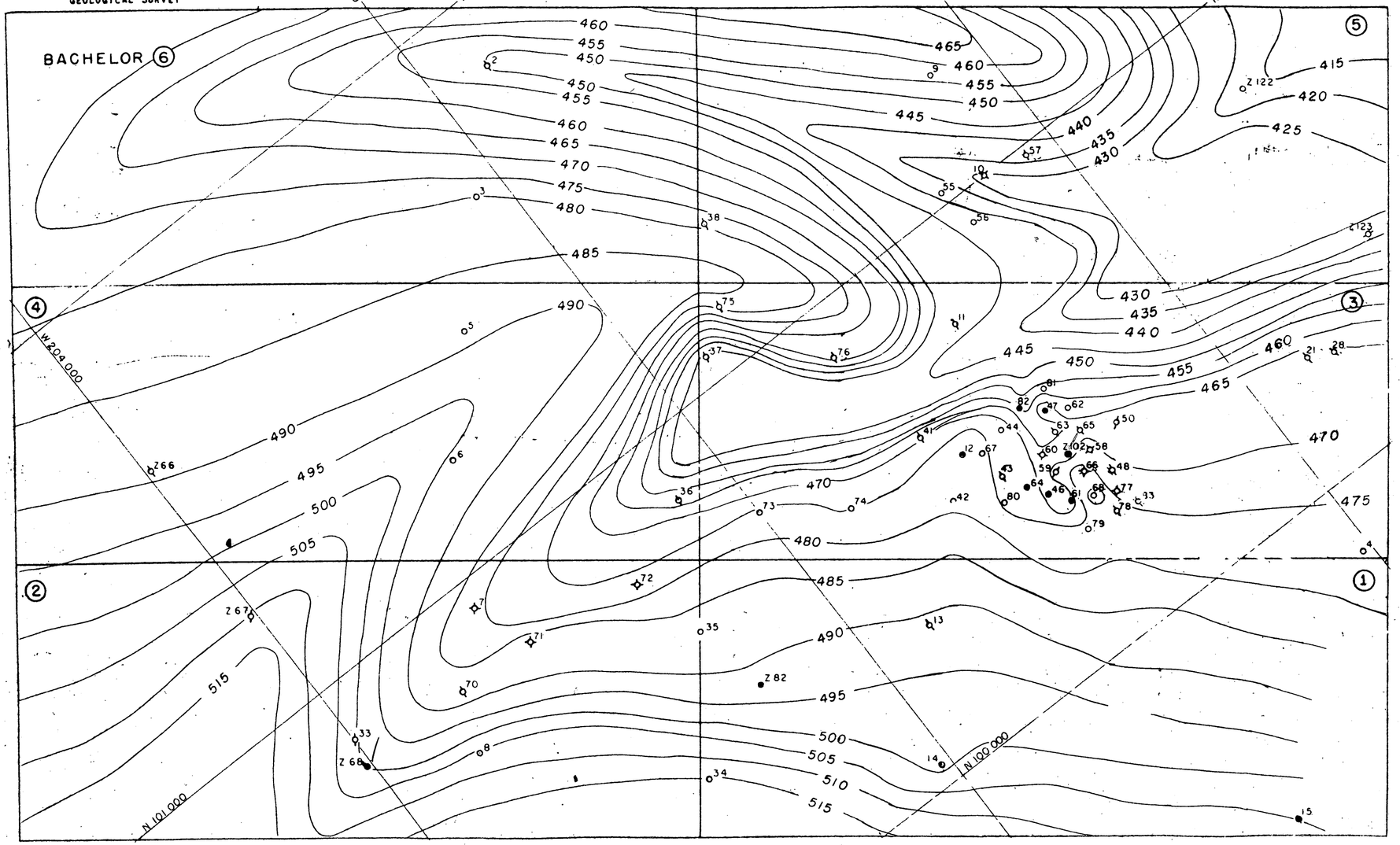


FIGURE 1 - LOCATION MAP, BACHELOR GROUP, W. A. GREER, SAN MIGUEL AND MONTROSE COUNTIES, COLO. (DMRA 3555)

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



DEFENSE MINERALS EXPLORATION ADMINISTRATION
AUGUST 1956 DOCKET 3555

EXPLANATION

—415— STRUCTURE CONTOUR DRAWN ON BASE OF "JACK KNIFE SAND". CONTOUR INTERVAL 5 FEET. ALL ELEVATIONS ARE PLUS 6000 FEET. DATUM IS MEAN SEA LEVEL

DRILL HOLES. (Z-PREFIX IS HOLE DRILLED BY U.S. ATOMIC ENERGY COMMISSION. ALL OTHERS DRILLED BY FOUR CORNERS EXPLORATION COMPANY.)

● ORE HOLE (CONTAINS MORE THAN 2.0 FEET OF 0.20% U_3O_8 OR BETTER)

✧ MINERALIZED HOLE (CONTAINS MORE THAN 0.10% U_3O_8 BUT LESS THAN 0.20% U_3O_8)

✡ WEAKLY MINERALIZED HOLE (CONTAINS MORE THAN 0.02% U_3O_8 BUT LESS THAN 0.10% U_3O_8)

○ BARREN

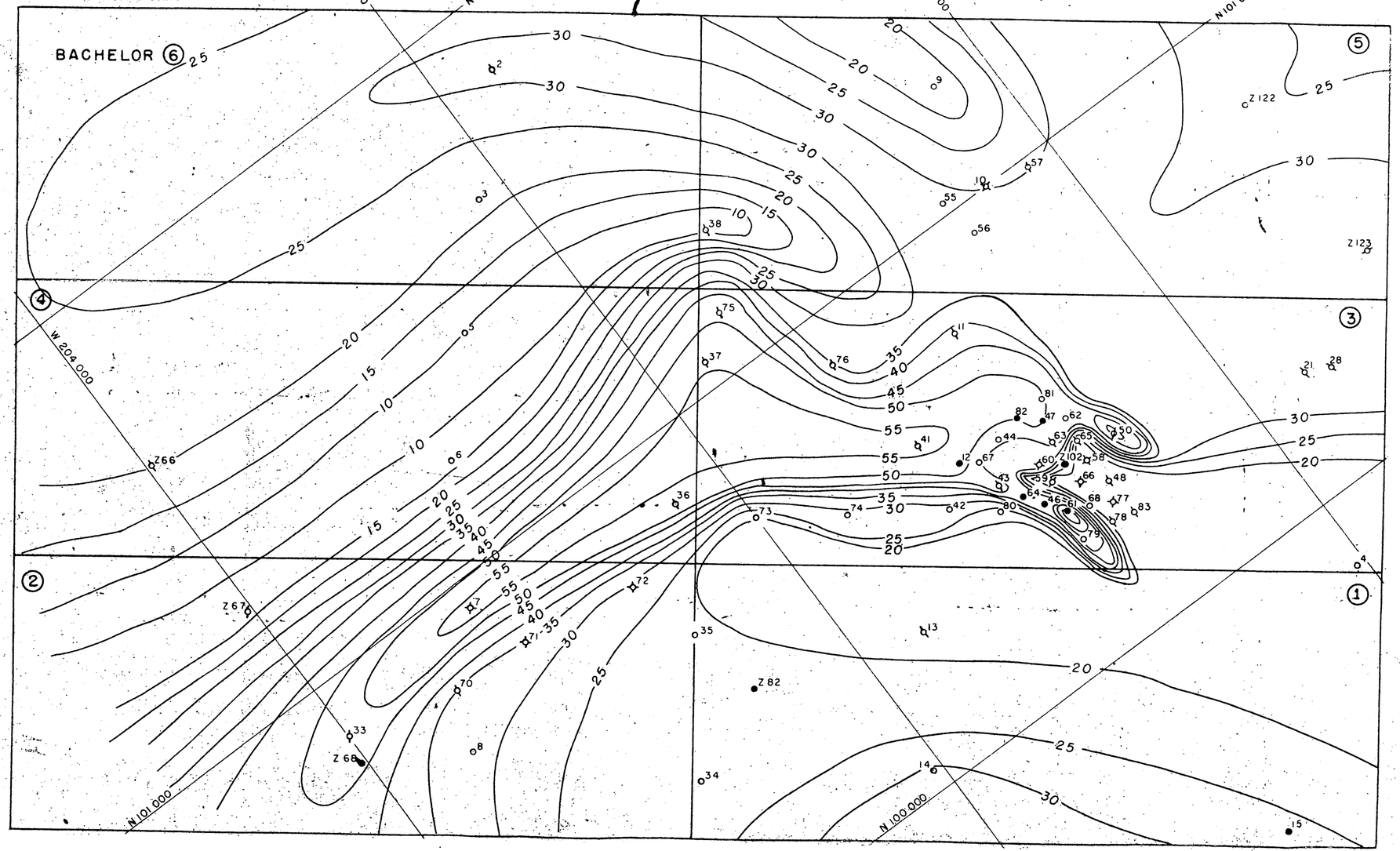
Note: COORDINATES, CLAIM BOUNDARIES, AND HOLE LOCATION FROM APPLICANTS MAP.

GEOLOGY BY CARL H. ROACH, U.S.G.S.

200 0 400 FEET

FIGURE 2.--MAP SHOWING STRUCTURE CONTOURS ON THE BASE OF THE "JACK KNIFE SAND", BACHELOR GROUP OF CLAIMS, FOUR CORNERS EXPLORATION COMPANY, MONTROSE COUNTY, COLORADO.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



DEFENSE MINERALS EXPLORATION ADMINISTRATION
AUGUST 1956
DOCKET 3555

N

EXPLANATION

10 — ISOPACH LINE SHOWING THICKNESS OF "JACK KNIFE SAND" IN FEET. ISOPACH INTERVAL 5 FEET.

DRILL HOLES (-PREFIX IS HOLE DRILLED BY U.S. ATOMIC ENERGY COMMISSION. ALL OTHERS DRILLED BY FOUR CORNERS EXPLORATION COMPANY.)

● ORE BEARING (CONTAINS MORE THAN 2.0 FEET OF 0.20% U_3O_8 OR BETTER.)

✧ MINERALIZED (CONTAINS MORE THAN 0.10% U_3O_8 BUT LESS THAN 0.20% U_3O_8.)

α WEAKLY MINERALIZED (CONTAINS MORE THAN 0.02% U_3O_8 BUT LESS THAN 0.10% U_3O_8.)

Note: COORDINATES, CLAIM BOUNDARIES, AND HOLE LOCATION FROM APPLICANTS MAP.

GEOLOGY BY CARL H. ROACH U.S.G.S.

200 0 400 FEET

FIGURE 3.--MAP SHOWING THICKNESS OF THE "JACK KNIFE SAND", BACHELOR GROUP OF CLAIMS, FOUR CORNERS EXPLORATION COMPANY, MONTROSE COUNTY, COLORADO.

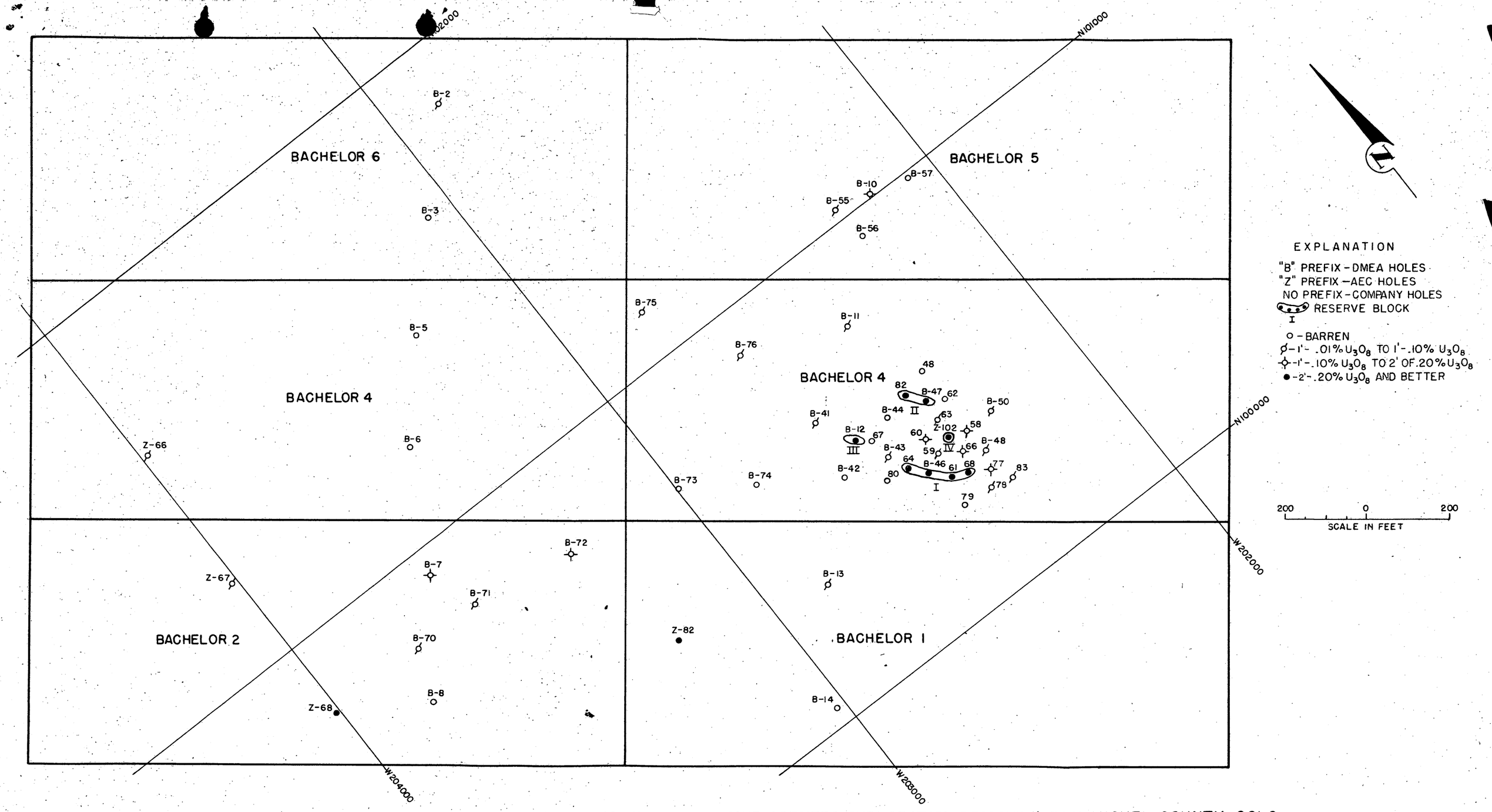


FIGURE 4 - ORE RESERVES AND DRILL HOLES, BACHELOR CLAIMS, W. A. GREER (FOUR CORNERS EXPLORATION COMPANY), SAN MIGUEL COUNTY, COLO.
DMEA 3555, CONTRACT Idm-E 791

12-14-56

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

RECEIVED DEC 18 1956

224 New Customhouse
Denver 2, Colorado

December 11, 1956

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims) Montrose and San Miguel Counties, Colo.

Dear Mr. Greer:

Enclosed is one photocopy of a letter dated November 14, 1956 for which we have not received your reply.

Subsequent to November 14, single copies of other settlement sheets have been received. You are again urged to remind your purchaser to submit four (4) copies of the required material.

Yours very truly,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enclosure

MHM/vj

cc: Royalty File E791
Corres. File E791
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

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

224 New Customhouse
Denver 2, Colorado

November 16, 1956

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims) Montrose and San Miguel Counties, Colo.

Dear Mr. Greer:

To bring our royalty files current, you are requested to submit an original and six (6) copies of a statement regarding your status of eligibility to receive AEC bonus payments for production of the first 10,000 lbs of U_3O_8 from land subordinated to the Government by the terms of Contract Idm-E791.

Yours very truly,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E791
Corres. File E791
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

RECEIVED
NOV 19 1956
L. W. E.A.

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

224 New Customhouse
Denver 2, Colorado

November 14, 1956

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: Docket DMEA 3555 (Uranium), Contract Idm-E971, W. A. Greer (Bachelor Claims) Montrose and San Miguel Counties, Colo.

Dear Mr. Greer:

In reply to our request of October 4, 1956, a letter dated November 13, 1956 has been received from Mr. C. T. Langlais of Four Corners Exploration Company, which submitted one copy of the load detail for Liquidation Nos. 6791, 6763 & 6806. Not mentioned in our letter of October 4, but mentioned in our previous letter of August 30, is the statement that this office requires four (4) copies of all evidence of sales which include settlement sheets and load details when appropriate. To facilitate full report of production covered by Liquidation Nos. 6763, 6791 & 6806, our office will this time reproduce copies to meet our requirements. You are urged to remind your purchasers to submit four (4) copies of the required material.

Review of our files indicate no reply has been received to our letter of November 8, 1956. It is imperative for us to receive the needed additional copies requested, as the copy at hand is only partially legible.

Today we have received check No. 8257 issued by Vanadium Corporation of America, Durango, Colorado for $35.07 as royalty on production covered by settlement sheet dated October 28 - October 31, 1956, on Lots 77553 and 77582. One settlement sheet was enclosed, three more are requested.

Yours very truly,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

RECEIVED
NOV 19 1956

MHM/vj
cc: Royalty File E791
Corres. File E791
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

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

224 New Customhouse
Denver 2, Colorado

November 8, 1956

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims) Montrose and San Miguel Counties, Colo.

Dear Mr. Greer:

We have received check No. 8207 in the amount of $497.76, issued by Vanadium Corporation of America as royalty on production covered by Lot No. 77470.

Only one copy of the settlement sheet with accompanying load detail was received as evidence of sale for this production. Our requirements are four (4) copies of both settlement sheet and load detail sheet; therefore, please submit the needed additional copies of this material to this office within the near future.

Yours very truly,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E791
Corres. File E791
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

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

224 New Customhouse
Denver 2, Colorado

November 1, 1956

RECEIVED NOV 5 1956 DMEA

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, N. M.

Re: Docket No. DMEA-3555 (Uranium)
Contract No. I&m-E791
W. A. Greer (Bachelor Claims)
Montrose & San Miguel Cds., Colo.

Dear Mr. Greer:

Enclosed is a photocopy of a letter dated October 4, 1956, for which we have not received your reply.

Please give this matter your immediate attention.

Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enc.

MHM:bh

cc-Royalty File E-791
Corres. File E-791
Sec. Op. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

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

RECEIVED
OCT - 8 1956

224 New Customhouse
Denver 2, Colorado

October 4, 1956

Mr. W. A. Greer
502 Alisa Drive
Albuquerque, N. M.

Re: Docket DMEA-3555 (Uranium) Contract Idm-E791
W. A. Greer (Bachelor Claims)
Montrose and San Miguel Counties, Colorado

Dear Mr. Greer:

Subsequent to our letter dated August 30, 1956, we have received settlement sheets unaccompanied by the required load detail for Liquidation No. 6808, dated September 5, 1956, made by Union Carbide Nuclear Company, Grand Junction, Colorado.

To bring our records to date, we would appreciate your submitting a copy of the load detail sheet which accompanied this liquidation number, in addition to the load detail sheets which accompanied Liquidation Nos. 6763 and 6791, requested by our letter of August 30.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MM:bh
cc-Sec. Op. Comm. (2)
J. F. Shaw (2)
Corres. File E-791
Royalty File E-791
Marshall
Chron.

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

RECEIVED
SEP - 4 1956

224 New Customhouse
Denver 2, Colorado

August 30, 1956

Mr. W. A. Greer
502 Aliso Drive
Albuquerque, New Mexico

Re: Royalty payments, Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims), Montrose and San Miguel Counties, Colorado

Dear Mr. Greer:

We have received royalties in the amount of $184.16 on production covered by the following settlement sheets:

Liq. No. 2619 dated July 19, 1956, Purchaser: Climax Uranium Company
Liq. No. 6763 dated Aug. 2, 1956, Purchaser: United States Vanadium Company
Liq. No. 6791 dated Aug. 22, 1956, Purchaser: Union Carbide Nuclear Company

We note in two instances (Liquidation Nos. 6763 and 6791), settlement was computed covering a series of individual shipments. The purchaser in each case has submitted only one copy of the settlement sheet and no load detail. Our requirements are four (4) copies of each settlement sheet with four (4) copies of a load detail sheet when settlement is made with one settlement sheet covering a series of individual shipments.

You are accordingly requested to instruct your purchasers to furnish us the required number of settlement sheets and load detail sheets when settlement is made on the previously stated basis.

The load detail sheet must show the dry weight and assay of each shipment, which in turn assures the Operator and the Government of accurany and serves as a permanent record which may be subjected to inspection in the future.

In order to bring our records to date, we would appreciate your submitting a copy of the load detail sheets which accompanied Liquidation Nos. 6763 and 6791. We will reproduce the prescribed number for our requirements and return your copy by certified mail.

Yours very truly,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E791
Corres. File E791
S c. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

FILE COPY
Surname:
Chung
Fitton
Hunter
Chandler
Paone
Geehan
Kilsgaard
Selfridge
Henderson

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

JUL 17 1956

Mr. W. A. Grover
[illegible] Alice Drive
Albuquerque, New Mexico

Re: Docket No. [illegible]-355[illegible] (uranium)
Contract No. [illegible]
Reminder Claim
Mesaverde Area
San Miguel County, Colorado

Dear Mr. Grover:

Enclosed is a "Certification by the United States of America of a Discovery or Development Under an Exploration Project Contract." This certification covers all the land described in Article 2 of the subject contract.

By the terms of the Exploration Project Contract, as amended, and of the certification, all uranium and other valuable minerals produced from the claims described in Article 2 of the contract, from April 26, 1955, the date of the contract, are subject to the Government's percentage royalty as set forth in the contract until the sum which the Government has advanced on its participating interest is repaid, or until April 26, 1965, whichever occurs first.

Payments should be made to Mr. W. [illegible] Trever, Executive Officer, [illegible] Field Team, Region III, 7th Floor Customhouse Building, Denver 2, Colorado. Checks should be payable to the Defense Minerals Exploration Administration. The purchaser should be advised to deduct the royalties from the amount due on each shipment and forward the check directly to the Executive Officer. Any bonus payments or allowances received by you from the sale of ore are considered to be a part of the purchase price to which the Government's royalty applies. Royalty payments to the Government should be accompanied by written evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charges, certified to be correct by the purchaser.

You are requested to notify Mr. Trever of any changes in ownership or production rights that might have any effect on the Government's right to its percentage royalty. Also, if production

R.E.H.

ceases at any time for an extended period, please notify Mr. Traver at six-month intervals that no production has been made, when that is the case.

Sincerely yours,

G. O. Mittendorf

Administrator

Enclosure

MChing/gla/iam 7-10-56

cc to: Four Corners Exploration Co.
205 Petroleum Bldg.
Grand Junction, Colorado
Louis P. Gaggini, Geo-Engineering
304 Min Street
Grand Junction, Colorado
Homer N. Rosenquist
Naturita, County of Montrose, Colorado
Admr.'s Reading File
Operating Committee
Robert W. Geehan, Rm. 3608
T. H. Kiilsgaard, Rm. 5224
DMEA Field Team, Reg. III (2)
Docket
Rare and Mise. Metals Div.
Contract Adm. & Audit Div.
F. E. Johnson
Mr. Ching

700

FILE COPY

Surname:
Chrand
Elliot
Chandler
Lane
Sehen
~~Blessed~~
Lefrodge
Johnson

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

JUL 17 1956

Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-E791
W. A. Greer
Bachelor Claims
Montrose and
San Miguel Counties, Colorado

Gentlemen:

For your information, a certification of discovery or development has been issued to the Operator as a result of the exploration program under the above-referenced contract.

The property as set forth in the contract is included in the property referred to in the Operating Agreement, dated August 29, 1955, and Supplementary Agreement of the same date, between W. A. Greer and Bertha Greer and Four Corners Exploration Company.

We are enclosing the following for your records:

1. A copy of a "Certification by the United States of America of a Discovery or Development Under an Exploration Project Contract."

2. A copy of the transmittal letter to Mr. W. A. Greer, 502 Aliso Drive, Albuquerque, New Mexico.

Sincerely yours,

G. O. Mittendorf (for)

Administrator

Enclosures
MChing/gla/izm 7-10-56
cc to: Admr.'s Reading File
Operating Committee
Robert W. Geehan, Rm. 3608
T. H. Kiilsgaard, Rm. 5224
DMEA Field Team, Reg. III (2)
Docket
Rare & Misc. Metals Div.
Contract Adm. & Audit Div.
Mr. F. E. Johnson
Mr. Ching

F.C.S.

rname copy

700

Ching
Ellis
Chambers
Paone
Geehan
Kiilsgaard
Selfridge
Johnson

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

JUL 17 1956

Mr. Louis P. Gaggini
Geo-Engineering
304 Main Street
Grand Junction, Colorado

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-E791
W. A. Greer
Bachelor Claims
Montrose and
San Miguel Counties, Colorado

Dear Mr. Gaggini:

For your information, a certification of discovery or development has been issued to the Operator as a result of the exploration program under the above-referenced contract.

The property as set forth in the contract is the same property referred to in the Subordination Agreement, dated June 27, 1955, which was signed by you.

We are enclosing the following for your records:

1. A copy of a "Certification by the United States of America of a Discovery or Development Under an Exploration Project Contract."

2. A copy of the transmittal letter to Mr. W. A. Greer, 502 Alise Drive, Albuquerque, New Mexico.

Sincerely yours,

G. O. Mittendorf (fw)

Administrator

Enclosures

MChing/ai 7-10-56
cc to: Admr.'s Reading File
Operating Committee
Robert W. Geehan, Rm. 3608
T. H. Kiilsgaard, Rm. 5224
DMEA Field Team, Region III (2)
Docket
Rare and Misc. Metals Division
Contract Adm. & Audit Division
F. E. Johnson
Mr. Ching

RCS

700

Surname copy

Ching
Chambers
Pace
Geehan
Kiilsgaard
Selfridge
Johnson

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

JUL 17 1956

Mr. Homer N. Rosenquist
Naturita
County of Montrose
Colorado

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-E791
W. A. Greer
Bachelor Claims
Montrose and
San Miguel Counties, Colorado

Dear Mr. Rosenquist:

For your information, a certification of discovery or development has been issued to the Operator as a result of the exploration program under the above-referenced contract.

The property as set forth in the contract is the same property referred to in the Owner's Consent to Lien, dated June 29, 1955, which was signed by you.

We are enclosing the following for your records:

1. A copy of a "Certification by the United States of America of a Discovery or Development Under an Exploration Project Contract."

2. A copy of the transmittal letter to Mr. W. A. Greer, 502 Alice Drive, Albuquerque, New Mexico.

Sincerely yours,

G. O. Mittendorf

Administrator

Enclosure

MChing/ai 7-10-56
cc to: Admr.'s Reading File
Operating Committee
Robert W. Geehan, Rm. 3608
T. H. Kiilsgaard, Rm. 5224
DMEA Field Team, Region III (2)
Docket
Rare & Misc. MetalsDivision
Contract Adm. & Audit Division
F. E. Johnson
Mr. Ching

R.C.S.

Ching

6/28/56

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

RECEIVED
JUN 28 1956

224 New Customhouse
Denver 2, Colorado

June 26, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Gamma-ray log interpretations

Enclosed are four copies each of gamma-ray log interpretations for the following DMEA contracts.

Docket DMEA-3555, Contract Idm-E791, Four Corners Exploration Co., San Miguel and Montrose Counties, Colorado

Docket DMEA-3868, Contract Idm-E906, LaSalle Mining Co., San Juan County, Utah

Docket DMEA-3962, Contract Idm-E928, Norbute Mining Co., Grand County, Utah

W. M. Traver

W. M. Traver

Enclosures

Four Corners Exploration
Bachelor Draw
DMEA DOCKET NO. 3555

DMEA
Date Rec'd.

JUN 25 1956

BUREAU OF MINES
Denver, Colorado

RECEIVED
JUN 28 1956

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_eU_3O_8$	Remarks
B-70	369.0	None	195.5-363.7	316.7 - 318.0	1.3	410			<0.010	
				329.0 - 329.9	0.9	1,700			0.047	
				332.8 - 336.2	3.4	210			<0.005	
				349.0 - 350.0	1.0	540			0.015	
				354.6 - 355.6	1.0	360			<0.010	
B-72	317.3	None	146.5-314.6	264.2 - 266.2	2.0	240			<0.005	
				278.8 - 282.1	3.3	600			0.013	
				285.5 - 286.5	1.0	200			<0.005	
				296.0 - 297.3	1.3	840			0.023	
				298.3 - 302.3	4.0	200			<0.005	
				304.9 - 305.9	1.0	3,600			0.13	
				305.9 - 307.5	1.6	1,200			0.025	
				307.4 - 309.0	1.6	800			0.018	
				309.0 - 309.9	0.9	500			0.014	
B-73	330.0	None	179.8-324.3	285.9 - 287.4	1.5	880			0.023	
				287.4 - 288.6	1.2	360			<0.010	
				289.8 - 291.0	1.2	580			0.015	
				306.2 - 308.2	2.0	270			<0.005	
				309.9 - 311.1	1.2	310			<0.010	
				313.4 - 316.8	3.4	380			<0.010	
				316.8 - 317.8	1.0	1,300			0.032	
				319.3 - 320.5	1.2	420			<0.010	
B-75	302.0	None	174.2-302.0	249.7 - 252.1	2.4	300			<0.010	
				273.4 - 274.6	1.2	260			<0.005	
				277.6 - 278.6	1.0	2,200			0.064	
				279.5 - 280.4	0.9	340			<0.010	
				280.4 - 284.4	4.0	500			<0.010	
				284.4 - 285.2	0.8	640			0.021	

* From top to bottom depths

3555

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT
Date 6-20

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. ~~Docket Control Mails and Files~~
5. ~~Div. Adm. Ass't~~ ~~Division~~
6. Docket Control Mails and Files

Note comments in report regarding:

1. Certification recommended
2.
3. Tentative ore reserve data
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Certification of discovery in preparation (drafted) 7/6/56 M. Ching per glw

Robert E. Adams

6/20/56
a.9

RECEIVED
JUN 20 1956

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

224 New Customhouse
Denver 2, Colorado

June 18, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims), San Miguel and Montrose Counties, Colorado

Enclosed are the original and three copies of a joint memorandum dated June 13, 1956, from J. William Hasler, Geologist, Geological Survey, and M. H. Salsbury, Mining Engineer, Bureau of Mines. The Field Examiners recommend that the subject project be certified as a discovery or development resulting in part from the exploration work performed under subject contract, in which this office concurs.

The Operator's final accounting report has been received today and will be processed, withholding a nominal sum pending resolution of all matters relative to closing the account.

W. M. Traver

W. M. Traver

Encl.

W.O.

MINERAL DEPOSITS
DMEA REFER TO:
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JUN 14 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

RECEIVED
JUN 20 1956

DMEA
Date Rec'd.
JUN 18 1956
BUREAU OF MINES
Denver, Colorado

June 13, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
E. N. Harshman

From: J. William Hasler
M. H. Salsbury

Subject: DMEA 3555 (Uranium), contract Idm-E 791, W. A. Greer (Four Corners Exploration Company) Bachelor group), San Miguel and Montrose Counties, Colorado. Recommendations on Certification.

Work under the subject contract was completed in April 1956 with discovery of ore-grade mineralization (more than 0.10 percent U_3O_8 or 100 percent V_2O_5 in thicknesses of 1 foot or more) in 6 out of 30 plug and core drill holes as determined by chemical analyses of the cores substantiated by radiometric logging.

Using results of DMEA drilling, another ore hole drilled by the Atomic Energy Commission, and four offset holes penetrating ore-grade material drilled by the operator without Government assistance, a small ore reserve has been computed. A total of 1882 tons with an average content of 0.396 percent U_3O_8, 2.387 percent V_2O_5 and a value of $145,835.00 has been estimated. The reserve estimate appears to be conservative. Inasmuch as the operator has recently completed a shaft to the ore horizon and is now making preparations for mining, it is evident that a larger tonnage is anticipated.

On the basis of the computed reserves as a result, in part, of Government-assisted exploration drilling under docket DMEA 3555, contract Idm-E 791, certification of discovery is recommended.

J. William Hasler
J. William Hasler,
U. S. Geological Survey

M. H. Salsbury
M. H. Salsbury
U. S. Bureu of Mines

MHS/mlr

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

RECEIVED
1 5 1956

224 New Customhouse
Denver 2, Colorado

June ~~13, 1956~~

RECEIVED
JUN 1 5 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims), San Miguel and Montrose Counties, Colorado

Enclosed are two copies of the Operator's final engineering and geologic report pertaining to work completed under the subject contract. Also enclosed are two copies of a memorandum, dated June 8, 1956, from M. H. Salsbury, Mining Engineer, Bureau of Mines, relative to the adequacy of the Operator's final report.

The examining engineer advises that a recommendation for a certification of discovery will be made.

The Operator's final accounting report has not been processed, as it was necessary to return the report to the Operator for corrections and additions.

W. M. Traver

W. M. Traver

Enclosures

OPR's FINAL REPORT

DMEA
Date Rec'd,
MAY 23 1956
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BUREAU OF MINES
Denver, Colorado
JUN 15 1956

May 22, 1956

Idm B-791
Docket 3555

Narrative Report

Final Report - DMEA Drilling Bachelor Claims

Exploration of the Bachelor claims was undertaken August 9, 1955, when the Four Corners Exploration Company moved two Failing "1500" drills onto the property.

Drilling was continuous until December 1955 when unfavorable weather conditions forced the company to ask for a recess which was granted by Amendment No. 2 to the Exploration Project Contract.

Upon the arrival of more favorable weather, onedrill was moved onto the property and the last authorized hole was bottomed April 18, 1956.

Methods Employed

Both rigs employed were Failing "1500" rotary drills with hydraulic pull-downs. All holes were plugged with 4½" tricone rock bits to a point well above the uppermost ore bearing sandstone and then cored to the bottom of the hole with 3-5/8" double tubed, ball bearing core barrels. Compressed air was employed as a circulating medium. Both Jacknife and "3rd rim" sandstones were cored and bottomwas declared when approximately 8 feet of red mudstone were penetrated below the "3rd rim" sandstone.

All core was boxed and stored after graphic, detailed lithologic logs were prepared on acetate.

All holes were logged with a carefully calibrated Babbel hole logging device. All but five of the 30 holes bottomed were also logged by an AEC truck mounted logging unit.

Core which appeared to contain values approaching .10% U_3O_8 was split and sent to Brown Laboratories for a chemical analysis of U_3O_8 and V_2O_5 content. A split of all assayed core has been submitted to the DMEA field team at Grand Junction. All other core is boxed and stored at our camp at Bachelor Draw.

Core recovery for the project averaged better than 95%.

Drilling Results

Results obtained by the drilling of the 30 authorized holes were such that the company "closed in" around DMEA ore holes with 50 foot offsets and succeeded in locating enough ore to warrant the sinking of a two-compartment shaft. The shaft is now completed and the station is being cut. (See Assay Map)

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JUN 15 1956

Ore Reserves

The calculation of ore reserves in the saltwash in this particular area is rather difficult. The ore characteristically occurs in narrow elongate "rolls" that tend to thick and thin in such a manner as to create a series of pods elongated in the direction of sedimentation. Considering the lack of continuity of a given pod and the probable width, 10' - 20', it is not possible to predict any blanket ore body on the basis of holes drilled on 50' spacings. The depth of hole is such that if is not economically feasible to drill on closer spacing. However, some attempt has been made to arrive at a minimum figure of tonnage and grade. Where holes spaced 50 feet apart are in ore, such as B-64, B-46, B-61 and B-68, a continuity is tentatively assumed. In each of these holes, the ore is assumed to have a radius of 10 feet, thus presenting a continuous elongate body in which tonnage can be computed. A similar method was used for holes B-47 and B-82. (See Assay Map)

The ore in hole B-12 is assumed to be elongate in the direction of B-64 (see cross section) and because of its grade and thickness, it is thought that the area of ore is larger than the rather isolated 102.

Grade and thickness have been computed by averaging the values found in the holes in any given ore block. On the basis of drill holes, four pods of varying sizes have been located and have been numbered according to gross value, including initial production bonus.

Block No.	$\%U_3O_8$	$\%V_2O_5$	Tons	Gross Value
1	.28	1.73	1280	$69,120
2	.64	4.0	307	39,296
3	.74	4.3	243	35,235
4	.22	1.5	52	2,184
			1882	$145,835

It is realized that the above calculation may not be realistic since there are probably similar ore pods to be found throughout the mineralized area delineated by holes B-12, B-82, B-47, B-65, B-48, B-77, B-68, B-61, B-46, B-64 and B-43. It also must be realized that the ore bodies as presented may not be continuous. (See Assay Map) It can be seen on the cross section maps that the ore tends to hold pretty well to one horizon within the Jacknife sandstone.

Geology

Two ore horizons were penetrated by all holes drilled on the Bachelor claims. The upper ore bearing sandstone is the Jacknife sand which was found to contain all commercial ore discovered. Separating the Jacknife and "3rd rim" sandstone is approximately 10 feet of red mudstone.

Considerable variation in thickness in the Jacknife was noted with a thick channel of sand trending roughly S.60°E. through the claims. Thickness of the Jacknife varies from 15 feet to 57 feet within a few hundred linear feet. The ore bodies were found to lie along the southern flank of this channel.

In the immediate vicinity of the ore, the Jacknife contains rather thick, 2'-5', green mudstone splits (see cross sections), considerable carbon and abundant interstitial green mudstone and galls. Varying amounts of cross-bedding were also noted. The Jacknife sand throughout the claims is predominantly fine-grained and light gray to buff in color.

The underlying "3rd rim" sandstone is of almost uniform thickness over the Bachelor claims. Maximum variations noted were from thicknesses of 26' to 37'. The "3rd rim" sandstone is a light gray, fine-grained, cross-bedded sandstone with thin, 1'-2', carbonaceous bands near the base. These carbonaceous units are usually well mineralized; however, no ore was found in the "3rd rim" sandstone.

Thank you for your help
Forrest Hinchee
Geologist

Tabulation of all DMEA Holes Drilled Under Contract Idm B-791

Hole No.	Non-core	Core	Bottom	From To	Mineralization %U_3O_8	%V_2O_5
B-2	193.0	202.0	395.0	308.0-308.8	.03	.05
				308.8-309.0	.05	
				309.4-309.7	.07	
B-3	268.5	123.5	392.0	Barren		
B-5	230.0	150.0	380.0	Barren		
B-6	231.0=	155.0	386.0	Barren		
B-7	200.0	184.0	384.0	272.6-273.0	.08	.36
				273.0-273.5	.22	1.10
B-8	210.0	132.5	342.5	Barren		
B-9	169.0	174.0	343.0	Barren		
B-10	163.0	183.5	346.5	333.8-334.5	.16	.05
				334.5-336.5	.12	.07
B-11	190.0	162.5	352.5	Trace mineralization		
B-12	242.5	118.5	361.0	264.6-266.1	.05	.59
				266.1-270.0	.03	.20
				270.0-271.3	.04	.36
				271.3-274.3	.88	5.19
				274.3-275.0	.13	.73
				275.0-276.0	.03	.03
B-13	185.0	155.0	340.0	313.0-313.5	.08	.13
B-14	215.0	157.0	372.0	Barren		
B-41	206.5	149.5	356.0	336.0-337.0	1100 CPS	AEC Unit
B-42	198.5	152.0	350.5	Barren		
B-43	222.5	141.5	364.0	282.0-284.0	1900 CPS	AEC Unit
B-44	214.0	146.0	360.0	Barren		
B-46	231.0	148.0	379.0	296.0-297.5	.05	.18
				297.5-298.5	.08	.20
				298.5-299.0	.16	.38
				299.0-300.0	1.01	1.61
				300.0-301.0	.99	4.43
				301.0-302.0	.57	3.10
				302.0-305.0	.35	3.07
				305.0-306.3	.35	3.08
				306.3-306.9	.07	.44
B-47	221.5	146.5	368.0	291.5-292.0	.04	.19
				292.0-293.0	.95	5.49
				293.0-294.0	~~11~~ 128 - ~~Counter~~	8.10
B-48	222.5	166.0	388.5	276.0-277.0	1700 CPS	AEC Unit
				293.5-294.5	2300 CPS	AEC Unit
B-50	232.0	138.0	370.0	282.0-283.0	1300 CPS	AEC Unit
B-55	191.5	143.5	335.0	324.0-325.0	600 CPS	AEC Unit
B-56	201.5	139.0	340.5	Barren		
B-57	201.5	144.5	346.0	Barren		
B-71	200.5	142.0	342.5	326.8-328.0	.17	.80
				328.0-330.5	.03	.11
B-74	210.0	143.5	353.5	338.0-338.5	775 CPS	AEC Unit
B-76	207.0	128.0	335.0	257.0-257.3	2400 CPS	AEC Unit
				318.0-319.0	1500 CPS	AEC Unit
B-70	247.0	122.0	369.0	331.5-332.0	.05	Nil
				352.8-353.9	.01	.17
B-72	177.0	140.0	317.0	307.0-307.9	.12	.06
B-73	195.0	133.0	328.0	319.0-319.5	.045 -	Counter
B-75	157.0	142.0	299.0	280.5-281.0	.11	.36
	6233.5'	4462.5'	10,696.0'			

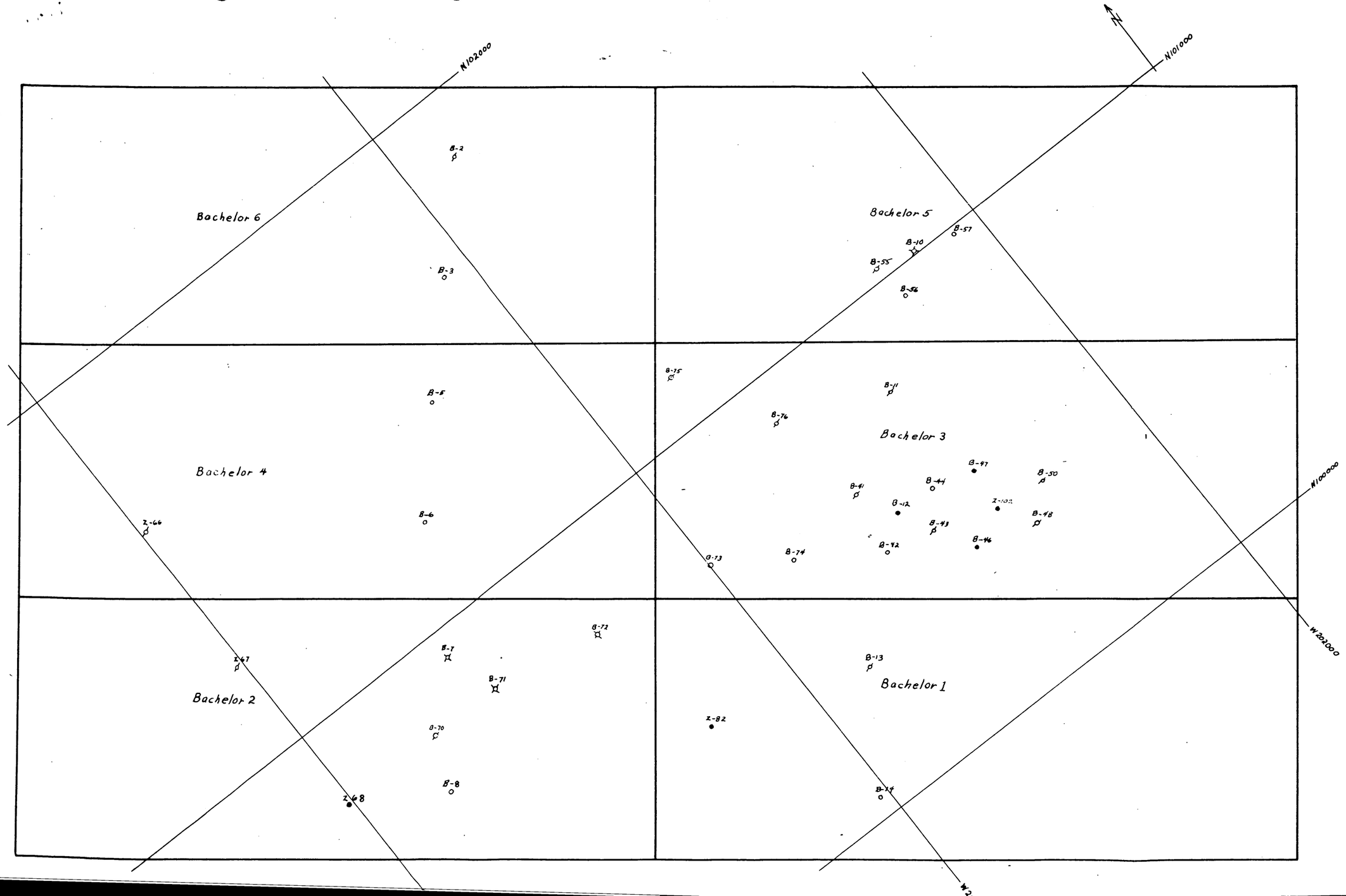


Fig. 2

DMEA - 35°3°5"

Drill Hole Map - Bachelor Claims

Drill Hole Values

O - Barren

β - 1' - .01% U_3O_8 to 1' - .10% U_3O_8

⌘ 1' - .10% U_3O_8 to 2' of 20% U_3O_8

● 2' .20% U_3O_8 and better

200' 0' 200'

DMEA
Date Rec'd.

RECEIVED
JUN 15 1956

JUN 12 1956

BUREAU OF MINES
Denver, Colorado

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
June 8, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III
R. N. Marshman
Through: John F. Shaw

From: M. H. Salsbury

Subject: Docket DMEA 3555 (Uranium) Contract Idm-E791,
W. A. Greer (Four Corners Exploration Company, Bachelor claims)
San Miguel and Montrose Counties, Colorado - Recommendations
on final report submitted by operator

The operator under the subject contract has submitted a final geologic and engineering report covering the completed project. The report, while very brief, appears to cover essential data, and includes all information which will be required for a DMEA final report that cannot be obtained out of DMEA files. A summary of hole data has been included, but no lithologic logs. These logs would be duplicates of those submitted with the monthly narrative reports and it is not believed it is necessary to have them submitted again in five copies.

The operator has not included a financial summary, but this will be available to Government personnel for use in a final report from records in DMEA files.

It is recommended that the operator's final report be accepted. A recommendation for a Certification of Discovery will be made.

for John F. Shaw
M. H. Salsbury
Mining Engineer

MHS/mw
cc: 9
RNMarshman
Idm-E791
Chron

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

RECEIVED
MAY 28 1956

224 New Customhouse
Denver 2, Colorado

May 24, 1956

Memorandum

To: John F. Shaw (2)

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

Subject: Docket DMEA-3555 (Uranium) Contract Idm-E791, W. A. Greer (Four Corners Exploration Company, operating) (Bachelor claims), San Miguel and Montrose Counties, Colorado

Enclosed are all copies of the subject Operator's final Monthly Progress Report and Voucher for the period of March and April, 1956 complete as submitted to this office by the Operator. The originals of Forms MF-104, MF-104A and the Operator's narrative were not submitted and will have to be secured from the Operator.

Also enclosed is a copy of the Operator's final engineering and geologic report. Please advise by return mail if you consider the Operator's report adequate as a final report. If so, you may retain the copy of the report and return it after it has served your needs.

J. W. Townsend

J. W. Townsend

Enclosures

JDC:jy
cc: Corresp. E791
Sec. Op. Comm. (2)
Townsend
Cooper
Chren.

5/8/56

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

RECEIVED
MAY 7 - 1956

224 New Customhouse
Denver 2, Colorado

May 3, 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Gamma-ray log interpretations -
DMEA-3767, Contract Idm-E877, Uranium Prospector's Company, Ltd. (Jack Rabbit group) Emery County, Utah
DMEA-3555, Contract Idm-E791, W. A. Greer (Operating agreement with Four Corners Exploration Company) (Bachelor claims) San Miguel and Montrose Counties, Colorado
DMEA-3582, Contract Idm-E796, Walter Duncan Mining Company (Red Rock et al. claims) San Juan County, Utah
DMEA-3613, Contract Idm-E860, Chatu Uranium Mining Company, Inc. (Seven Mile property) Grand County, Utah
DMEA-3655, Contract Idm-E899, Bowles-Heflin Mining Company (J. V. Eaverson lease) San Miguel County, Colorado
DMEA-3896, Contract Idm-E910, Hecla Mining Company (Hot Rock et al. claims) San Juan County, Utah

Enclosed are four copies each of gamma-ray log interpretations for holes drilled on the subject properties.

W. M. Traver

W. M. Traver

Enclosures

Four Corners Exploration Co.
Bachelor Draw
DMEA DOCKET NO. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-41	356.0	None	10.5-355.8	246.2 - 247.8	1.6	360			<0.010	
				247.8 - 249.5	1.7	300			<0.010	
				251.7 - 253.1	1.4	440			<0.010	
				315.8 - 316.7	0.9	660			0.016	
				337.9 - 338.5	0.6	1,600			0.060	
				339.4 - 340.7	1.3	560			0.013	
				341.7 - 343.0	1.3	400			<0.010	
B-42	350.5	None	194.6-340.0	254.8 - 255.8	1.0	340			<0.010	
				301.0 - 302.3	1.3	360			<0.010	
				304.2 - 306.3	2.1	280			<0.005	
				306.3 - 307.1	0.8	200			<0.005	
				313.3 - 314.9	1.6	280			<0.005	
				319.2 - 319.7	0.5	240			<0.010	
				320.3 - 321.8	1.5	370			<0.010	
B-43	364.0	None	289.3-362.0	308.1 - 309.0	0.9	260			<0.010	
				322.7 - 323.6	0.9	460			0.012	
				325.2 - 326.4	1.2	450			0.010	
				327.9 - 329.0	1.1	630			0.017	
				334.1 - 335.1	1.0	600			0.018	
				336.7 - 337.6	0.9	1,500			0.040	
				343.9 - 345.1	1.2	270			<0.010	
				345.8 - 346.6	0.8	360			<0.010	
				346.9 - 347.4	0.5	290			<0.010	
				350.2 - 350.7	0.5	230			<0.010	
				351.4 - 352.5	1.1	220			<0.005	
				354.2 - 355.0	0.8	360			<0.010	
				355.0 - 355.8	0.8	320			<0.010	
				358.1 - 358.9	0.8	210			<0.005	

* From top to bottom depths

Four Corners Exploration Co.
Bachelor Draw
DMEA DOCKET NO. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From*	Depth Logged To	Anomaly Detected From*	Anomaly Detected To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-44	360.5	None	284.9	357.0	306.9	307.9	1.0	210			<0.005	
					319.1	320.0	0.9	320			<0.010	
					320.0	320.6	0.6	220			<0.010	
					322.1	322.7	0.6	260			<0.010	
					332.8	333.4	0.6	200			<0.005	
					342.8	343.6	0.8	230			<0.005	
					344.3	344.9	0.6	240			<0.010	
					344.9	345.5	0.6	200			<0.005	
					347.2	347.7	0.5	200			<0.010	
					352.4	353.0	0.6	240			<0.010	
B-46	379.0	None	159.7	376.0	173.5	174.5	1.0	220			<0.005	
					263.1	237.1	1.0	230			<0.005	
					256.7	257.5	0.8	210			<0.005	
					275.2	277.0	1.8	860			0.020	
					277.8	279.0	1.2	1,200			0.025	
					280.2	282.6	2.4	540			0.011	
					282.6	284.3	1.7	740			0.017	
					284.3	287.2	2.9	900			0.021	
					287.2	288.8	1.6	380			<0.010	
					288.8	290.0	1.2	560			0.012	
					292.2	293.9	1.7	2,000			0.046	
					295.9	297.2	1.3	32,000			1.0	
					297.2	299.8	2.6	10,000			0.27	
					299.8	300.9	1.1	16,000			0.55	
					331.5	332.9	1.4	480			<0.010	
					334.6	335.5	0.9	340			<0.010	
					364.2	365.3	1.1	600			0.017	

* From top to bottom depths

Four Corners Exploration Co.
Bachelor Draw
DMEA DOCKET NO. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-48	388.5	None	217.3-386.0	254.4 - 255.1	0.7	240			<0.010	
				260.9 - 261.7	0.8	240			<0.010	
				266.1 - 267.0	0.9	220			<0.005	
				275.2 - 276.1	0.9	2,500			0.080	
				277.9 - 278.9	1.0	240			<0.005	
				279.8 - 280.7	0.9	280			<0.010	
				282.0 - 283.4	1.4	400			<0.010	
				285.0 - 286.9	1.9	840			0.021	
				286.9 - 288.5	1.6	600			0.014	
				288.5 - 290.0	1.5	340			<0.010	
				292.8 - 293.5	0.7	3,300			0.14	
				322.1 - 323.4	1.3	440			<0.010	
				338.1 - 339.1	1.0	560			0.016	

* From top to bottom depths

Four Corners Exploration Co.
Bachelor Draw

GAMMA-RAY LOG INTERPRETATION DMEA DOCKET NO. 3555

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-50	370.0	None	71.8-360.0	140.8 - 141.8	1.0	200			<0.005	
				144.1 - 144.9	0.8	200			<0.005	
				248.1 - 249.0	0.9	310			<0.010	
				250.7 - 251.4	0.7	230			<0.010	
				252.0 - 252.5	0.5	220			<0.010	
				258.6 - 260.0	1.4	1,400			0.032	
				261.2 - 264.4	3.2	540			<0.010	
				264.4 - 266.1	1.7	1,400			0.030	
				266.1 - 271.2	5.1	460			<0.010	
				271.2 - 272.0	0.8	2,200			0.074	
				272.0 - 276.0	4.0	580			0.012	
				276.0 - 277.9	1.9	380			<0.010	
				277.9 - 280.0	2.1	660			0.013	
				302.0 - 303.7	1.7	420			<0.010	
				317.6 - 318.8	1.2	660			0.016	
				320.7 - 321.5	0.8	400			0.011	
				339.8 - 340.5	0.7	800			0.032	
				341.5 - 342.4	0.9	460			0.013	
				342.4 - 343.6	1.2	300			<0.010	
				346.0 - 347.5	1.5	260			<0.005	
B-55	335.0	None	10.0-332.0	279.9 - 280.9	1.0	620			0.018	
				291.4 - 292.9	1.5	620			0.015	
				318.1 - 319.5	1.4	490			0.011	
				322.8 - 323.8	1.0	800			0.026	
B-56	340.5	None	10.0-340.5	261.7 - 263.4	1.7	360			<0.010	
				292.2 - 293.2	1.0	460			0.012	
				301.8 - 302.3	0.5	240			<0.010	
				303.8 - 304.6	0.8	450			0.013	
				320.8 - 321.6	0.8	430			0.012	
				331.8 - 332.8	1.0	220			<0.005	
				335.2 - 336.4	1.2	550			0.013	
				338.5 - 339.0	0.5	220			<0.010	

* From top to bottom depths

Four Corners Exploration Co.
Bachelor Draw
DMEA DOCKET NO. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-74	353.5	None	10.4-353.0	250.4 - 251.7	1.3	620			0.015	
				309.5 - 310.7	1.2	760			0.021	
				315.9 - 317.6	1.7	660			0.014	
				321.3 - 323.1	1.8	800			0.018	
				325.3 - 326.6	1.3	750			0.020	
				331.1 - 332.4	1.3	420			<0.010	
				333.5 - 334.4	0.9	1,000			0.023	
				334.4 - 335.6	1.2	700			0.019	
				336.8 - 337.8	1.0	1,300			0.032	
				337.8 - 339.6	1.8	420			<0.010	
				339.6 - 341.1	1.5	620			0.015	
				341.1 - 342.8	1.7	600			0.013	
				342.8 - 343.8	1.0	960			0.032	
				343.8 - 346.0	2.2	460			<0.010	
				346.0 - 346.7	0.7	1,500			0.047	
B-76	338.0	None	87.7-335.0	257.4 - 258.0	0.6	4,800			0.31	
				258.7 - 260.3	1.6	1,200			0.025	
				280.0 - 281.4	1.4	390			<0.010	
				312.4 - 315.0	2.6	600			0.012	
				318.0 - 318.8	0.8	2,600			0.090	
				319.5 - 320.2	0.7	2,600			0.10	
				320.2 - 322.8	2.6	520			0.010	
				322.8 - 324.0	1.2	620			0.017	

* From top to bottom depths

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

RECEIVED
APR 16 1956

224 New Customhouse
Denver 2, Colorado

April 12, 1956

Mr. F. O. Manol
Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

Re: Docket DMEA - 3555 (Uranium)
Contract Idm-E791
Bachelor Claims
San Miguel and Montrose
Counties, Colorado

Dear Mr. Manol:

We are processing your Monthly Report and Voucher for the period October, November and December, 1955 with the following deductions

a) An amount of $300.63, the cost of 27.33 hours of bulldozing at $11.00 per hour is disallowed. The contract allowance for bulldozing under Stage II is 72 hours. As you were paid for 32.33 hours of Stage II bulldozing on the August 10-September 7, 1955 voucher, there remains only 39.67 hours subject to payment on the current voucher, whereas 67 hours is claimed.

b) An amount of $5.00 for one sample analysis is disallowed. The cost of 14 sample analyses was claimed but assay returns were submitted for only 13 allowable samples.

Total amount disallowed: $305.63

Reconciliation with Amount Claimed on Form MF-104 for the Period October, November and December, 1955

Amount claimed on Form MF-104	$16,101.15
Total amount disallowed	305.63
Total accepted cost	$15,795.52
Recommended payment at 75 percent	$11,846.64

If there is any question regarding the above disallowances, please feel free to contact this office.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

JDC:jy
cc: Corresp. E791
Sec. Op. Comm. (2)
Shaw (2)
Townsend
Chron.

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

224 New Customhouse
Denver 2, Colorado

March 23, 1956

Mr. F. O. Manol
Four Corners Exploration Company
205 Petroleum Building
Grand Junction, Colorado

Re: Docket DMEA-3555 (Uranium)
Contract Idm-E791
Bachelor Claims
San Miguel and Montrose
counties, Colorado

Dear Mr. Manol:

We are returning all copies of your narrative report covering work performed under Contract Idm-E791 for the months of October, November, and December, 1955 because the narrative has not been signed. Reference is made to the third paragraph of our registered letter dated July 1, 1955 wherewith we transmitted the contract to Mr. W. A. Greer.

Please sign all copies of the narrative report and return them to this office as soon as possible so that we can process the October-December, 1955 voucher for payment.

For your information, regardless of the actual cost to your company, all work performed under Contract Idm-E791 may be claimed at the rates specified in the contract.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

JDC:jy
cc: Corresp. E791
Sec. Op. Comm. (2)
Shaw (2)
Townsend
Chron.
Enclosures

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

RECEIVED
FEB - 6 1956

224 New Customhouse
Denver 2, Colorado

February 1, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer - Bachelor Claims, Montrose and San Miguel Counties, Colorado

Enclosed are the Government's, Division, and Docket copies of Amendment No. 2 to Contract Idm-E791, which was prepared in Washington and forwarded by your letter of January 23, 1956, for signature by the Operator and this office.

Copies of the Amendment have been given to the Operator, Finance Office, Region III, and distributed to other offices concerned.

for W. M. Traver

Enclosures

2-1-56

Per Traver's memo of 1-30-56 all future correspondence to be mailed to:

Four Corners Exploration Company

205 Petroleum Building

Grand Junction, Colorado

DMEA-3151
" 3555
" 3854
" 2
" 4101
"

Surname copy

700

Ching
Ellis
Talbot
Selfridge
Johnson
Mathews

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

JAN 23 1956

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

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-5791
W. A. Greer
Bachelor Claims
Montrose and San Miguel
Counties, Colorado

Dear Mr. Traver:

Enclosed are the original and seven copies of an Amendment No. 2 to the subject contract, drawn as recommended in your memorandum of January 10, 1956.

If you and the Operator find the amendment in order, please have the date and signatures affixed as indicated and make the usual distribution thereafter.

Two extra copies of the amendment are included for the use of the Field Team.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

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

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

MChing/gla
1-23-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Ching

R.C.L.

Surname copy

700

Ching
Ellis

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

January 16, 1956

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Michael Ching, Mining Engineer
Rare and Miscellaneous Metals Division

Subject: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-8791
W. A. Greer
Bachelor Claims
Montrose and San Miguel Counties, Colorado

Will you kindly prepare an amendment to the subject contract in accordance with the attached draft. It is requested that you designate the proper party that should sign the amendment for the Operator in view of the Operating Agreement and Supplemental Agreement, both dated August 29, 1955, between W. A. Greer and Bertha Greer, and Four Corners Exploration Company.

/s/ Michael Ching

Michael Ching

MChing/gla
cc to: Docket
Code 700
Mr. Ching

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

RECEIVED
JAN 12 1956

January 10, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer, Bachelor claims, Montrose and San Miguel Counties, Colorado

Enclosed are four sets of data consisting of two letters from the Operator dated December 26, 1955 and January 6, 1956. The Operator requests the Government's approval for suspension of operations because of severe weather conditions from December 16, 1955 to April 1, 1956 with work to be completed by June 30, 1956.

The date fixed in the contract for the completion of the project work is December 13, 1955. Therefore, extension of that date will be necessary. 31

We recommend that an Amendment be prepared to authorize suspension of operations from December 16, 1955 to April 1, 1956, and extend the date for completion of the work to June 30, 1956.

The matter is forwarded for your consideration and appropriate action or advice to us as to how we should proceed.

W. M. Traver

W. M. Traver

FOUR CORNERS EXPLORATION COMPANY
1118 MAIN STREET BOX 116
GRAND JUNCTION, COLO. GRANTS, NEW MEXICO

December 26, 1955

IRVING RAPAPORT
F. O. MANOL

DMEA
Date Rec'd.
DEC 30 1955
BUREAU OF MINES
Denver, Colorado

Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

RECEIVED
JAN 12 1956

Attention: Mr. W. M. Traver

Re: Docket DMEA 3555
Contract Idm-E791

Gentlemen:

We herewith request that the remainder of the drilling under the subject contract be postponed until after the April 1, 1956. We further propose that the remainder of the work be done between April 1 and June 30th.

The following holes remain undrilled: B-70, B-72, B-73, and B-75.

We make this request on account of weather. The severe cold makes it uneconomic to try to finish this work at this time.

Please be advised that we are starting to sink shaft on the subject claims some time in January. The shaft will be sunk in close proximity to B-12 to take advantage of a slight downgrade in underground haulage ways which will result at that point.

As soon as possible after the first of the year we will submit a final billing for 1955 together with a complete report on all of our drilling to date.

Very truly yours,

F. O. Manol

F. O. Manol
1118 Main Street
Grand Junction, Colorado

FOUR CORNERS EXPLORATION COMPANY
1118 MAIN STREET BOX 116
GRAND JUNCTION, COLO. GRANTS, NEW MEXICO

IRVING RAPAPORT
F. O. MANOL

January 6, 1955

DMEA
Date Rec'd.
JAN 9 1956

BUREAU OF MINES
Denver, Colorado

U. S. Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

RECEIVED
JAN 12 1956

Attention: Mr. W. M. Traver

Re: Docket 3555
Contract Idm-E791

Dear Mr Traver:

Please be advised that the last work done on the subject contract was on December 16, 1955.

This information is being furnished you in compliance to your request by your letter dated January 3.

Very truly yours,

F. O. Manol

F. O. Manol
1118 Main Street
Grand Junction, Colorado

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

RECEIVED
DEC - 8 1955

224 New Customhouse
Denver 2, Colorado

December 6, 1955

Memorandum

To: T. A. Christensen

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

Subject: Docket DMEA-3555 (Uranium), Contract Idm-E791, W. A. Greer, Bachelor claims, Montrose and San Miguel Counties, Colorado - Working Agreement and Supplemental Agreement with Four Corners Exploration Company

Enclosed is one copy each of the following:

a) Operating Agreement dated August 29, 1955 between W. A. Greer and Bertha Greer (Owners) and Four Corners Exploration Company (Operator).

b) Supplementary Agreement effective August 29, 1955 between W. A. Greer and Bertha Greer (Owners) and Four Corners Exploration Company (Operator).

c) Letter dated September 28, 1955 from Four Corners Exploration Company to Mr. William Traver transmitting the Operating agreement to this office.

E. N. Harshman

E. N. Harshman

Enclosures
JDC:jy
cc: Sec. Op. Comm. (2)
Corresp. File E791
Harshman) w/copies above documents
Hasler)
Shaw (2))
Chron.

Surname copy

700

Ching
Ulis
Martin
Dwyer
Saunders
Selfridge
Johnson
Wallendorf

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

DEC 2 1955

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
12A New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-5791
W. A. Greer
Bachelor Claims
Montrose and San Miguel
Counties, Colorado

Dear Mr. Traver:

Enclosed, for your files, are two copies of a Supplemental Agreement, dated August 29, 1955, between W. A. Greer and Bertha Greer and Four Corners Exploration Company, which satisfies the requirements listed in our letter of October 26 to the Operator.

The Operator's August-September voucher may now be processed.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (SHB)

Enclosures

APPROVED:

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

Thor H. Kiilsgaard (SHB)
Member, Geological Survey

MChing/gla
11-29-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700
Mr. Ching
JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Chairman, Operating Comm. D.M.E.A.

RECEIVED
NOV 30 1955

EUR MINES, DN 235 11-29-55 4-24 PM

CHAIRMAN, OPERATING COMMITTEE, DMEA

RE DMEA 3555, CONTRACT IDM-E791, W. A. GREER, URTT OF 11-8-55 AND OPERATOR'S LETTER OF 11-23-55 TRANSMITTING SUPPLEMENT TO OPERATING AGREEMENT WITH FOUR CORNERS EXPLORATION CO., PLEASE TELETYPE WHETHER WE CAN NOW PROCESS AUGUST-SEPTEMBER MF-104 VOUCHER.

E N HARSHAMXXX E N HARSHMAN

No reply necessary. See our letter of Dec. 2, 1955 which had to be routed through Legal.

MC

Denver, Colo.

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

RECEIVED
DEC - 1 1955

224 New Customhouse
Denver 2, Colorado

November 29, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

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

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer - Bachelor Group of claims, San Miguel and Montrose Counties, Colorado; Exploration Performed by Four Corners Exploration Company

Enclosed for your records are four copies of confirmation of verbal approval by the DMEA Field Team, Region III, for the drilling of seven holes under Stage II of the contract.

Also enclosed are four sets of data relevant to the matter.

E. N. Harshman

E. N. Harshman

Enclosures

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

RECEIVED
DEC - 1 1955

[illegible] New Customhouse
Denver 2, Colorado

November 29, 1955

Mr. F. O. Hanel
Four Corners Exploration Company
P. O. Box 116
Grand Junction, Colorado

Re: Project DMEA 3575 (Uranium)
Contract [illegible]
W. A. Grover - Bachelor claims,
San Miguel and Montrose Counties,
Colorado

Dear Mr. Hanel:

In reference to your letter of November 1, 1955, this constitutes confirmation of DMEA Field Team, Region III, verbal approval of November 4, 1955, for you to drill seven holes, Nos. B-70 to B-76, inclusive, under Stage II of the Contract.

The locations of the holes are shown on the map entitled, "Figure 1. Reconnaissance Map of the Bachelor Group of Claims, Showing Thickness of Jackpile Sand, Existing Drill Holes and Location of Proposed Stage II Drill Holes, W. A. Grover (4 Corners Exploration Co.), San Miguel County, Colorado," which is attached hereto and made a part of this work approval.

The drilling shall be performed in conformance with all provisions in the Contract pertaining thereto.

Nothing in this work approval shall be construed to increase the total estimated cost of the project, the amount of the Government's contribution, nor the fixed unit cost of any item of work.

Very truly yours,

E. M. Hans-Amar

E. M. Hansman
Acting Executive Officer
DMEA Field Team, Region III

JMHrgel
cc: Chairman, Oper. Comm. (4)

DRAFT
1/16/56
Thing/gla

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

AMENDMENT NO. 2

It is agreed this _____ day of _____, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and W. A. Greer, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E791, Docket No. DMEA-3555, dated April 28, 1955, hereinafter called the "Contract," that:

1. (a) Work under the Contract shall be suspended during the period beginning December 17, 1955, and ending not later than March 31, 1956.

(b) No costs incurred by the Operator during the period of suspension shall be allowable for contribution by the Government, and the Government shall not contribute to any costs of rehabilitation or repair which, in its opinion, would not have occurred if there had been no suspension of the work.

(c) The Operator at his own cost and expense, without contribution by the Government, during the period of suspension shall preserve and protect the project work and any property in which the Government has an interest.

2. The time fixed for the completion of the work is extended to June 30, 1956.

3. This agreement shall not be construed to increase the estimated total cost of the project nor the aggregate total amount which the Government may be required to contribute under the provisions of the contract.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By:

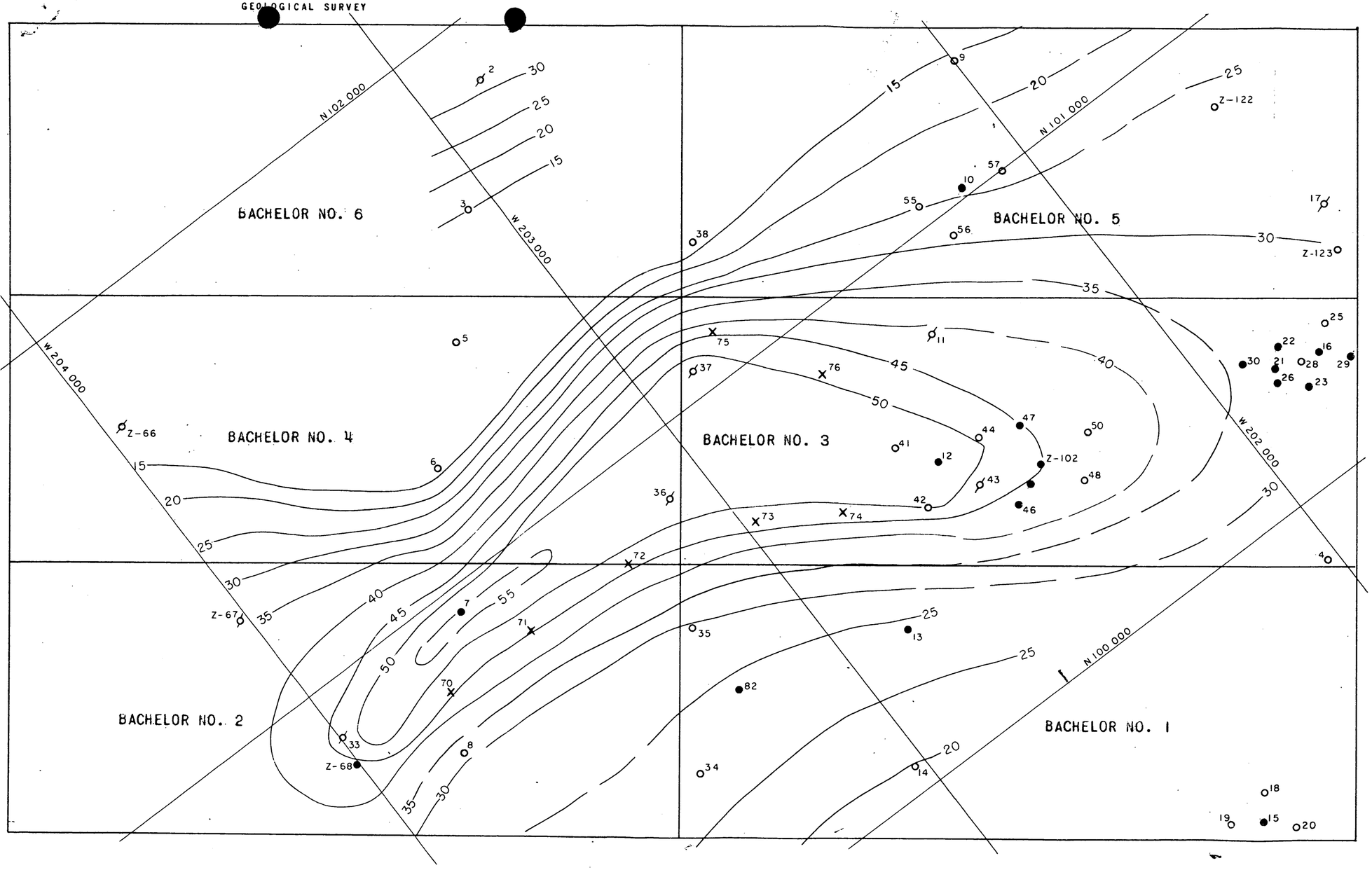
Operator

Executive Officer,
DMTA Field Team, Region III

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3555 NOVEMBER 1955



EXPLANATION

15 — ISOPACHOUS LINE SHOWING THICKNESS OF JACKNIFE SAND

DRILL HOLES. (HOLE NUMBERS WITH PREFIX Z ARE A.E.C. HOLES)

o56 BARREN

ø37 MINERALIZED

●82 ORE-BEARING, 1 FOOT OR MORE OF 0.10 PERCENT U_3O_8 OR BETTER

X76 LOCATION OF PROPOSED STAGE II DMEA HOLE

Note: BASE FROM APPLICANTS MAP.

N

200 0 600 FEET

ISOPACHOUS INTERVAL 5 FEET

Figure 1. ISOPACHOUS MAP OF THE BACHELOR GROUP OF CLAIMS, SHOWING THICKNESS OF JACKNIFE SAND, EXISTING DRILL HOLES AND LOCATION OF PROPOSED STAGE II DRILL HOLES, W.A. GREER (4 CORNERS EXPLORATION CO.), SAN MIGUEL COUNTY, COLORADO.

MINERAL DEPOSITS
DMEA
RECEIVED
NOV 25 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

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

November 23, 1955

RECEIVED
DEC - 1 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: J. William Hasler
M. H. Salsbury

Subject: DMEA docket 3555 (Uranium), contract Idm-E 791, Four Corners Exploration Company, Bachelor group of claims, San Miguel and Montrose Counties, Colorado

The Four Corners Exploration Company has applied to the DMEA for a request for 7 additional stage II holes to complete drilling under contract Idm-E 791, docket 3555, in the Bachelor group of claims, Bull Canyon area, Montrose County, Colorado.

The applicant has drilled 11 stage II holes to date and has had favorable results from the holes offsetting ore hole Z-102. Stage II offset hole No. 46 penetrated 7.3 feet of ore-grade material averaging 0.654 percent U_3O_8, between 296 and 306 feet in the hole. Diamond drill hole No. 47 discovered 2.0 feet of material averaging 1.11 percent U_3O_8 between 283 and 285 feet. The company are continuing drilling around mineralized holes B-12, Z-102, B-46, and B-47 on 50-foot centers on their own account to block out ore already discovered. They have concurrently prepared an isopachous map on the Bachelor claims and have delineated a channel trending north-east, and more or less establishing the trend suggested from previous drilling.

The company requests that the remainder of the stage II drilling be done in areas that will test the flanks of this north-east trending channel. Ore deposits in the Bull Canyon area are known to occur on the flanks of channels and it is believed that the chances of discovering ore along the channel are good.

It is recommended that the 7 holes, as proposed on the accompanying figure No. 1, be drilled on the north and south flanks of the thick channel of sand. The holes will average about 345 feet in depth and range from 302 to 388 feet and will be drilled not closer than 100 feet from any previously drilled hole. The company was granted verbal approval from the Region III Field Team on November 4, 1955, and drilling is in progress.

J. William Hasler

J. William Hasler,
U. S. Geological Survey

M. H. Salsbury

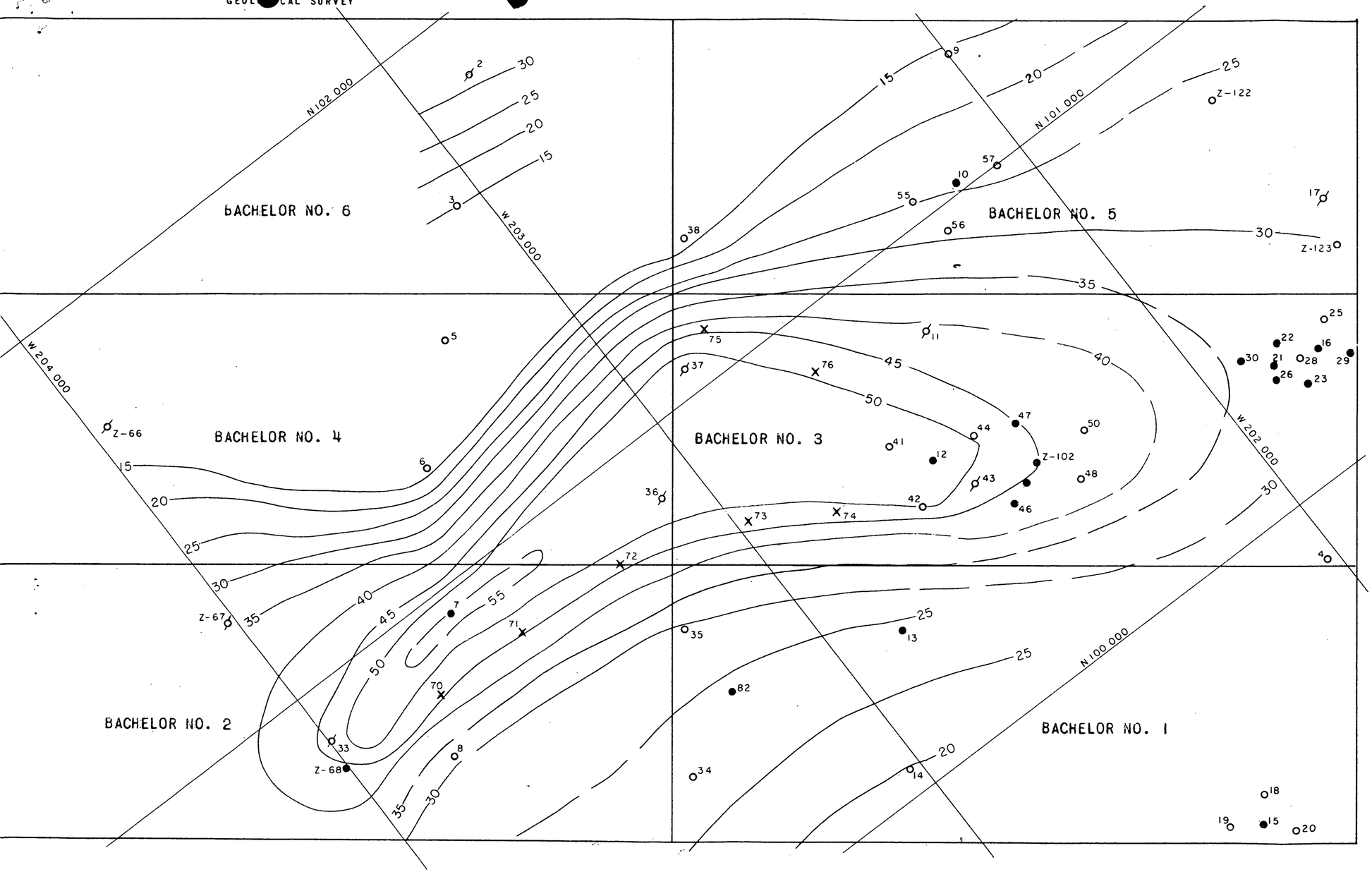
M. H. Salsbury,
U. S. Bureau of Mines

JWH/mlr

Enclosure

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3555 NOVEMBER 1955



EXPLANATION

15 — ISOPACHOUS LINE SHOWING THICKNESS OF JACKNIFE SAND

DRILL HOLES. (HOLE NUMBERS WITH PREFIX Z ARE A.E.C. HOLES)

o56 BARREN

ø37 MINERALIZED

●82 ORE-BEARING, 1 FOOT OR MORE OF 0.10 PERCENT U_3O_8 OR BETTER

×76 LOCATION OF PROPOSED STAGE II DMEA HOLE

Note: BASE FROM APPLICANTS MAP.

N

200 0 600 FEET

ISOPACHOUS INTERVAL 5 FEET

Figure 1. ISOPACHOUS MAP OF THE BACHELOR GROUP OF CLAIMS, SHOWING THICKNESS OF JACKNIFE SAND, EXISTING DRILL HOLES AND LOCATION OF PROPOSED STAGE II DRILL HOLES, W. A. GREER (4 CORNERS EXPLORATION CO.), SAN MIGUEL COUNTY, COLORADO.

FOUR CORNERS EXPLORATION COMPANY
1118 Main Street
Grand Junction, Colorado
November 1, 1955

DMEA
Date Rec'd.
NOV 4 1955
BUREAU OF MINES
Denver, Colo.
RECEIVED
DEC 1 1955

Defense Minerals Exploration Administration
224 New Customhouse
Denver, Colorado

Re: Docket No. DMEA 3555
Contract No. Idm-E791
Bachelor Claims

Attention: Mr. William Traver

Dear Mr. Traver:

Pursuant to the approved drilling program on the subject contract we have completed the drilling of the first eleven holes of Stage 2 and we are herewith submitting our request for approval of drilling and drilling locations for the final seven holes of Stage 2.

Of the first eleven holes in Stage 2, two holes (B-46, approx. 7' good ore) (B-47, approx. 3' good ore) contained uranium mineralization of ore grade and ore thickness. The other nine holes all showed evidences of areal favorability, such as color of sandstone, green mudstones, limonite flecking, and thick ore sands. The presence or absence of uranium seems to be tied in very closely with the presence or absence of carbon.

We now have four holes in ore in one localized area (B-12, B-46, B-47, and Z-102). The same area has six other holes with varying degrees of mineralization, but void of ore. All of these holes are essentially on a 100 foot grid; so percentage-wise in this localized area the results are very good: in fact, so good, that we will readily concede a discovery has been made. But to take all risks out before we can start sinking a shaft, we feel we must do more drilling on 50 foot centers; of course, on our own account.

Because, according to the terms of the subject contract we can not use the remaining seven holes in close spaced drilling in our discovery area, we propose to use the remaining seven holes to further explore the very highly favorable areas on the flanks (especially the south flank) of the channel stretching across the claims.

The selection of drilling pattern for the remaining seven holes is the result of conference and complete accord by your Grand Junction Geology Staff and of our Project Geologist. Specifically, we therefore propose the following holes as shown on the enclosed isopach map.

Hole No.	Bottom Depth	Start Core	Hole No.	Bottom Depth	Start Core
B-70	388	238	B-74	370	220
B-71	348	198	B-75	302	152
B-72	322	172	B-76	357	207
B-73	340	190			

These holes we feel will be tremendously important in the overall exploration project. Stage 1 holes delineated an area of favorability. The first eleven holes of State 2 resulted in a discovery. And the last seven holes, quite possibly, will provide us with extremely helpful information for estimating the extent of a possible ore producing zone.

FOUR CORNERS EXPLORATION COMPANY
1118 Main Street
Grand Junction, Colorado
November 1, 1955

We have chosen to submit this application for the remaining seven holes before we have received back our chemical assays on our cores submitted for assay. Our reason for not waiting for assays before making this proposal on the last seven holes is that we are eager to get started as soon as possible to complete this work before winter and snows arrive. For the same reason we would appreciate your earliest possible approval.

In the meantime we will continue drilling on our own account in the discovery area on close spaced holes.

Sincerely,

F. O. Manol
1118 Main St.
Grand Junction, Colorado

P.S.: Our chemical assays were just returned to us so we are showing this information next below:

	Depth		U308	V205
Hole No. B-~~47~~ 46	296.0 to	297.5	.05	.18
	297.5	298.5	.08	.20
	298.5	299.0	.16	.38
	299.0	300.0	1.01	1.61
	300.0	301.0	.99	4.43
	301.0	302.0	.57	3.10
	302.0	305.0	.35	~~3.08~~ 3.07
	305.0	306.3	.35	3.08
	306.3	306.9	.07	.44
Hole No. B-47	283.0	284.0	.95	5.49
	284.0	285.0	1.28	8.10

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

RECEIVED
DEC - 1 1955

224 New Customhouse
Denver 2, Colorado

November 29, 1955

Mr. F. G. Manol
Four Corners Exploration Company
P. O. Box 116
Grand Junction, Colorado

Re: Docket 5555 (Uranium)
Contract Idm-E791,
W. A. Greer - Bachelor claims,
San Miguel and Montrose Counties,
Colorado

Dear Mr. Manol:

Reference is made to your letter of November 3, 1955, which was included with the material submitted under date of November 1, 1955, relative to the Government's approval of seven additional holes to be drilled under Stage II.

In your letter of November 3, you request an amendment to the contract to give you broad authority in the interchange of footage between core and plug bit drilling and funds involved between both Stages I and II.

Execution of an amendment of the nature you have requested is not within the authority delegated to this office and it is doubtful that it would be given favorable consideration by the DMEA Washington Office.

However, if at a later date you find it necessary, because of conditions encountered in the drilling, to adjust the footages and funds between plug drilling and core drilling within each stage of work, we suggest that you re-apply for the amendment and give an analysis of the exact footage of each type of drilling and the amount of funds involved in the adjustment.

Very truly yours,

E. N. Harshman

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

JWP:pri
cc: Chairman, Oper. Comm. (4)) w/copy of Operator's letter of November 3.

RECEIVED
DEC - 1 1955

November 3, 1955

Defense Minerals Exploration Administration
224 New Customhouse
Denver, Colorado

Re: Docket No. DMEA 3555
Contract Idm-E791
Bachelor Claims

Attention: Mr. Wm. Traver

Dear Mr. Traver:

We herewith request an amendment to the subject contract to allow interchange of core bit and plug bit drilling footages and funds allocations in and between both Stages 1 and 2.

We request this amendment for the reason we find it uneconomical and impractical to adhere rigidly to the drilling footages by classifications as set forth in the contract.

Allowing the project geologist a reasonable latitude of judgment in this respect will definitely result in more information benefits for the monies spent.

If possible we would like to have this amendment retroactive to the drilling we have already done and invoiced to this contract.

Sincerely,

F. O. Manol

F. O. Manol
1118 Main Street
Grand Junction, Colorado

Recd. 12-1-55

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

Denver Federal Center
Denver, Colorado

November 23, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Gamma-ray log interpretations

Enclosed are four copies of gamma-ray log interpretations on the following DMEA exploration projects:

DMEA Docket

2771 - Walter Gramlich
3297 - Continental Uranium Company
3475 - Amuranium Corporation
3514 - Climax Uranium Company
3555 - Four Corners Exploration - Bachelor group
3579 - Bula Belle Uranium, Inc.
3582 - Walter Duncan Mining Co.
3632 - Colamer Corporation
3649 - Simpson Uranium Co.
3660 - Mid Continent Uranium Corp.
3675 - Great Frontier Uranium Company
3730 - Vaughey & Vaughey, Ouray Ventures
3939 - Westvaco Mineral Products

W. M. Traver

By Townsend

Enclosures

Caggini, Anderson, Kalp
Batchelor Claim No. 1
DMEA Docket No. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From*	Depth Logged To	Anomaly Detected From*	Anomaly Detected To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B1	245.5	15' 2.5" pipe	91.6	244.2	Barren							

* From top to bottom depths

11-28-55 izm

FOUR CORNERS EXPLORATION COMPANY
1118 MAIN STREET BOX 116
GRAND JUNCTION, COLO. GRANTS, NEW MEXICO

IRVING RAPAPORT
F. O. MANOL

November 23, 1955

RECEIVED
NOV 28 1955

U. S. Dept. of the Interior
Defense Minerals Exploration Administration
Washington 25, D.C.

Re: Docket No. DMEA-3555(Uranium)
Contract No. Idm-E791
Bachelor Claims
Montrose and San Miguel
Counties, Colorado

Attention: Mr. Frank E. Johnson
Acting Administrator

Gentlemen:

With your letter dated October 26 to Mr. W. A. Greer--502 Aliso Drive, N.E.---Albuquerque, N.M. your office requested that the contract between the Greers and the Four Corner Exploration Company, by which contract the Four Corners Exploration Company was assigned the operation of the Bachelor Claims, be modified to provide for the Government's royalty and lien in connection with the subject contract.

In line with the above request we are transmitting to you herewith six copies of a supplement to the above referred to document, said supplement provides by specific mention the protection requested, and said supplement is properly signed by both parties thereto.

Very truly yours,

F. O. Manol

F. O. Manol
1118 Main Street
Grand Junction, Colorado

cc-W. A. Greer
DMEA--224 New Customhouse--Denver, Colo.

RECEIVED
NOV 28 1955

SUPPLEMENTARY AGREEMENT

THIS AGREEMENT, made and entered into as of August 29, 1955, by and between W. A. GREER and BERTHA GREER, husband and wife, of Albuquerque, New Mexico, parties of the first part and hereinafter called the Owners, and FOUR CORNERS EXPLORATION COMPANY, a copartnership composed of F. O. Kunzl and Irving Rapaport, of Grants, New Mexico, party of the second part and hereinafter called the Operator, WITNESSETH:

That for and in consideration of the mutual covenants and agreements herein contained on the part of the parties hereto to be kept and performed, it is hereby agreed as follows:

1. This agreement to the extent herein specifically set forth and provided shall amend, modify and supplement that certain contract entered into between the parties hereto under date of August 29, 1955, designated as Operating Agreement and having to do with the operation by the said Operator of lode mining claims described as Bachelor and Bachelor 2 to 6, both inclusive, and Pinos and Pinos 2 and 3, located in San Miguel County, Colorado, as per location notices recorded in the office of the Recorder of San Miguel County, Colorado, and Divide Claims 25 to 28, both inclusive, located in Section 24, Township 13 North, Range 10 West, N.M. P.M., McKinley County, New Mexico, as per location notices thereof filed in the office of the County Clerk and Ex officio Recorder of McKinley County, New Mexico. Said contract was filed for record in the Office of the Recorder of San Miguel

County, Colorado on September 19, 1955, and recorded in Book 11, page 56 of the records of said county and was filed for record in the Office of the County Clerk of McKinley County, New Mexico, on October 15, 1955, and was recorded in Book 11 of Leases, pages 56 to 67, both inclusive, of the records of said county.

2. Said agreement hereinbefore described to the contrary notwithstanding, the United States of America and its appropriate department or agency shall have a first and prior lien upon said lode mining claim hereinbefore described for the preservation of its right to a percentage royalty on production as set forth in D.M.E.A. Docket No. 3555, Contract No. Idm-E791 and neither the Owner nor the Operator shall transfer, convey nor surrender the land nor any right, title or interest therein, nor permit nor suffer any claim, lien or encumbrances thereon without expressly referring to and providing in the instrument of conveyance, lien or encumbrances for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof as herein set forth.

IN WITNESS WHEREOF, the parties to this agreement have hereunto set their hands this 5th day of November, 1955, as of August 29, 1955.

W. A. Green

Bertha Green

OWNERS

FOUR CORNERS URANIUM COMPANY,
a copartnership,

By _____
Partner

OPERATOR

STATE OF NEW MEXICO }
County of Bernalillo } ss.

The foregoing instrument was acknowledged before me this 22nd day of November, 1955, by W. A. Greer and Bertha Greer, husband and wife.

Donald W. Eakin
Notary Public

My commission expires:
4/22/57

STATE OF COLORADO }
County of Mesa } ss.

The foregoing instrument was acknowledged before me this 7 day of November, 1955, by F. O. Kunel, partner, on behalf of Four Corners Exploration Company, a copartnership.

Lois M. Hagner
Notary Public in and for
Mesa County, Colo.

My commission expires:
My Commission expires September 20, 1959

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

224 New Customhouse
Denver 2, Colorado

RECEIVED
NOV 14 1955

November 10, 1955

Mr. W. A. Greer
502 Alise Drive
Albuquerque, New Mexico

Re: Docket DMEA-3555 (Uranium)
Contract Idm-E791, W. A.
Greer, San Miguel and Montrose Counties, Colorado

Dear Mr. Greer:

Your Monthly Progress Report and Voucher for the period August 10 - September 7, 1955 has been received. We are withholding payment of the Voucher pending notice that the Operating Agreement between you and your wife and Four Corners Exploration Company has been revised as requested by the Acting Administrator, Defense Minerals Exploration Administration, in his letter to you dated October 26, 1955.

Very truly yours,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

By J. W. Townsend
J. W. Townsend

JDC:jy
Copy to:
F. O. Manol
Four Corners Exploration Company
1118 Main Street
Grand Junction, Colo.

Sec. Op. Comm. (2) Corresp. File E791
Harshman Townsend
Shaw (2) Cooper
Chron.

Surname copy

700

Ching
Ellis
Chambers
Selfridge
Gibson
Weatherdorf

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

NOV - 8 1955

DEPARTMENT OF THE INTERIOR

DMEA

14X4401(01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secy.)

T E L E T Y P E

W. M. TRAVER, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION III
224 NEW CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

REURTT NOVEMBER 4 W. A. GREER DOCKET 3555 HOLD UP PROCESSING AUGUST-SEPTEMBER VOUCHER UNTIL ASSURED OPERATING AGREEMENT REVISED.

George C. Selfridge

GEORGE C. SELFRIDGE
CHAIRMAN, OPERATING COMMITTEE

MChing/gla
11-7-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Ching
Confirmation to Region III

Chairman, Operating Committee

RECEIVED
NOV - 7 1955

DN 235 BUR MINES 11-4-55 4-10

CHAIRMAN, OPERATING COMMITTEE

REURLET 10-26 TO W A GREER, DMEA-3555, CONTRACT IDM-E791. SHALL WE PROCESS AUGUST - SEPTEMBER MF-104 VOUCHER PRIOR TO REVISION OF OPERATING AGREEMENT. PLEASE ADVISE BY TELETPXX TY TELETYPE.

J W TOWNSEND FOR J M TRAVER

Denver Colo.

Surname copy

700

Ching
Ellis
Chambers

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

Mr. W. A. Greer
502 Alisa Drive
Albuquerque, New Mexico

OCT 26 1955

Re: Docket No. DMEA-3555 (Uranium)
Contract No. Idm-8791
Bachelor Claims
Montrose and San Miguel
Counties, Colorado

Dear Mr. Greer:

We have recently been furnished a copy of the Operating Agreement between you and your wife and Four Corners Exploration Company wherein the latter is let into possession of the property covered by the captioned contract and is given the management, control and operation of the same.

Article 2 (d) of the subject contract provides that ". . . the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof."

Accordingly, it is requested that the above-referred-to Operating Agreement be revised to include a provision for the Government's royalty and lien and that a copy of the revised agreement be forwarded to this office.

Sincerely yours,

Frank E. Johnson
By ESF
Acting Administrator

Cy to: F. O. Manol
Four Corners Exploration Company
1118 Main Street
Grand Junction, Colorado

MChing/gla
10-26-55
cc to: Admr.'s Reading File
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

R.C.J.

IN REPLY REFER TO:

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

RECEIVED
OCT 31 1955

October 25, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Gamma-ray log interpretations

Enclosed are four copies of gamma-ray log interpretations on the following DMEA exploration projects:

DMEA Docket

3297	Continental Uranium Co.
3514	Climax Uranium Company
3555	Four Corners Exploration Co.
3582	Walter Duncan Mining Company
3614	Western Oil Fields - Binder group
3628	Simpson Mining Company
3660	Mid-Continent Uranium

W. M. TRAVER

W. M. Traver

Enclosures

Copy to: Shaw (2)
Hasler
Harshman
Townsend
Chron.

ENHarshman:arh

Copy to USGS

Four Corners Exploration Co.
Bull Canyon
DMEA Docket No. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-7	384.0	None	0.0-342.7	271.4-272.8	1.4	300			<0.010	
				274.1-275.4	1.3	2800			0.080	
				293.1-294.2	1.1	420			<0.010	
				294.2-295.6	1.4	240			<0.005	
				316.2-317.0	0.8	400			0.011	
				317.0-318.3	1.3	1400			0.032	
				318.7-319.4	0.7	400			0.012	
				319.4-320.3	0.9	200			<0.005	
				335.0-336.2	1.2	1200			0.027	
				338.6-340.7	2.1	260			<0.005	
B-8	351.0	None	0.0-229.7	Barren						
B-9	328.0	None	0.0-326.0	Barren						
B-11	352.5	None	0.0-312.3	251.3-252.1	0.8	400			0.011	
				252.1-254.0	1.9	240			<0.005	
				254.0-254.7	0.7	480			0.015	
B-14	367.0	None	1.3-255.5	Barren						

* From top to bottom depths

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

Ruth Berger

OCT 24 1955

Memorandum

To: The Administrator, DMEA
Attention: Chief, Rare & Miscellaneous Metals Division

From: Associate Solicitor, Division of Mineral Resources

Subject: Docket No. DMEA-3555
W. A. Greer (Uranium)

With a reference slip dated October 11, Mr. Ellis transmitted a copy of an "Operating Agreement" executed by W. A. Greer and wife, Bertha, and by Four Corners Exploration Company, a partnership composed of H. A. Manol and Irving Rapaport. It was requested that this office review the agreement and take such action as is deemed necessary.

The subject exploration contract, dated April 28, 1955, is written on Form MF-200A of June 1954, and states that the land is held by the Operator as a lessee. We understand from Mr. Ching, informally, that the work is very close to completion. The docket indicates that the Government has known since July 1955, that the Four Corners Exploration Company has been performing the project work for the Operator.

The Operating Agreement is dated August 29, 1955, and recites that W. A. Greer and wife have formed a joint venture with Four Corners Exploration Company for the operation of certain properties, including all the land that is the subject of the exploration contract. In brief, the agreement provides for the management, control, and operation of the properties and control of all normal business functions by Four Corners. The agreement contemplates that part of the exploration costs will be financed by monies obtained from DMEA. However, the agreement does not expressly refer to the Government's right to percentage royalty and lien for payment thereof.

The foregoing indicates that the Operator has assigned rights under the contract without the written consent of the Government, as required by Article 1; and has given up possession of the land, without expressly

referring to and providing for the Government's right to percentage royalty and lien for payment thereof, both as required by Article 2(d).

As it appears that the project work is almost completed and the Government has not been harmed in any way by the Operator's technical defaults concerning possession of the land and assignment of rights under the contract, there does not seem to be any point, at this time, in raising these questions. However, in regard to the Operator's failure to make express provision in the Operating Agreement for the Government's royalty and lien, it is appropriate to request the revision of the Operating Agreement to include such a provision, even though it would seem that the Joint Venture is on actual notice of the Government's rights respecting royalty. It is suggested that a letter be written to the Operator requesting that such revision be made.

Robert P. Dwyer

Robert P. Dwyer

HCRubin/weg
October 24, 1955

Copies to: DMEA Docket
Sol. Docket
Mr. Ellis (2)
Mr. R. P. Dwyer
Mr. H. C. Rubin
Chron.
Mr. G. C. Selfridge (2)

October 24, 1955

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare and Miscellaneous Metals Division

Subject: Amendment to contract

Mr. Ching has reviewed and approved Amendment No. 1, dated October 17, 1955, to Contract Idm-E791, Docket No. DMEA-3555, W. A. Greer.

Grace L. Ault

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

RECEIVED
OCT 2 0 1955

October 12, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer, (Bachelor claims), Montrose and San Miguel Counties, Colorado

Enclosed are the original and ~~three~~ two copies of Amendment No. 1 that has been prepared and executed in this office. This Amendment changes the wording of the work description under Stage II in Exhibit "A" of the contract to permit offset drilling near a previously drilled AEC Hole Z--102.

Offset drilling near this AEC hole was authorized by the work approval prepared in this office, dated September 26, 1955, four copies of which were sent to you.

Your attention is directed to the signatures on Amendment No. 1. This Amendment was signed both by W. A. Greer and F. O. Manol, Partner, Four Corners Exploration Company. Four Corners Exploration Company has an operating agreement with Mr. Greer to administer work on land controlled by Greer. On October 7, 1955, we sent you copies of this agreement and requested advice on whether or not any document would have to be prepared for attachment to the contract. As both parties have signed this Amendment, we believe that the interest of the Government is fully protected.

RECEIVED
DEC - 9 1955
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

W. M. Traver

By J W Townsend
J. W. Townsend

Enclosures

700
Mr. Chiu
Contract file

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

224 New Customhouse
Denver 2, Colorado

October 11, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Gamma-ray log interpretations for:
DMEA 2771, Contract Idm-E577, Gramlich Exploration Company
DMEA 3297, Contract Idm-E800, Continental Uranium, Inc.
DMEA 3449, Contract Idm-E745, United States Uranium Company
DMEA 3475, Contract Idm-E760, Amuranium Corporation
DMEA 3555, Contract Idm-E791, W. A. Greer (Four Corners Exploration Company)
DMEA 3649, Contract Idm-E812, Simpson et al Mining Company
DMEA-3579, Contract Idm-E794, Eula Belle Uranium, Inc.
DMEA 3582, Contract Idm-E796, Walter Duncan Mining Company
DMEA 3514, Contract Idm-E823, Climax Uranium Company
DMEA 3614, Contract Idm-E795, Western Oil Fields, Inc.

1 set to USGS
10/19/55

Enclosed are four copies of gamma-ray log interpretations for holes drilled on the subject properties with transmittal memorandum by E. N. Harshman, Region III DMEA Field Team member.

W. M. Traver

By J. W. Townsend

JU:ab

c
o
p
y

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

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

October 6, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N.Harshman

Subject: Gamma-ray log interpretation data

Enclosed are eight copies each of gamma-ray log interpretations for the following projects:

DMEA 2771 - Walter Gramlich
" 3297 - Continental Uranium Corp., Big Indian area
" 3449 - U. S. Uranium, Red Hill claim
" 3475 - Amuranium Corporation
" 3555 - Four Corners Exploration Co., Bull Canyon
" 3571 - Simpson Mining Company, Rajah claims
" 3579 - Herome Craig, Ula Bella claims
" 3582 - Walter Duncan Mining Co.
" 3514 - Climax Uranium, Beaver Mesa
" 3614 - Western Oil Fields, Binder group

Four copies of each log interpretation should be forwarded to the Chairman of the Operating Committee for information.

/s/ E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

c
o
p
y

W.A. Greer
Four Corners Exploration Co.
Bull Canyon
DMEA Docket No. 3555

GAMMA-RAY LOG INTERPRETATION

Hole No.	Depth Drilled	Depth Cased	Depth Logged From* To	Anomaly Detected From* To	Anomaly Thickness	Counts per minute	CPM Corrected for Casing	CPM Corrected for G-M Tube	Grade $\%_e U_3O_8$	Remarks
B-10	346.5	None	0.0-346.5	265.9-266.8	0.9	260			≥0.010	
				289.3-290.4	1.1	520			0.014	
				290.4-290.9	0.5	260			<0.010	
				290.9-291.9	1.0	770			0.025	
				296.8-298.0	1.2	650			0.017	
				305.6-307.3	1.7	200			<0.005	
				335.0-337.0	2.0	6800			0.210	
B-12	350.0	None	0.0-319.7	270.7-273.2	2.5	3000			0.074	

* From top to bottom depths

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

RECEIVED
OCT 10 1955

224 New Customhouse
Denver 2, Colorado

October 7, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer, Bachelor claims, Montrose and San Miguel Counties, Colorado

Enclosed please find three copies of an Operating Agreement between W. A. and Bertha Greer and Four Corners Exploration Company. Also enclosed are three copies of the transmittal letter, dated September 28, 1955, from F. O. Manol, partner, Four Corners Exploration Company.

This agreement appears to be one of management, whereby the exploration project contract holder, W. A. Greer, has given full authority to the Four Corners Exploration Company to operate all property held by Greer and his wife. Four Corners Exploration Company are also conducting another exploration program under Contract Idm-E671.

We are sending you copies of this agreement for review by the legal department and for possible preparation of any document necessary for attachment to the subject contract. The last line of Article one, on page one, in this agreement is particularly brought to your attention.

Enclosures

W. M. Traver

FOUR CORNERS EXPLORATION COMPANY
1118 Main Street Box 116
Grand Junction, Colo. Grants, New Mexico
September 28, 1955

(COPY)

Irving Rappaport
F. O. Manol

Mr. William Trever
Defense Minerals Exploration Administration
224 New Customhouse
Denver, Colorado

RECEIVED
OCT 10 1955

DMEA Docket 3555

Dear Mr. Trever:

In compliance with the suggestion of Mr. Wm. Ehmler of your Grand Junction office, I am mailing you herewith a signed and notarized copy of an Operating Agreement dated August 29, 1955 between the Greers and the Four Corners Exploration Company; by which instrument the operating rights of the property under the subject Docket were transferred and assigned to our company.

I have been holding this up waiting notification from the San Miguel County Clerk and Recorder of recording data usually supplied with documents of this kind. Today over the telephone I was informed by the San Miguel County Recorder that the original copy of the document had not yet been returned by whoever does their photostating and that therefore Book and Page recording numbers have not yet been assigned.

If your office needs more than one copy of the enclosed document please have some photostated and have the invoice for the charges mailed to us here in Grand Junction.

Please advise if you will need the recording data referred to above.

Sincerely,

/s/ F. O. Manol
F. O. Manol
1118 Main St.
Grand Junction, Colorado

RECEIVED
OCT 10 1955

OPERATING AGREEMENT

THIS AGREEMENT, Made and entered into this 29th day of August, 1955, by and between W. A. GREER and BERTHA GREER, husband and wife, of Albuquerque, New Mexico, parties of the first part and hereinafter called the Owners, and FOUR CORNERS EXPLORATION COMPANY, a copartnership composed of F. O. Manol and Irving Rapaport of Grants, New Mexico, party of the second part and hereinafter called the Operator,

WITNESSETH:

That for and in consideration of the mutual covenants and agreements herein contained on the part of the parties hereto to be kept and performed, it is hereby agreed as follows:

1. The Owners are the holders of the leases, lode mining claims and other mineral interests set forth in Exhibit "A" attached hereto and made a part hereof, said mining claims, leases and mineral interests being hereinafter referred to as the "mining properties". Said mining properties hereinafter for divisional purposes may also be referred to as the "Colorado group of claims" and the "New Mexico group of claims". The Operator possesses capital, operating experience, geologic knowledge and management skill. Owners and Operator therefore agree and do hereby form a joint venture for the operation of the properties described in Exhibit "A", and the Operator is hereby let into possession of said mining properties and shall have the management, control and operation of the same in accordance with the terms and conditions herein contained.

2. The Operator agrees to lend to the venture monies as needed up to the sum of Two Hundred Thousand and No/100 ($200,000.00) Dollars, if necessary, for use in the following manner:

(a) The Operator is to pay the Owners simultaneously with the execution of these presents the sum of $ [illegible] to cover all out-of-pocket expenses incurred by the said Owners in the acquisition and development of said mining properties. These expenses shall be itemized against the

individual mining properties for which they were incurred. These expenses shall be considered as operating expenses of the venture and not as a cost of entry into this venture.

(b) One Hundred Fifty Thousand and No/100 ($150,000.00) Dollars may be kept in reserve at the discretion of the Operator for shaft-sinking, camp building and the purchase of mining equipment once an economic ore body has been blocked out in the opinion of the Operator.

(c) The differential between Two Hundred Thousand and No/100 ($200,000.00) Dollars and items (a) and (b) next above shall be the amount budgeted for exploratory and development drilling and incidental expenses thereto. This amount is agreed to be adequate for exploratory and development drilling for the reason that the greater part of these costs will be financed by loans secured for this purpose from the Defense Minerals Exploration Administration.

(d) It is agreed by both the Owners and the Operator that these loans are to be held at the necessary adequate minimum rather than having idle interest-bearing capital charged to the venture.

(e) The Operator may advance more than Two Hundred Thousand and No/100 ($200,000.00) Dollars in total if he so wishes, providing that such additional loans prove to be necessary and are deemed economic and advisable. Such additional loans would be budgeted for use as the situation would require.

3. All of the operations conducted by the said Operator shall be in a good, careful, skillful and workmanlike manner, it being the purpose of the Owners in entering into this agreement to obtain the managerial and professional skills of the said Operator and the necessary working capital for the proper exploration, development and production of said mining properties. Speed and high production are the essence of this agreement. During the organizational period of this venture F. O. Manol shall contribute whatever amount of his personal time and effort is necessary to get said mining properties into operation in the shortest possible time, and thereafter the said F. O. Manol shall

continue to render services to the venture as the general manager of the operations.

4. The advance of operating expenses to be made by the Operator shall constitute a loan to the venture and shall be repayable out of profits only, with interest at the rate of four (4%) per cent per annum from the date of the advance of the respective portions of such loan.

5. Profits and losses of the venture will be divided equally between the Owners and the Operator subject to the provision above with reference to repayment of the loan advanced by Operator. However, no more than twenty-five (25%) per cent of the profits of the venture will be distributed to Owners and Operator until the capital advance made by the Operator is repaid. Upon the repayment to the Operator of its entire advance, profits shall be computed at least quarterly and division of profits made at such time in amounts to be mutually agreed upon.

6. Neither of the parties constituting the said Operator shall receive salary or other compensation in lieu of salary for the time he shall personally expend in the performance of his duties herein undertaken, except for the division of profits above provided for. All normal expenses incurred by the Operator in connection with the venture will be reimbursed.

7. The Operator shall have during the term of this agreement sole control of all normal business functions of the operation. Regularly scheduled meetings shall be held at least four times each year between the Owners and the Operator to discuss operational problems. Either party may call such a meeting upon twenty (20) days' written notice if no regularly called meeting has been held during the preceding ninety (90) days. The exact time and place of said meeting shall be contained in said notice.

8. Additional properties may be acquired and brought under the terms of this agreement by mutual consent, with the said properties to be paid for out of the profits of this venture or as the parties may otherwise determine.

9. It is contemplated that certain of the mining properties may be sold. In the event of sale, the profits, if any, after deduction of costs of acquisition, unrecovered monies spent in exploration, development and production, and the expenses of sale, shall be divided equally between the Owners and the Operator.

10. Separate books and records pertaining to this venture shall be kept in a good and proper manner and on a normal current status at a fixed location, and such books and records shall be accessible to the Owners during normal business hours.

11. Nothing contained in this agreement shall obligate either the Owners or the Operator to limit their business efforts solely to this particular venture.

12. This agreement shall continue in full force and effect so long as any of the mining rights under which the Owners hold said mining properties remain in effect unless sooner terminated as hereinafter provided.

13. The Operator shall conduct its said operations in full accordance with the terms and provisions of the mining laws, rules and regulations under which any lode mining claims are held and under the terms and conditions of any leases or other written instruments under which any of said mining properties are held, and shall do all things that may be necessary to keep said mining properties in good standing.

14. None of said mining properties shall be sold except upon the mutual agreement of the Operator and the Owners.

15. The said Operator shall pay and charge to expense all rentals, royalties, fees, dues and charges required or necessary to be paid on any of said mining properties or the production thereof.

16. If the said Operator shall fail, refuse or neglect to carry out any of the terms or conditions of this agreement on its part to be kept and performed, the Owners may at their option give to the said Operator notice in writing of such default, and if the said Operator shall fail, refuse or neglect to correct said default within thirty (30)

days of the receipt of such notice, then the said Owners may terminate this agreement.

17. Notices, payments and other communications required or permitted hereunder shall be deemed to have been properly given or delivered when made in writing and delivered personally or when sent by registered mail with all necessary postage prepaid, addressed as follows:

Four Corners Exploration Company
Grants, New Mexico

W. A. Greer and Bertha Greer
502 Alise Dr., NE
Albuquerque, New Mexico

Either party may change the address to which notices or other communications are to be mailed by giving written notice thereof to the other party.

18. In case of disagreement as to any matter relating to operations hereunder which cannot be settled amicably, upon five (5) days' written notice given by one party to the other, such matter and disagreement shall be submitted to a board of three (3) arbitrators. Each party hereto agrees to appoint one (1) arbitrator within ten (10) days after such notice is given. The third arbitrator shall be chosen promptly by the two so appointed. All three (3) arbitrators shall be disinterested practical uranium mining operators. Pending a decision of such board of arbitrators the parties hereto shall remain bound by the express terms hereof. Any and all decisions rendered by a majority of such board of arbitrators shall be final and binding upon the parties hereto and adjustments shall be made in conformity with their award.

19. The Operator shall carry, with responsible insurance carriers, workmen's compensation and employers liability insurance, automotive public liability and property damage insurance and general public liability and property damage insurance covering the activities with respect to the mining properties, protecting the Owners and the Operator in and for amounts adequate and as customarily carried with respect to operations of the nature and extent covered hereby.

20. In the event of the death of either of the Owners, the heirs, legatees or devisees of such Owner shall succeed to the rights and

interests of such Owner. In the event of the death of either of the partners constituting the Operator, the remaining partner shall carry out and perform all of the managerial and operational duties herein provided to be performed by the Operator and shall account to the heirs, legatees and devisees of the deceased partner in such manner and under such circumstances as such partner may provide. It is hereby agreed that the death of either partner shall not terminate the said partnership so far as this agreement is concerned, and that the surviving partner will fully carry out and perform all the terms and conditions herein contained on the part of the partnership to be kept and performed. In the event of the death of both of the partners constituting the Operator herein, this agreement shall terminate and the said Owners or their heirs, successors or assigns shall be immediately entitled to re-enter into possession of all of said premises and property and shall be obligated only to account to the legal representatives of the partnership or the heirs, legatees or devisees of the individual partners for the profits of said business accruing to the date of such termination and for any balance then remaining owing on account of operating capital advanced.

21. In the event of dissolution of this venture prior to complete repayment of the capital advance made by Operator, all proceeds from the sale of personal property belonging to the venture shall go to Operator. Once the indebtedness is liquidated, the proceeds from any such sales shall be divided equally between Owners and Operator as profits of the venture.

22. These presents shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, executors, administrators and assigns, except as herein otherwise provided.

IN WITNESS WHEREOF, the parties to this agreement have hereunto

set their hands the day and year herein first above written.

W. A. Greer

W. A. Greer

Bertha Greer

Bertha Greer

OWNERS

FOUR CORNERS EXPLORATION COMPANY

By _____

F. O. Manol, Partner

By _____

Irving Rapaport, Partner

OPERATOR

STATE OF NEW MEXICO)
County of Bernalillo) ss.

On this 19th day of August, 1955, before me personally appeared W. A. GREER and BERTHA GREER, husband and wife, to me known to be the persons described in and who executed the foregoing instrument, and acknowledged that they executed the same as their free act and deed.

WITNESS my hand and seal the day and year last above written.

My commission expires:
February 1, 1959

_____
Notary Public

STATE OF NEW MEXICO)
County of) ss.

On this _____ day of August, 1955, before me personally appeared F. O. MANOL and IRVING RAPAPORT, to me known to be the persons who executed the foregoing instrument in behalf of FOUR CORNERS EXPLORATION COMPANY, a copartnership composed of the said F. O. Manol and Irving Rapaport, and acknowledged that they executed the same as the free act and deed of said Four Corners Exploration Company.

WITNESS my hand and seal the day and year last above written.

_____
Notary Public

My commission expires:

_____

RECEIVED
OCT 10 1955

EXHIBIT A TO AGREEMENT BETWEEN W. A. GREER AND BERTHA GREER, HUSBAND AND WIFE, PARTIES OF THE FIRST PART, AND FOUR CORNERS EXPLORATION COMPANY, A COPARTNERSHIP, PARTY OF THE SECOND PART, DATED AUGUST _____, 1955.

- -

The mining properties referred to in the attached Agreement are as follows:

I

All of the rights and interests acquired by W. A. Greer under the following interests:

(a) Mining lease from Homer N. Rosenquist to Louis P. Gaggini as recorded in the office of the Recorder of San Miguel County, Colorado, on June 14, 1954, in Book 223, page 146, covering the following described lode mining claims, to wit:

"Name of Claim	Location Certificate recorded in Book	Page
Slick Rim		
Bachelor	174	518
Bachelor #2	174	519
Bachelor #3	174	519
Bachelor #4	174	520
Bachelor #5	174	520
Bachelor #6	174	521
Pines	175	136
Pines #2	175	137
Pines #3	175	137".

(b) Assignment by Louis P. Gaggini to W. A. Greer of the lease referred to in paragraph (a) dated June 4, 1954, and recorded in the office of the Recorder of San Miguel County, Colorado, on June 14, 1954, which assignment recites that it covers the following described lode mining claims, to wit:

"Name of Claim	Location Certificate recorded in Book	Page
Bachelor	174	518
Bachelor #2	174	519
Bachelor #3	174	519
Bachelor #4	174	520
Bachelor #5	174	520
Bachelor #6	174	521
Pines	175	136
Pines #2	175	137
Pines #3	175	137".

(c) Amendment to the mining lease described in paragraph (a) hereof executed by Homer N. Rosenquist and Louis P. Gaggini on or about August 23, 1954, which said amendment is undated but is recorded in the office of the County Clerk of San Miguel County, Colorado.

PAGE TWO TO EXHIBIT A TO AGREEMENT BETWEEN W. A. GREER AND BERTHA GREER, HUSBAND AND WIFE, PARTIES OF THE FIRST PART, AND FOUR CORNERS EXPLORATION COMPANY, A COPARTNERSHIP, PARTY OF THE SECOND PART.

(d) Agreement between Homer N. Rosenquist, Louis P. Gaggini and W. A. Greer, dated July 25, 1955, with respect to the modification of certain terms of said lease of March 15, 1954, and the settlement of the lawsuit pending in the District Court of San Miguel County, Colorado, with reference thereto.

Said claims as will appear from the instruments referred to are subject to total royalties of twenty-two and one-half (22½%) per cent.

II

Lode Mining Claims Divide No. 25 to 28, both inclusive, located in Section 24, Township 13 North, Range 10 West, N.M.P.M., McKinley County, New Mexico, as per location notices thereof filed in the office of the County Clerk and Ex-officio Recorder of McKinley County, New Mexico, more particularly described as follows, to wit:

Divide #25

Beginning at the southwest corner of this claim, at which point a 4" by 4" by 4' post 3,480 feet N89° 57' W of the southeast corner of Section 24, T13N, R9W, thence 1500 feet N0°12' W to a point 60 feet S0°E of a 4" by 4" by 4' post; the true location of the corner falls toward the middle of an almost vertical cliff; thence 600 feet S89° 57'E to a 4" by 4" by 4' post, thence 1500 feet S0° 12' E to a 4" by 4" by 4' post, thence 600' N89° 57' W to the point of beginning.

Divide #26

Beginning at the southwest corner of this claim, 2880 feet N89°57' W of the southeast corner of Section 24, at which point a 4" by 4" by 4' post is located, thence 1500' N0°12' W to a 4" by 4" by 4' post, thence 600 feet S 89° 57' E to a 4" by 4" by 4' post, thence 1500 feet S0° 12' E to a 4" by 4" by 4' post, thence N 89° 57' W to the point of beginning.

Divide #27

Beginning at the southwest corner of this claim 2280 feet N 89°57' W of the southeast corner of Section 24, at which point a 4" by 4" by 4' post is located, thence 1500 feet N0°12' W to a 4" by 4" by 4' post, thence 600 feet S89°57'E to a 4" by 4" by 4' post, thence 1500 feet S0°12'E to a 4" by 4" by 4' post, thence 600 feet N89°57' W to the southwest corner of this claim.

Page THREE TO EXHIBIT A TO AGREEMENT BETWEEN W. A. GREER AND BERTHA GREER, HUSBAND AND WIFE, PARTIES OF THE FIRST PART, AND FOUR CORNERS EXPLORATION COMPANY, A COPARTNERSHIP, PARTY OF THE SECOND PART.

Divide #28

Beginning at the southwest corner of this claim 1680 feet N89°57'W of the southeast corner of Section 24, at which point a 4" by 4" by 4' post is located, thence 1500 feet N0°12' W to a 4" by 4" by 4' post, thence 480 feet S 80°57' E to a 4" by 4" by 4' post, thence 1500 feet S0°12' E to a 4" by 4" by 4' post, thence 480 feet N89°57'W to the southwest corner of this claim.

The locator of said claims is W. A. Greer. Said claims are subject to a ten (10%) per cent royalty to Bertha Greer.

W. A. Greer

Bertha Greer

OWNERS

FOUR CORNERS EXPLORATION COMPANY

By _____
Partner

By _____
Partner

OPERATOR

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

224 New Customhouse
Denver 2, Colorado

September 26, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W. A. Greer (Bachelor Claims), Montrose and San Miguel Counties, Colorado

Enclosed are four copies for your review and filing of Region III Field Team action, including relevant data, concerned with a request from the Operator of the subject contract for Stage II drilling.

These data are as follows:

1. Letter from the Operator's representative, I. Rapaport, requesting Stage II drilling.

2. Joint memorandum from U.S.B.M. and U.S.G.S. field representatives, with initialed concurrence by their respective supervisors, recommending approval of the request.

3. The Region III Field Team's letter authorizing the Stage II drilling.

W. M. Traver

W. M. Traver

Enclosures

RECEIVED
SEP 29 1955

224 New Customhouse
Denver 2, Colorado

September 26, 1955

Mr. W. A. Greer
c/o Mr. I. Rapaport
Four Corners Exploration Company
1118 Main Street
Grand Junction, Colorado

Re: Docket [illegible] 3555 (Uranium),
Contract Idm-8791, W. A. Greer,
(Bachelor claims) Montrose and
San Miguel Counties, Colorado

Dear Mr. Greer:

Reference is made to a letter of September 12, 1955, signed by I. Rapaport relative to Stage II drilling under Contract Idm-8791.

Confirming verbal approval of September 12, 1955, you are authorized to drill the following holes under Stage II of the Contract:

1. Four holes as offsets to Stage I Hole B-12, averaging approximately 375 feet in depth.

2. Three holes as offsets to Stage I Hole B-10, averaging approximately 360 feet in depth.

3. Four holes as offsets to AEC Hole Z-102, averaging approximately 400 feet in depth.

These drill holes are on the Bachelor Nos. 3 and 5 claims at locations shown by a letter X within a red square [X] on the map Figure I, titled "Map of part of Bull Canyon District, showing location of Stage I drill holes and proposed Stage II drill holes on Bachelor Group of claims, W. A. Greer (Four Corners Exploration Co.) San Miguel County, Colorado," attached to and made a part of this work approval. The drilling of the eleven holes must comply with all provisions and is subject to all conditions of the contract.

Nothing in this work approval shall be construed to increase the estimated total cost of the project, the amount of the Government's contribution, nor the agreed unit cost for any item of work.

Very truly yours,

IBWA Field Team, Region III

W. M. Traver

W. M. Traver

E. N. Hawkinson

E. N. Hawkinson

Enclosure

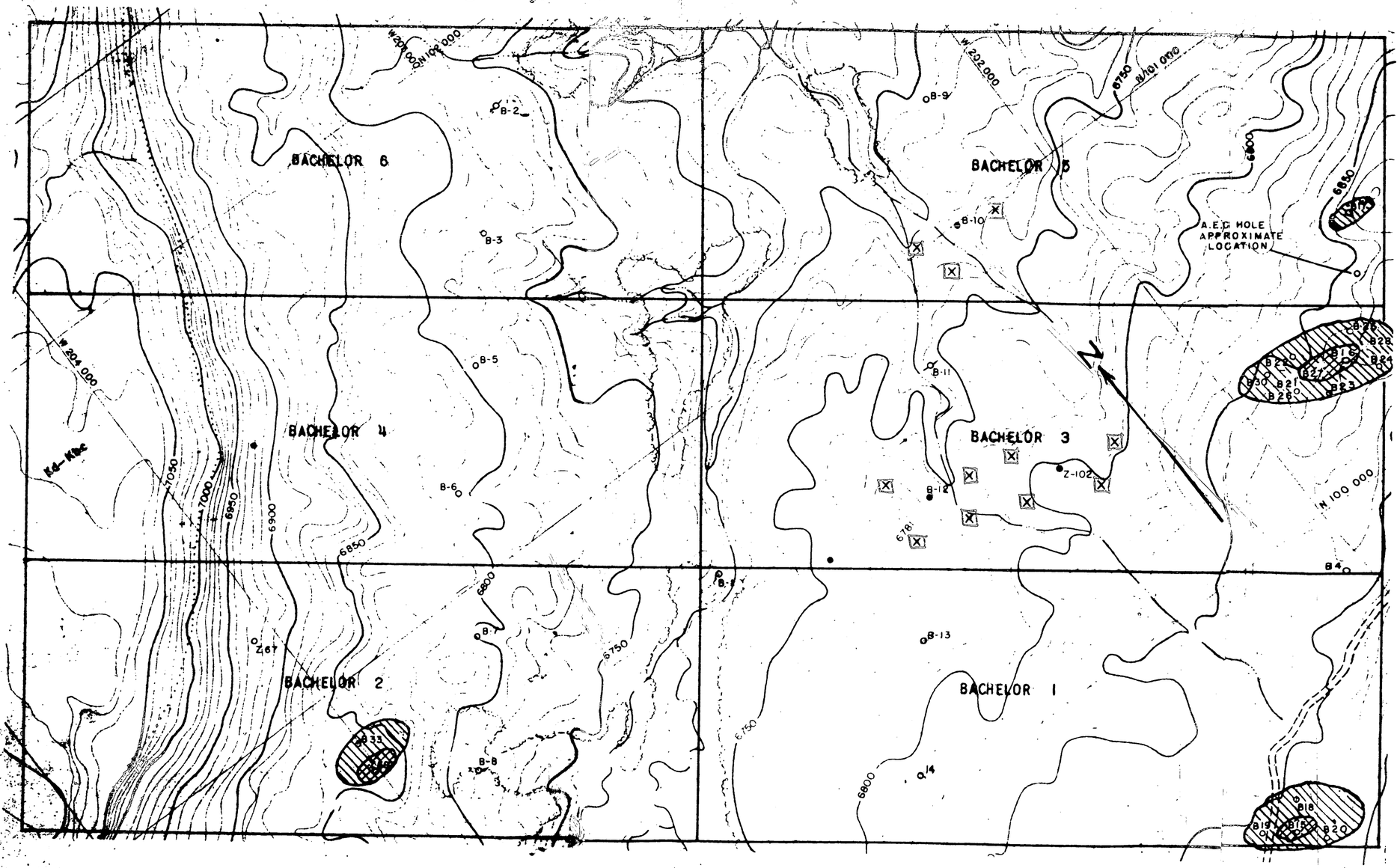
cc Mr. W. A. Greer
508 Aliso Drive
Albuquerque, N. M.

WMT:yel
cc: Chairman, Operating Comm. (4)
Christensen
Hawkinson
Hosler
Shaw (2)
Territorial
Assistant ETYA
Subject ETYA
Chron.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

9

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3555 REVISED SEPTEMBER 1955



EXPLANATION

Kd-Kbc	CRETACEOUS DAKOTA-BURRO CANYON
Jmb	JURASSIC MORRISON BRUSHY BASIN MEMBER
	FORMATION CONTACT
	INFERRED MINERALIZED GROUND
	INFERRED ORE
	DRILL HOLES. HOLES WITH NUMBERS PREFIXED Z DRILLED BY ATOMIC ENERGY COMMISSION. HOLE NUMBERS B-2 THRU B-14 DRILLED UNDER D.M.E.A. CONTRACT, STAGE I. ALL OTHER HOLES DRILLED BY W. A. GREER
○	BARREN
ø	WEAKLY MINERALIZED
●	ORE-BEARING
X	LOCATION OF PROPOSED STAGE II DRILL HOLE

Note: TOPOGRAPHY, GEOLOGY AND CLAIM BOUNDARIES FROM APPLICANTS MAP

200 0 400 FEET
CONTOUR INTERVAL 10 FEET

SECTION 15 (UNSURVEYED)
T. 45 N., R. 18 W.
N.M.P.M.

Figure 1. MAP OF PART OF BULL CANYON DISTRICT, SHOWING LOCATION OF STAGE I DRILL HOLES AND PROPOSED STAGE II DRILL HOLES ON BACHELOR GROUP OF CLAIMS, W.A. GREER (FOUR CORNERS EXPLORATION CO.) SAN MIGUEL COUNTY, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Colorado Plateau District
P. O. Box 360
Grand Junction, Colorado

DMEA
Date Rec'd.
SEP 23 1955
BUREAU OF MINES
Denver, Colorado

September 21, 1955

Memorandum

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

From: J. W. Hasler, USGS
M. H. Salsbury, USBM

O.K. E.M. Hazelman

Subject: Request for Stage II drilling DMEA docket 3555 contract Idm-E 791 Four Corners Exploration Co. Bachelor group, San Miguel and Montrose Counties, Colorado.

Mr. M. H. Salsbury and I have carefully reviewed the applicants request to drill stage II holes as offset holes found to contain uranium material of ore grade in stage I.

The applicant has requested to offset DMEA hole B-12 with four holes, not less than 100 feet from any previously drilled hole and averaging 375 feet in depth. Hole B-12 discovered 3.7 feet of material assaying 0.72 eU_3O_8 at a depth of 226.5 feet (Fig. 1).

The applicant also requests three stage II offset holes around DMEA hole B-10 averaging 360 feet in depth and not less than 100 feet from any previously drilled hole, and four stage II offset holes from AEC hole Z-102 averaging 400 feet in depth and not less than 100 feet from any previously drilled hole.

DMEA hole B-10 discovered 3.0 feet of 0.48 percent eU_3O_8 between 334 feet and 337 feet as reported by AEC gamma-ray equipment, however, the applicant believes there may be only 2.7 feet of 0.20 percent U_3O_8 in this zone. AEC hole Z-102 found .3 feet of 0.56 percent U_3O_8.

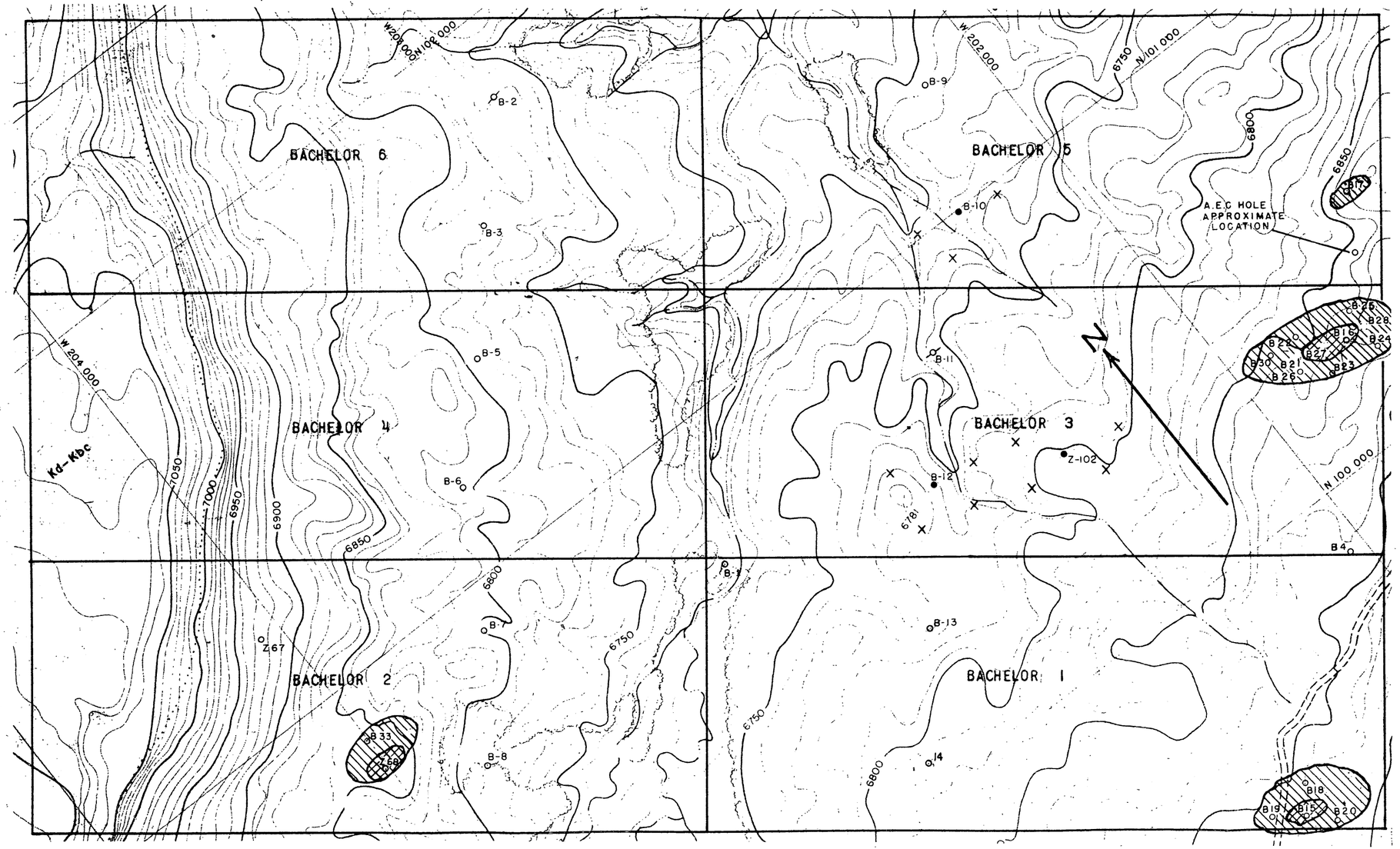
It is recommended that these eleven stage II holes be drilled as proposed by the applicant as there is a good chance of discovering deposits of commercial grade as indicated by stage I drilling. Verbal approval was granted by the Region III Field Team on September 12, and the applicant was notified on that date.

J. William Hasler
J. William Hasler
Geologist

M. H. Salsbury
M. H. Salsbury
Mining Engineer

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3555 REVISED SEPTEMBER 1955



EXPLANATION

Kd-Kbc	CRETACEOUS DAKOTA-BURRO CANYON
Jmb	JURASSIC MORRISON BRUSHY BASIN MEMBER
	FORMATION CONTACT
	INFERRED MINERALIZED GROUND
	INFERRED ORE
	DRILL HOLES. HOLES WITH NUMBERS PREFIXED Z DRILLED BY ATOMIC ENERGY COMMISSION. HOLE NUMBERS B-2 THRU B-14 DRILLED UNDER D.M.E.A. CONTRACT, STAGE I. ALL OTHER HOLES DRILLED BY W. A. GREER
○	BARREN
⊘	WEAKLY MINERALIZED
●	ORE-BEARING
×	LOCATION OF PROPOSED STAGE II DRILL HOLE

Note: TOPOGRAPHY, GEOLOGY AND CLAIM BOUNDARIES FROM APPLICANTS MAP

200 0 400 FEET
CONTOUR INTERVAL 10 FEET

SECTION 15 (UNSURVEYED)
T. 45 N., R. 18 W.
N.M.P.M.

Figure 1. MAP OF PART OF BULL CANYON DISTRICT, SHOWING LOCATION OF STAGE I DRILL HOLES AND PROPOSED STAGE II DRILL HOLES ON BACHELOR GROUP OF CLAIMS, W. A. GREER (FOUR CORNERS EXPLORATION CO.) SAN MIGUEL COUNTY, COLORADO

FOUR CORNERS EXPLORATION COMPANY
1118 MAIN STREET
GRAND JUNCTION, COLO
BOX 116
GRANTS, NEW MEXICO

IRVING RAPAPORT
F. O. MANOL

September 12, 1955

Mr. William Traver
Defense Minerals Exploration Administration
224 New Customhouse
Denver, Colorado

DMEA Docket 3555

Dear Mr. Traver:

This is to request permission to offset with Stage 2 drilling under Docket 3555 AEC drill holes on the Bachelor Claims in Bull Canyon, Colorado. Mr. Louis Gaggini had previously requested this authority and had been told to prepare an amendment submitting the AEC report and data on the property. It was found that this information was confidential and could not be submitted by an individual not connected with the government. As an alternative, Mr. William Hassler of the Grand Junction office of the DMEA obtained, reviewed, and approved this proposal. (Letter of August 19, 1955 Hassler to Gaggini).

The first stage of drilling on the Bachelor Claims has been completed and a complete report on the results will be submitted as soon as the final assays have been received.

We now request permission to offset DMEA hole B-12 with four holes averaging 375 feet in depth at a minimum distance of 100 feet; DMEA hole B-10 with three holes averaging 360 feet in depth at a minimum distance of 100 feet; and AEC hole Z-102 with four holes averaging 400 feet in depth at a minimum of 100 feet. This request has been reviewed by Mr. Hassler who gave verbal approval August 12, 1955. It is proposed that the positions of the remaining seven holes under this contract be determined as the results of the above eleven holes are gained.

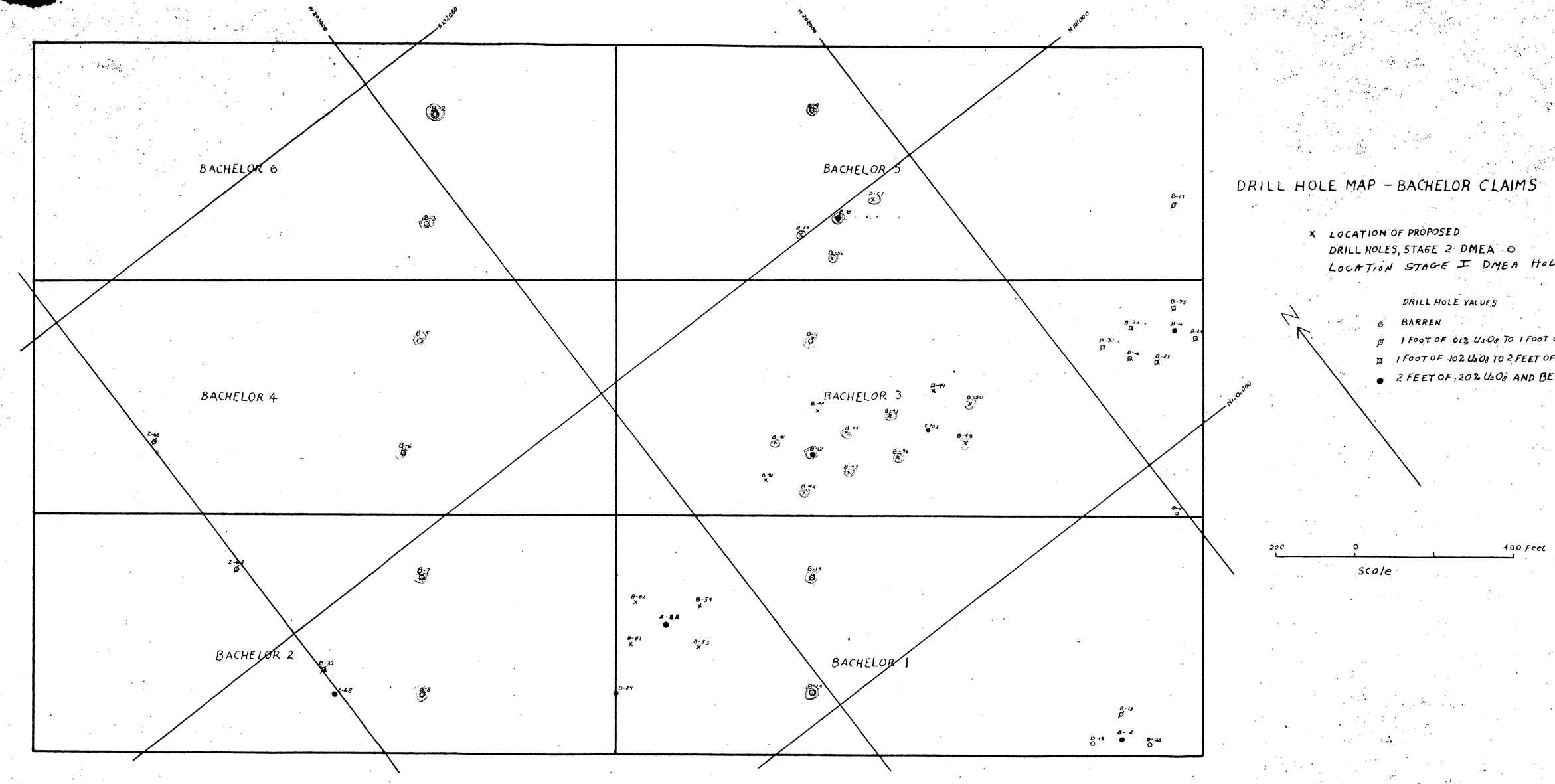
Should the present high rate of discovery be maintained on this property, it may be possible to initiate shaft sinking this year.

Yours truly,

I. Rapaport

by: F. O. Manol
F. O. Manol--Partner

cc- Mr. Wm. Traver (6)
Mr. Wm. Hassler(1)
Mr. W. A. Greer (1)


BACHELOR 6
BACHELOR 5
BACHELOR 4
BACHELOR 3
BACHELOR 2
BACHELOR 1
W 202000
N 102000
W 200000
N 101000
N 100,000
DRILL HOLE MAP – BACHELOR CLAIMS
X LOCATION OF PROPOSED DRILL HOLES, STAGE 2 DMEA
LOCATION STAGE I DMEA HOLES
DRILL HOLE VALUES
BARREN
1 FOOT OF .01% U_3O_8 TO 1 FOOT OF .10% U_3O_8
1 FOOT OF .10% U_3O_8 TO 2 FEET OF .20% U_3O_8
2 FEET OF .20% U_3O_8 AND BETTER
N
200
0
400 Feet
Scale

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

RECEIVED
AUG - 5 1955

224 New Customhouse
Denver 2, Colorado.

August 2, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3151 (Uranium) Contract Idm-E671
Four Corners Exploration Company
(Flat Top - Vilatie Claims Nos. 4 and 5)
McKinley County, New Mexico
and
Docket DMEA-3555 (Uranium) Contract Idm-E791
W. A. Greer (Bachelor Claims Nos. 2 - 61 incl.)
San Miguel County, Colorado

For your information there are enclosed two copies of a letter relative to the two subject dockets.

Evidently Mr. Rapaport is managing Contract Idm-E791 for W. A. Greer. He was the contractor on Idm-E671.

W. M. Traver

W. M. Traver

Encls.

UTAH | COLORADO
ARIZONA | NEW MEXICO

Four Corners Exploration Company

P. O. BOX 101 GRANTS, NEW MEXICO

[illegible] MADAFORT
[illegible]

[illegible] 20, [illegible]

[illegible] Beaver
[illegible] Corporation, [illegible]
[illegible] Box 722
Fort Lauderdale
[illegible], Colorado

Re: [illegible]
[illegible]

RECEIVED
AUG - 5 1955

Gentlemen:

[illegible] letter [illegible] the [illegible]
[illegible] received from the Four Corners [illegible]
[illegible] Corporation. [illegible]
[illegible] Company is [illegible] [illegible]

Arrangements to develop [illegible]
[illegible] with the [illegible] [illegible]
[illegible] for discussion [illegible]

[illegible]

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

RECEIVED
JUL - 5 1955

224 New Customhouse
Denver 2, Colorado

July 1, 1955

REGISTERED

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3555 (Uranium), Contract Idm-E791, W.A. Greer, San Miguel and Montrose Counties, Colorado

Enclosed are the Government, Division and Docket copies of Contract Idm-E791 which has been signed by the operator.

Copies of the contract have been given to the operator, the Finance Office, Region III, and a copy has been retained for our files.

W. M. Traver

W. M. Traver

Enclosures

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

224 New Customhouse
Denver 2, Colorado

July 1, 1955

RECEIVED
JUL - 5 1955

Registered

Mr. W.A. Greer
902 Alice Drive
Albuquerque, New Mexico

Re: Docket DMA 3555 (Uranium)
Contract Idm-1,92

Dear Mr. Greer:

Enclosed herewith is your copy of Exploration Project Contract No. Idm-1,92, Docket DMA 3555, which you signed June 20, 1955.

Also enclosed are six copies of Form EP-104 "Operator's Monthly Report and Voucher" and six copies of Form EP-104A "Operator's Unit Cost and Progress Report". At the completion of the first calendar month of operation and monthly thereafter you are required to submit five copies of the form to Mr. John P. Shaw, U.S. Bureau of Mines, Room 237, Building 20, Denver Federal Center, Denver 2, Colorado. The sixth form is for your records.

Please note that the monthly report requires a narrative report which should be accompanied by maps or sketches. The narrative report must be signed by the operator. The monthly report will not be processed for payment unless accompanied by a narrative report. Additional copies of Forms EP-104 and EP-104A will be furnished to you as required.

For your information and in reply to many questions that have been asked, after Forms EP-104 and EP-104A are received an engineer will check progress and approve your accounts, after which it will be sent to the Regional Office, Region III, U.S. Bureau of Mines, 224 New Customhouse, Denver 2, Colorado, for auditing and vouchering. If the report is in order, a check will be issued by the Treasury Department for the Government's portion of the costs. If you have any difficulty in completing these forms and the reports, please call on Mr. Shaw or this office for assistance.

In the matter of your claim for reimbursement of drilling costs, reimbursement to you under the terms of the contract will be on the basis of a hole or holes completed to the objective, therefore your monthly report should include only such holes that are completed.

Your attention is directed to the provision that Stage II work is contingent on the results obtained from Stage I and performance of the work under Stage II is subject to the prior approval of the Government.

When Stage I has been completed you should request approval from this office for the work you propose to perform under the next stage. Your request for the work approval must be in sextuplicate, complete with a map showing the location of the holes drilled under Stage I, the proposed location of holes to be drilled under Stage II and the results of the work performed under Stage I, including assay returns and any other pertinent data which will be of value to the Government in evaluating the work performed under Stage I. You should anticipate a suspension of operations between stages of work to enable the Government geologist and engineer to evaluate the results of the work performed and make their recommendations to this office relative to the additional work you propose.

To eliminate as much delay as possible, if that is of serious consideration, you should expedite forwarding of the results of the work completed and your request for the Government's approval of the additional work you propose.

Field representatives of the Government are not authorized to approve any changes in the work program or contract provisions. Such approval can only be given by the Washington office, DMEA, or the DMEA Field Team, Region III, which is comprised of E. M. Harshman, U.S. Geological Survey member, and W. M. Traver, U.S. Bureau of Mines member.

It is a regulation that reimbursement for the cost of work accomplished prior to the date of the contract will not be allowed. It is also a requirement that you notify this office in writing the date work actually commences under the contract, with a copy of your letter to Mr. Shaw.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enclosures

WMT/JP
cc Subject
Chron
Amendment File
Chairman, Op. Comm. (2)
Harshman
Shaw
Hasler
Townsend

Surname copy

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

Ching
Ellis
Rubin
Selfridge
Jefferson

JUN 16 1955

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

Re: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Bachelor Group
San Miguel and Montrose Counties,
Colorado

Dear Mr. Traver:

Enclosed are two copies each of a letter dated June 9, 1955, from Geo-Engineering and our telegraphic reply, in connection with substitution of a Performance Bond in lieu of an Owner's Consent to Lien.

Upon receipt of the Performance Bond, please change the recital under Article 2 (c) of the contract to read, "Subordination Agreement of Louis P. Gaggini and Performance Bond in lieu of Consent to Lien of owner."

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

MChing/gla
6/14/55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching

APPROVED:

J. H. Hedges (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

R.C.S.

Surname copy

Department of the Interior

DMEA

14-5103(01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secy.)

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

Ching
Ellis
Pontri
Hedges
Kiilsgaard
Selfridge
Johnson

JUN 16 1955

HAROLD A. CULP
GEO-ENGINEERING
304 Main Street
GRAND JUNCTION, COLORADO

REULIET JUNE 9, W. A. GREER, DOCKET 3555 PERFORMANCE BOND FOR $28,141.25 ACCEPTABLE IN LIEU OF OWNER'S CONSENT TO LIEN. SEND TO W. H. TRAVER, 224 NEW CUSTOMHOUSE BUILDING, DENVER 2, COLORADO.

Frank E. Johnson

FRANK E. JOHNSON, ACTING ADMINISTRATOR

MChing/gla 6-14-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching
Confirmation to Mr. Harold A. Culp

A.C.S.

6/13/55 gla

GEO-ENGINEERING
304 Main Street
Grand Junction, Colorado

RECEIVED
JUN 13 1955

June 9, 1955

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

Re: Docket DMEA-3555 (Uranium)
W. A. Greer (Bachelor Group)
San Miguel County and Montrose County
State of Colorado

Dear Mr. Mittendorf:

We are having difficulty getting an Owner's Consent to Lien on the Bachelor Group. Would a Performance Bond (Standard Form 25) in the amount of $28,151. 25 be acceptable in lien of the Owner's Consent to Lien?

Very truly yours,

GEO-ENGINEERING

by Harold A. Culp
Harold A. Culp

HAC:lm

Surname copy

Ching
Ellis
Selfridge
Mattenday

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

MAY 12 1955

Department of the Interior
DMEA
14X1401(01) Revolving Fund, Defence Production Act, Interior
(Allocated Working Fund to the Office of the Secy.)

LOUIS P. CAGGINI
GEO-ENGINEERING
304 MAIN STREET
GRAND JUNCTION, COLORADO

REGURLET MARCH 28 W. A. GREER DOCKET DMEA-3555 PLEASE

FORWARD REQUESTED FORMS TO W. N. TRAVER AT DENVER. HE HOLDS CONTRACT.

SIGNED

ERNEST W. ELLIS, CHIEF
RARE & MISC. METALS DIVISION, DMEA

MChing/gla
5-11-55
cc to: Admr.'s Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

R.G.

5/10/55 gla

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

224 New Customhouse
Denver 2, Colorado

May 5, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3555 (Uranium), W. A. Greer, (Batchelor group), San Miguel and Montrose Counties, Colorado

This will acknowledge receipt of your letter dated April 28, 1955 together with six copies of the short form contract.

We are holding all copies of the contract pending receipt of the Owner's Consent to Lien and subordination agreement forms. However, we note in your letter to the Applicant dated March 28, 1955 that you requested him to complete the forms and send them to your office. If and when they are received by your office, will you please forward them to us.

W. M. Traver

W. M. Traver

Surname 700

Ching
Ellis
Chamberlin
Selfridge
Johnson

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

Code 700
Mr. Ching

Messrs. J.E.Crawford,Rm.3641
T.H.Killsgaard,Rm.5224
J.O.Hosted,Rm.3210,GSA

Admr. Reading File
Operating Committee
Docket

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

APR 28 1955

Re: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Bachelor Group
San Miguel and Montrose Counties
Colorado

Dear Mr. Traver:

Enclosed are the original and five copies of a short-form contract between the Government and W. A. Greer, signed by the Administrator.

If you find the contract in order, it is ready for forwarding to the Operator for signature subject to the following requirements:

1. Insertion of a suitable final starting date under Article 3.

2. Receipt by you of the executed Owner's Consent to Lien and Subordination Agreement forms, requested of Geo-Engineering in our letter of March 28, 1955.

You will note that the Field Team's costs have been modified somewhat. This was necessary because costs, other than those listed under "Independent Contracts" in the Field Team report, were found to be unreasonably high.

Please make the usual distribution of copies after execution by the Operator.

Sincerely yours,

George C. Selfridge By ESY
Chairman, Operating Committee

MChing:am
4-26-55
cc to:

Enclosures

APPROVED:

/s/ Robert W. Geehan By ESY
Member, Bureau of Mines

Thor H. Killsgaard By ESY
Member, Geological Survey

R.C.S.

Rubin

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

APR 1 3 1955.

Memorandum

To: The Administrator, DMEA
Attention: Mr. E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3555, W. A. Greer, Uranium

As requested in Mr. Ching's memorandum of April 8, we have prepared the attached contract, in satisfactory legal form for execution, subject to attachment of the consent to lien and subordination agreement requested of the Operator in Mr. Ellis' letter to him dated March 28.

It will be noted that, although this is a short-form contract, no sizes are specified for the drilling.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments

HCRubin/emd
Copy to: DMEA Docket
Solicitor's Docket
E. W. Ellis
J. L. Hofflund
H. C. Rubin
chron.

DOCKET COPY

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

Ellis

April 8, 1955

Memorandum

To: The Files

From: Michael Ching, Mining Engineer
Rare and Miscellaneous Metals Division

Subject: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Batchelor Group
San Miguel and Montrose Counties, Colorado

The Field Team Report of Examination, dated February 21, 1955, contains separate cost estimates for Stages I and II. Costs listed under "Independent Contracts" are reasonable and consistent with costs in this area. Costs other than those listed under "Independent Contracts" appear to be unreasonably high and, in some cases, incorrectly estimated, and are revised and modified as follows:

STAGE I

Labor, supervision and technical services		
Sampler and field assistant		
Per week - 5 days @ $14.00, 1 day @ $21.00 11 weeks @ $91.00/week	$1,001.00	
Consultant - 11 days @ $50.00/day	550.00	$1,551.00
Operating materials and supplies		
Gasoline, oil, and repairs for pickup truck		
2½ months @ $50.00/mo.	125.00	
Transportation for consultant		
11 trips @ $6.00 each	66.00	
Core boxes - 25 @ $3.50 each	87.50	
Engineering supplies and services		
2½ months @ $50.00/mo.	125.00	403.50

Operating Equipment		
1 pickup truck rental		
11 weeks @ $25.00/week	$ 275.00	
1 house trailer rental		
2½ months @ $60.00/mo.	150.00	
		$ 425.00
Miscellaneous		
Accounting - 2½ mos. @ $50.00/mo.	125.00	
Probing - 12 holes @ $15.00/hole or stand-by time for USGS probing	180.00	
Payroll taxes and insurance @ 5%	50.00	$ 355.00
Total		$2,734.50
Per foot drilling		$ .61

STAGE II

Labor, supervision and technical services		
Sampler and field assistant		
Per week - 5 days @ $14.00, 1 day @ $21.00		
17 weeks @ $91.00/week	$1,547.00	
Consultant - 17 days @ $50.00/day	850.00	$2,397.00
Operating Materials and Supplies		
Gasoline, oil, and repairs for pickup truck		
4 months @ $50.00/mo.	200.00	
Transportation for consultant		
17 trips @ $6.00 each	102.00	
Engineering supplies and services		
4 mos. @ $50.00/mo.	200.00	502.00

Operating Equipment		
Pickup truck rental		
17 weeks @ $25.00/week	$ 425.00	
House trailer rental		
4 mos. @ $60.00/mo.	240.00	$ 665.00
Miscellaneous		
Accounting - 4 mos. @ $50.00/mo.	200.00	
Probing - 18 holes @ $15.00/hole or stand-by time for USGS probing	270.00	
Payroll taxes and insurance @ 5%	77.35	547.35
Total		$4,111.35
Per foot of drilling		$ .60

Michael Ching

Michael Ching

Surname copy

Ching
Ellis

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

April 8, 1955

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Michael Ching, Mining Engineer
Rare and Miscellaneous Metals Division

Subject: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Batchelor Group
San Miguel and Montrose Counties, Colorado

Will you kindly prepare a short-form contract between the Government and the subject Applicant in accordance with the attached draft. Owner's Consent to Lien and Subordination Agreement on forms prior to those revised on March 24, 1955, were requested of Applicant so etime ago and are expected to arrive shortly.

/s/ Michael Ching

Michael Ching

MChing/gla
cc to: Docket
Code 700
Mr. Ching

DRAFT
4/12/55
MChing/gla

Blacket

MF-200A
(Revised June 1954)

Docket No. DMEA -3555

Commodity Uranium

Contract No. Idm-E

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this ..... day of ....., 195...., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] W. A. Greer

whose mailing address is 502 Aliso Drive
Albuquerque, New Mexico
hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and .....

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Colorado, ~~County~~ Counties of San Miguel and Montrose, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] Lessee of [5] .....
in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] ....., [7] .....recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: .....

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows: .....

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

16—70618-1

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 7, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 7(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of Uranium. The work to be performed is described in Exhibit "A." The Operator on or before May 15, 1955 shall commence the work, and on or before December 31, 1955 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $37,535.00. The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $28,151.25: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work

performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records or accounts.

ARTICLE 7. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 6) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 8. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 8 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 9. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 10. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

.....
(Operator)

By .....

By .....

.....

I, ..., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70618-1

DRAFT
4/12/55
MChing/gla
Docket No. DMEA-3555
W. A. Greer

ANNEX I

The land on which the exploration work is to be performed consists of six unpatented mining claims situated in Section 14, T. 45 N., R. 18 W., N.M.P.M., San Miguel and Montrose Counties, Colorado, recorded at the San Miguel County Courthouse as follows:

Name of claim	Book No.	Page No.
Batchelor #1	174	518
" #2	174	519
" #3	174	519
" #4	174	520
" #5	174	520
" #6	174	521

EXHIBIT "A"

Description of the Work

The work consists of exploration by plug-bit and core drilling on the land described in Annex I of the contract and shown on the attached map labeled Figure 3.

The drill holes are to test the principal known ore zone in the vicinity of the property. This zone lies approximately 100 feet below the top of the Salt Wash member of the Morrison formation, consistently occurring in the second sandstone unit from the top of the member. Average depth of the holes will be approximately 375 feet, of which an average of 180 feet is likely to be cored. The coring should begin about 10 feet above the top sandstone unit of the Salt Wash and bottom in red mudstone with a 20-foot zone beneath the favorable ore horizon.

All drill core and cuttings shall be saved and split, one-half to be retained by the Operator for study or analysis and one-half to be properly stored for the use of the Government. The Operator's portion shall be checked radiometrically for uranium, and samples indicating significant mineralization shall be analyzed chemically for both uranium and vanadium.

All drill holes shall be logged geologically and probed radiometrically and the record of such logging and probing, and certified copies of all assay certificates shall be submitted with the Operator's monthly progress reports.

The work shall be done in two stages. If, in the opinion the Government, the results of Stage I warrant it, and the Government proves it in writing in advance, the work outlined in Stage II shall be done. The location, direction, and extent of all work under both stages are subject to the approval of the Government. There shall be no duplication of holes previously completed by the Operator for his own account.

STAGE I

The locations of Stage I holes are indicated on the attached Figure 3. The work consists of the preparation of access roads and drill sites by bulldozer and the drilling of a maximum of 12 holes aggregating not more than 4500 feet, in two rows, as shown. The holes in each row shall be spaced approximately 300 feet apart.

STAGE II

Stage II shall consist of bulldozer site preparation, and drilling a maximum of 18 holes aggregating not more than 6,800 feet. The purpose of these holes is to further explore any mineralization or favorable areas found in Stage I. None are to be drilled closer than 100 feet from any previously drilled hole.

Estimated Cost of the Project

STAGE I

2 bulldozer moves on or off property @ $50.00/move	$ 100.00	
47 hours bulldozer work @ $12.00/hr.	576.00	
*2340 Ft. Plug drilling @ $2.70/ft.	6,318.00	
*2160 ft. core drilling @ $3.60/ft.	7,776.00	
25 chemical analyses @ $5.00 each	125.00	
		$14,895.00

STAGE II

6 bulldozer moves on or off property @ $50.00/move	$ 300.00	
72 hours bulldozer work @ $12.00/hr.	864.00	
*3560 ft. plug drilling @ $2.70/ft.	9,612.00	
*3240 ft. core drilling @ $3.60/ft.	11,664.00	
40 chemical analyses @ $5.00 each	200.00	
		$22,640.00
Estimated total cost of project		$37,535.00
Government participation @75%		$28,151.25

*Includes logging, probing, any necessary reaming or casing, and all other costs in connection with the project not otherwise provided for.

4/6/55 gla

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

April 5, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 6 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 3555 (Uranium), W. A. Greer, Bachelor group, San Miguel and Montrose County, Colorado

I have reviewed the Field Team report of examination and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

We concur in the recommendation that the Government enter into an exploration project contract based on the revised drilling program.

We are forwarding the Field Team report of examination to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford
John E. Crawford

Copy to: Division of Minerals
Branch of Rare & Precious Metals
J. O. Hosted (2)
J. E. Crawford (2)

4/4/55 gla

IN REPLY REFER TO:

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

March 31, 1955

Re: DMEA-3555
W. A. Greer
Bachelor Group
Bull Canyon Area
San Miguel Co., Colo.
$40,186.20 - Uranium

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

Subject: Review of Field Team report

The Field Team recommend a drilling program in two stages: Stage 1 -- 12 wide-spaced holes in two lines, with no holes closer than 300 feet to a previously drilled hole; and Stage 2 -- 18 holes no closer than 100 feet from favorable Stage 1 holes. The holes will average about 375 feet in depth. The targets for exploration are uranium deposits in the second (from top) rim or sandstone lense in the Salt Wash member. Based on the known deposits nearby, the target size is probably no more than 5,000 tons.

From a geologic viewpoint, the proposed drilling has a fair chance of finding small quantities of uranium. In my opinion, the wide-spaced drilling may be justified on the basis of ore trends. The Rim Rock deposit occurs about 4,000 feet northwest of the proposed drilling. About 1500 feet southeast of the Rim Rock (toward the Bachelor group), Sabre Uranium (DMEA-3662) has found mineralization in several drill holes. The trend, as based on these two areas and if projected about 2500 feet further southeast, would cross the Bachelor group.

The Field Team believes that the large number of deposits in the general area (including one ore hole on the property) and the favorability of the general area, also are justifications for the project. In view of the last paragraph of my memo to you regarding DMEA-3550, dated March 3, 1955, the suggested trend may be ample justification for the project but the large number of deposits and general favorability of the area are not justifications for this wide-spaced drilling program, where the targets are small and scattered.

I note in the engineer's report on pages 15 and 16, that at least one 10,000 ton deposit (to be mined from one shaft) will have to be found for the operator to break even. Nobody has calculated how many smaller deposits would have to be found, for an economic operation.

R. D. Trace

R. D. Trace

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

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

MAR 29 1955

Docket file DMEA-3555
W. A. Greer

Re: Docket No. DMEA-3633 (Uranium)
Apex Uranium, Inc.
Sheen and Pilot Groups
San Juan County, Utah

Dear Mr. Traver:

Reference is made to your memorandum of March 21, in which you recommend that the captioned docket be closed since you assume that we have received no reply to our letter of January 27, 1955.

For your information, we received a letter, dated March 7, from Mr. Louis P. Gaggini of Geo-Engineering which partly replied to our January letter. The letter also stated that a map was being prepared showing the approximate locations of drill holes and giving the justification therefor. Mr. Gaggini stated in the letter that he planned to be in Washington some time after March 12. We are also withholding action on the other two Apex Uranium applications (Dockets Nos. DMEA-3645 and DMEA-3722). You will note that the three applications intermingle parts of the same groups of claims.

On March 22, Mr. Gaggini telephoned from Montrose, Colorado. We told him of the difficulty we were having with the three Apex Uranium applications, to which he replied that possibly now all three would be combined into one application. He asked us to withhold action until we heard further in the matter. He furthermore stated that he expected to arrive in Washington right after April 1st.

The chief purpose of Mr. Gaggini's call on March 22 was to ascertain the delay in processing the W. A. Greer application (Docket No. DMEA-3555). We told him that the field reports had been received and were being studied. However, now that a project is contemplated, we find we do not have the proper Owner's Consent to Lien and Subordination Agreement mentioned in our field referral letter of November 19, 1954. We are writing for these documents.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Copies in following dockets:
DMEA-3633
DMEA-3645
DMEA-3722 DMEA-3555

APPROVED:

J. H. Hedges

Member, Bureau of Mines

/s/ R. D. Drage
Member, Geological Survey

Messrs. J.E.Crawford, Rm. 3641
T.H.Killsgaard, Rm. 5224
J.O.Hosted, Rm. 3210, GSA

EWEllis/gla
cc: Admr.'s Reading File
Operating Committee
Code 700

700

Surname copy

Ching
Ellis
Hutchedorf

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

Mr. Louis P. Gaggini
Geo-Engineering
304 Main Street
Grand Junction, Colorado

MAR 28 1955

Re: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Bachelor Group
San Miguel and Montrose Counties
Colorado

Dear Mr. Gaggini:

In connection with the subject docket we find that the Owner's Consent to Lien forms submitted with the application are now outmoded and have been superseded by forms which were revised on July 1, 1954. Will you kindly have seven of the enclosed forms filled out and executed by Homer H. Rosanquist and forward them to this office.

A similar number of the enclosed Subordination Agreement forms should be executed by you since you are the assignor of the Mining Lease and holder of a royalty claim on the subject property.

We shall continue to process your application pending receipt of these documents.

Sincerely yours,

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

Enclosures

MChing/gla
3-25-55
cc to: Admr.'s Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

3/28/55 - gla

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

224 New Customhouse
Denver 2, Colorado

March 16, 1955

Memorandum

To: Secretary to the Operating Committee

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 3555 (Uranium), W. A. Greer, Bachelor group, San Miguel and Montrose County, Colorado

Enclosed are the original and three copies of the report pertaining to the above application.

We concur in the recommendation that the Government enter into an exploration project contract based on the revised drilling program.

The conflict, mentioned in the engineering report, with four claims of the Radium Hill group are apparently not claims contained in DMEA 3550 none of which were located in Section 15.

The applicant is continuing to drill the property and it is suggested that before the effective date of the contract a field check be made to determine the number and location of all holes which have been drilled by the operator to that date. Any proposed holes in the contract which prove to be duplications of holes which the applicant is continuing to drill, or are otherwise found to be unnecessary, should not be drilled.

Exception is taken to the facetious remarks made in paragraph 1 of the Survey examiners report dated February 21, 1955, since such remarks have no place in a report of a field examination.

Enclosed are nine copies each of Figures 1, 2, and 3 for use in the contract.

Enclosures

W. M. Traver
W. M. Traver

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

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

ON-SITE EXAM. REPORT

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

/DMEA\ Date Rec'd MAR 2 1955

TRANSMITTED
MAR 18 1955

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
March 1, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw, Project Supervisor

Subject: Examination Report, Docket No. 3555 (Uranium), W. A. Greer, Bachelor group, San Miguel and Montrose Counties, Colorado.

Enclosed are the original and ten copies of "Summary, Conclusions, and Recommendations" by A. F. Kalala, geologist, and M. H. Salsbury, mining engineer, and the original and ten copies of an engineering report by M. H. Salsbury, on docket No. 3555.

The applicant requested exploration assistance consisting of two stages of diamond drilling, totalling 59 holes and 26,730 feet. The estimated cost of the proposed work was $112,809.69. The amount of Government participation at 75 percent would be $84,607.27. The examining team concluded that exploration is justified and proposed a revised drilling program consisting of 30 holes and 11,300 feet of diamond drilling in two stages at an estimated cost of $40,186.20. The amount of Government participation at 75 percent would be $30,139.65.

It is recommended that the Government enter into an exploration project contract with the applicant based on the revised drilling program agreed upon by the DMEA examining team and the applicant's representative.

John F. Shaw
John F. Shaw

cc 10
DMEA 3555
Chron

JFS/em

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3555, Bachelor Group

W. A. Greer

San Miguel and Montrose Counties, Colorado

Uranium

A. F. Holzle, Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

February 21, 1955

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

DMEA 3555

BACHELOR GROUP
W. A. GREER
SAN MIGUEL AND MONTROSE COUNTIES
COLORADO

Summary, Conclusions, and Recommendations

By A. F. Holzle
Geologist
Geological Survey

M. H. Salsbury
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

DMEA 3555

BACHELOR GROUP
W. A. GREER
SAN MIGUEL AND MONTROSE COUNTIES
COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By A. F. Holzle and M. H. Salsbury

The Bachelor group of six located claims in the Bull Canyon mining district, San Miguel and Montrose Counties, Colorado, held by W. A. Greer of Albuquerque, New Mexico, was visited by a Defense Minerals Exploration Administration examining team on January 5, 1955, accompanied by Louis P. Gaggini, of the firm of Geo. Engineering, consultants for Greer.

DMEA exploration assistance estimated to cost $112,809.69, Government participation at 75 percent, or $84,607.27, has been requested to explore the property by two stages of plug and core drilling totaling 59 holes and 26,730 feet. The claims are well located in the so called Uravan Mineral belt and lie within an ore trend which may extend eastward from the Rim Rock mine on the northwest flank of Wedding Bell mountain.

The claims appear to be valid but are in conflict with four claims of the Radium Hill group of different ownership. The Bachelor claims, however, are the prior locations, and the area in conflict would go with them on the basis of the record.

Rocks exposed on the Bachelor group include part of the Brushy Basin member of the Jurassic Morrison formation, and the overlying lower Cretaceous Burro Canyon formation. The principal ore-bearing Salt Wash member of the Morrison formation does not crop out on the property. At

its nearest exposure about 3,000 feet southwest, the Salt Wash member is about 375 feet thick. Geologic criteria favorable to ore occurrence are present.

The principal known ore-zone in the vicinity of the claims is approximately 250 feet above the base of the Salt Wash member, or about 100 feet from the top. This is the horizon it is proposed to explore.

There has been a moderate production from the Rim Rock, Jack Knife, and other claims in the vicinity, and a possibility exists that similar deposits can be found by exploration of the Bachelor group. However, the probable ore trend from the Rim Rock mine has not been proved, and there is an area between the Rim Rock and Bachelor group which is unexplored. This area lies under Wedding Bell mountain where drilling depths would be in excess of 500 feet.

Ernest R. Gordon of the Atomic Energy Commission was consulted, and gave the examining team data on a proposed Atomic Energy Commission drilling project in the area. Tentative drill sites have been spotted on the Bachelor claims and the surrounding area, including Wedding Bell mountain. The objective of the Commission project is tied in with a regional study. The proposed hole pattern is very wide-spaced and subject to change, and would not have great value in evaluating the ore potential of the Bachelor claims. It is not recommended, therefore, that the applicant's proposed exploration be delayed pending Atomic Energy Commission drilling results.

To mine ore in the Salt Wash member on the Bachelor group would require a 350-foot shaft, as there are no outcrops from which the ore horizon could be attacked. To mine ore bodies in the category under

10,000 tons, in which this property is likely to fall, the minimum ore grade for a break-even operation is estimated at about 0.30 percent U_3O_8 with 1.50 percent V_2O_5. There is a reasonable possibility of finding this class of ore but somewhat less possibility of mining the tonnage necessary to return the initial cost.

The applicant has proposed an exploration program which would cost over $18,000.00, per claim, which is certainly not justified by the estimated potential of the property.

Based on the geological conclusion that exploration is justified, and that significant ore bodies may exist on the Bachelor claims, although the probable ore potential is not too great, a revised drilling program was agreed upon by the DMEA examining team, and the applicant's representative.

A plug-bit and core drilling project consisting of 30 holes and 11,300 feet of drilling in two stages is recommended at an estimated cost of $40,186.20, Government participation 75 percent, or $30,139.65.

DMEA 3555

BACHELOR GROUP
W. A. GREER
SAN MIGUEL AND MONTROSE COUNTIES
COLORADO

Engineering Report

By M. H. Salsbury
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

DMEA 3555

BACHELOR GROUP
W. A. GREER
SAN MIGUEL AND MONTROSE COUNTIES
COLORADO

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Figure — Follows page

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2. Map of part of Bull Canyon District, showing location of Bachelor claim group, San Miguel County, Colorado... *
3. Map of Bachelor claim group, San Miguel County, Colorado, showing location of proposed drill holes..... *

*See figure with geologic report.

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

DMEA 3555

BACHELOR GROUP
W. A. GREER
SAN MIGUEL AND MONTROSE COUNTIES
COLORADO

ENGINEERING REPORT

By M. H. Salsbury

INTRODUCTION

W. A. Greer, 431 Grove, N. E., Albuquerque, New Mexico, has applied for Defense Minerals Exploration Administration assistance on the Bachelor group of six located mining claims in the Bull Canyon district, San Miguel and Montrose Counties, Colorado, at an estimated cost of $112,809.69, Government participation $84,607.27. The proposed exploration consisted of two stages of plug and core drilling totaling 26,730 feet and 59 holes, to explore a possible mineralized ore trend in an area adjoining properties with a record of substantial production.

A field investigation was made on January 5, 1955, by a Region III DMEA examining team, accompanied by Louis P. Gaggini, consultant for the applicant. Two representatives from the Geological Survey, A. E. Flint and A. F. Holzle, participated.

ACKNOWLEDGEMENTS

Data on the property, including results of previous drilling on and near the property was furnished by Mr. Gaggini. The Atomic Energy Commission has been contacted by W. P. Williams of the Geological Survey for information on production of nearby properties, any Atomic

Energy Commission drilling in the general area, and the possible value to the property of an exploration program which is currently being prepared by the Commission in the immediate area.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The claims are in sec. 14, T. 45 N., R. 18 W., New Mexico principal meridian, all in San Miguel County, Colorado, except the northwest corner of the Bachelor No. 6 claim which is over the northern boundary in Montrose County (fig. 1, also fig. 2 with the geologic report).

The property, at an elevation of about 6,800 feet, lies between Wedding Bell mountain to the northwest and Radium mountain to the southeast, both typical mesas in the Bull Canyon mining district. The relief on the central and southeast portions of the property at the head of Bachelor draw is not great but at the northwest end, on the steep slope of Wedding Bell mountain, slopes are precipitous and transportation of drilling equipment would be difficult.

Summer and fall seasons at this altitude are ideal. Precipitation is moderate to heavy with violent thunderstorms in summer, and occasional heavy snowfall in winter. Year-around operations underground are feasible but surface work in late winter and early spring is inadvisable, although exploration has been continued successfully in exceptionally dry years.

The claims are reached by traveling southwest over 16 miles of fair-to-poor dirt access roads southwest from the Monogram Mesa camp of the Geological Survey. The camp is 20 and 30 miles respectively from Naturita and Uravan, Colorado, the nearest towns and sites of ore

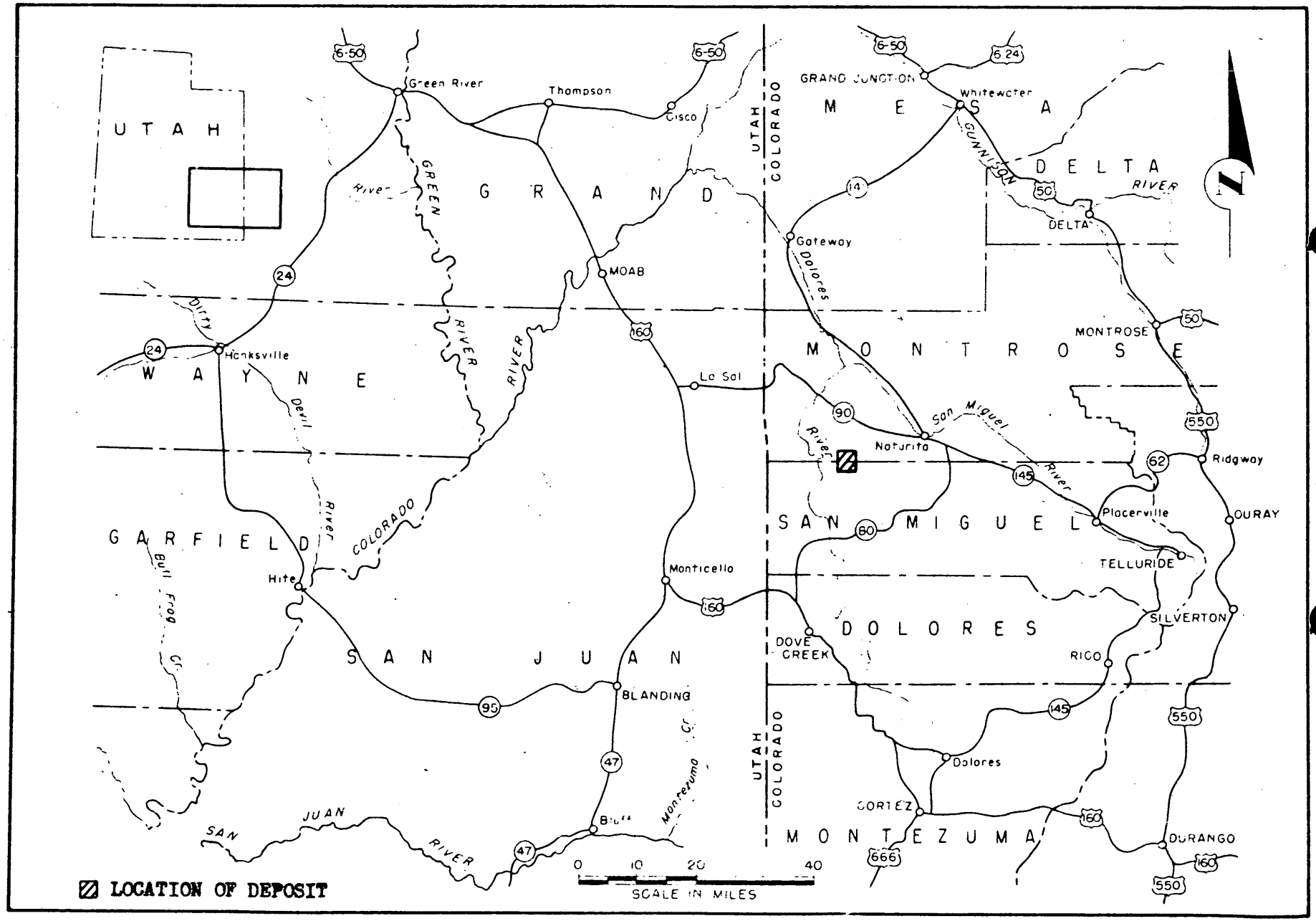


FIGURE 1 - LOCATION MAP, BACHELOR GROUP, W. A. GREER, SAN MIGUEL AND MONTROSE COUNTIES, COLO. (DMEA 3555)

treatment plants, partly over graveled Colorado State Highway 90, and a few miles of the surfaced portion of State Highway 141. Uravan is 101 miles over graveled State Highway 141 and U. S. Highway 50 from Grand Junction, Colorado, where adequate stocks of mining supplies are maintained.

Water for domestic purposes can be obtained at most seasons from nearby springs. A limited amount of drilling water can be caught in retaining ponds but much of it must be hauled from the San Miguel river or the Paradox valley.

There is an ample supply of firewood available in the heavy pinon pine cover. Mining timber is obtainable from lumbering operations near Norwood, Colorado, or the San Juan mountains. Power needs for mining and drilling purposes must be met by the individual operator in the form of gasoline or diesel driven equipment.

LABOR AND LIVING CONDITIONS

There are no towns within normal commuting distance of Wedding Bell mountain, and operating personnel in the area are usually housed on the project in cabins or house trailers. The applicant plans to contract the proposed work to a drilling contractor who will furnish his own equipment and housing.

HISTORY, PRODUCTION, AND OWNERSHIP

The earliest operations in the area carried on for the production of vanadium were started before World War I, but most current operations date from the post-World War II period.

There has been substantial production from mines in the vicinity of the applicant's claims (fig. 2 with the geologic report). The

Ground Hog and Jack Knife shafts, 1 mile southwest of the Bachelor group, and the Rim Rock mine, including three incline shafts, 1 mile west on the opposite slope of Wedding Bell mountain, have all produced profitable ore. From 1 to 2 miles northeast along the Salt Wash outcrops exposed in Bachelor Draw, other mines, which include the Lark, September Morn, Black Diamond, Dinah (or Diane), New John K, Bachelor, Crab Orchard, and others have produced small or moderate tonnages of commercial ore.

According to Atomic Energy Commission figures, the production of some of the mines is as follows:

Mine	Dry tons	Percent U_3O_8	Percent V_2O_5	Formation
Rim Rock No. 2	6,642	0.34	1.80	Salt Wash
Ground Hog	80	0.25	1.38	Brushy Basin
Jack Knife	952	0.26	1.68	Salt Wash
Jack Knife No. 3	7,039	0.33	1.67	Salt Wash
September Morn	653	0.20	1.98	Salt Wash

There has been no ore produced nor any discoveries made on the Bachelor claims nor on those claims immediately adjoining them.

The property rights of the applicant are vested in a 10-year lease dating from March 15, 1954 from the owner, Homer N. Rosenquist, to Louis P. Gaggini, and an assignment of the lease to the applicant by Gaggini. The lease terms include provisions calling for a 12 1/2 percent royalty on ore returns, and a minimum of 2,000 feet of drilling in 36 exploratory holes to be performed before July 15, 1954. Gaggini states that the owner has signed, or will sign, amendments, copies of which will be forwarded to the Field Team, Region III, extending the final date for completion of the drilling into 1955.

The Bachelor claims were discovered by Homer N. Rosenquist and J. B. Moss, Jr., on October 5, 1949, according to the location certificated dated December 2, 1949, and recorded in the San Miguel County Courthouse at Telluride, Colorado, in Book 174, pages 518 to 521. Amended locations were posted and recorded in accordance with the terms of Public Law 250 on December 17-18, 1953, in Book 226, pages 248 to 253. Montrose County records were checked, but the Bachelor No. 6 claim, lying partly in Montrose County, was not recorded in that courthouse. Gaggini agreed to check the matter and have the recording made if considered essential.

A copy of a quit claim deed from one of the original locators, J. B. Moss, Jr., to his partner, Rosenquist, was attached to the application. An Owner's Consent to Lien from Rosenquist to the applicant was mentioned but not furnished with the copy of the application used by the examining engineer.

Portions of five claims, Radium Hill Nos. 38, 39, 40, 41, and 42, originally located by the J. R. Simplot Company, overlap the Bachelor Nos. 2, 3, 4, 5, and 6 claims. These are erroneously marked "L.R.H.", standing for "Lower Radium Hill" on the applicant's map. These claims are part of a 54 claim group discovered October 31 or November 1, 1949, and first recorded December 20, 1949, according to the records in the Montrose County Courthouse, in Book 335, page 438 and following. Amended certificates signed by M. H. River, who had acquired them from the original locator, were recorded in Book 364, page 174 and following.

Although the claims in conflict with the Bachelor group lie wholly or in part in San Miguel County, they were never recorded in that courthouse, and a notation in the application is in error on this matter.

The location procedures for the Bachelor claims, on the ground and in courthouse records, appear to be in order, and from the discovery and filing dates, the rights of the applicant are prior to those of the conflicting locations, and valid otherwise, insofar as validity is currently interpreted on the Colorado Plateau. Gaggini states that he is assembling certified copies of location certificates for submission and expects to get a statement from the present owners of the Radium Hill claims, the Sabre Uranium Corporation, that they do not claim the area in conflict with the Bachelor group.

DESCRIPTION OF THE DEPOSITS

The uranium deposits near Wedding Bell mountain are found in the upper half of the Salt Wash member and, in one known case, in the Brushy Basin member, both in the Jurassic Morrison formation. The usual Salt Wash criteria for favorable ore conditions, including thick bedded sandstone units underlain by gray-green mudstone, and substantial carbonaceous content in the sandstone, apply here.

The only Brushy Basin deposit in the area, in fact one of the few commercial deposits known, is found at the Ground Hog mine about 1 mile west of the Bachelor group. Production from this mine has been insignificant. The other deposits in the area have been found in the top 170 feet of the Salt Wash member. All of the known deposits are small, probably less than 25 feet by 50 feet in lateral dimensions with a thickness averaging under 2 feet, although, locally, greater ore thicknesses may occur.

These deposits may be numerous. A map of mine workings on the Rim Rock property shows that one mineralized area had a width of nearly

200 feet along the outcrop, extending an equal distance back from the rim. The average content of ore mineral on nearby properties is about 0.32 percent U_3O_8 and 1.74 percent V_2O_5.

From regional studies by the Geological Survey, supported by examinations of mine workings, an apparent ore trend of N. 45°-55° W. is inferred which is likely to extend into the Bachelor claims (fig. 2 with the geologic report). This would be an extension of the ore trend at the Rim Rock mines. The extension of this trend has not been proved in the area between the Rim Rock claims and the Bachelor group because it pases through Wedding Bell mountain where drilling depths are excessive and no exploration has been undertaken.

There is a reasonable possibility of the occurrence of ore deposits on the Bachelor claims similar to those in the Rim Rock, Jack Knife and other nearby properties.

MINEABLE ORE RESERVES

No ore reserves have been developed on the property.

PRESENT STATUS

Exploration and Development

Exploration to date has consisted of one drill hole, No. B1, near the northwest corner of Bachelor No. 1 claim, and a dry rotary hole, No. B4, near the southeast corner. Neither hole showed mineralization or favorable geological conditions. Hole B1 was not drilled entirely through the potential ore-bearing sandstone and was cored for only 45 feet of a total depth of 245 feet. These holes were shown on the map with the Geo. Engineering report submitted with the application.

On the Radium Hill claims adjoining on the southwest, seven cored holes have been drilled at locations shown on the applicant's map. There was slight measurable radioactivity in two holes (0.09 U_3O_8 at 274-279.5 feet in hole RH3 and 0.02 U_3O_8 at 179.8-181.5 feet in hole RH5). Moderate thicknesses of potential ore-bearing sandstones were penetrated. Core was recovered through the Brushy Basin member in hole No. RH1, but no favorable sandstone was found. So generally the holes could be classed as unfavorable to semi-favorable.

Logs of the holes on the Radium Hill claims and for hole B1 were submitted with the application. The log for hole B4 was to be forwarded for inclusion with the application. It was drilled primarily to comply with the lease terms.

The Rim Rock, Black Diamond, September Morn, and possibly some others, are being worked.

Mining and Milling and Other Facilities

There are no buildings or equipment on the property. A drilling contractor would furnish exploration equipment, but a trailer and pickup truck for use of the applicant's representative would also be required.

PROJECT PROPOSALS WITH COSTS

The applicant has proposed a plug-bit and core drilling program in two stages. Stage I was set up to cover the entire area with wide-spaced drilling requiring 36 holes in a rectangular pattern with a minimum spacing of about 400 feet. Stage II was to consist of 24 holes to offset any favorable holes drilled in Stage I. Stage I would have

required an estimated 14,730 feet of plug-bit and core drilling and Stage II, 12,000 feet additional. The total estimated cost of this work was $112,809.69, Government participation at 75 percent would be $84,607.27. This expenditure would have amounted to about $18,800.00 per claim which, in the opinion of the examining team, is excessive, and not justified by the potential value of the property.

At a field conference, with the applicant's representative, a revised exploration plan which was submitted by him was agreed upon. The revised program still consists of two stages, but the hole pattern for Stage I has been changed, and the drilling footages curtailed to bring the exploration cost within a reasonable limit. The program is designed to penetrate the favorable upper sandstone units of the Salt Wash member by coring an average of 180 feet per hole, and bottoming holes 300 feet above the top of the Entrada formation. Core would be obtained through the entire section of the Salt Wash penetrated. Holes near the northwest and southeast boundaries were eliminated to avoid excessive drilling depths. The revised program is a compromise. A drilling place to give complete coverage of the property would be too costly in relation to the potential of the claims. Completion of Stage I should indicate whether or not further drilling is justified and Stage II, if authorized, should furnish enough information to evaluate the worth of the property, although it is not likely that any ore bodies would be blocked out completely.

Following is a description of the revised program (refer to fig. 3 with the geologic report for the location of Stage I holes):

Stage I consists of a maximum of 12 holes and an estimated 4,500 feet of plug-bit and core drilling in two northeast and southwest trending rows of six holes each 500 feet northwest and 500 feet southeast of the common interior end lines of the six claims. The holes in each row are to be a minimum of 300 feet apart. Holes are to be bottomed in the first red mudstone within 20 feet of the estimated bottoming horizon, 500 ? feet above the top of the Entrada formation. Holes are to be cored from a point 10 feet above the top of the Salt Wash member of the Morrison formation to the bottom, an average of 180 feet per hole. The estimated time for completion of Stage I is 2 1/2 months.

Total Stage I (estimated)	non-core drilling	-- 2,340 feet
	core drilling	-- 2,160 feet

Stage II consists of a maximum of 18 holes and an estimated 6,800 feet of drilling to explore further any mineralization or favorable geological conditions found in Stage I drilling. No Stage II hole is to be within 100 feet of any previously drilled hole. Stage II is to be undertaken after completion of Stage I. The locations and depths of the holes must be satisfactory to the Government and require written authorization from the DMEA Field Team, Region III.

Estimated time for completion of Stage II is 4 months.

Total Stage II (estimated)	non-core drilling	-- 3,560 feet
	core drilling	-- 3,240 feet
Total for entire project 30 holes -	non-core drilling	-- 5,900 feet
	core drilling	-- 5,400 feet
	Total	11,300 feet

Total estimated time - 6 1/2 months

The program is set up with fewer holes in Stage I because geological information must be obtained first before a larger number of holes could be located intelligently. Holes to be drilled in Stage II are not necessarily offset holes, as the term is usually understood, but, in part, may be a continuation of Stage I drilling.

Following is a cost estimate based on an operation of one drilling for 6 1/2 months, with contract drilling prices based on those quoted by the applicant which average slightly lower than the contract now in effect for similar Geological Survey drilling in Bull Canyon. At these rates no extra charge is made to the Survey for reaming, and the driller uses casing at his own discretion. Rental of probing equipment is included, or an equivalent charge for stand-by time is allowed in the event that arrangements can be made to have the holes probed by the Geological Survey.

Mineralization in the Brushy Basin member has been insignificant in the area, and no provision is made to core holes through this horizon.

COST ESTIMATE

Stage I

Estimated time for completion - 2 1/2 months

Independent contracts

Move in and move out bulldozer	$ 100.00	
Bulldozing to build access roads and prepare 12 drill sites - estimated time 48 hours at $12.00 per hour	576.00	
Plug-bit drilling 2,340 feet in 12 holes at $2.10 per foot	4,914.00	
Core drilling 2,160 feet at $3.00 per foot	6,480.00	
Total contracts		$12,070.00

Labor and supervision and technical services		
Labor - none		
Supervision		
Sampler and field assistant full time at $14.00 per day, time and one-half for over 40 hours per week - 11 weeks at $71.00 per week	$ 781.00	
Technical services		
Consulting services by Geo. Engineering 2 1/2 months at $650.00 per month	1,625.00	
Total labor, supervision, and technical services		$2,406.00
Operating materials and supplies		
Gasoline, oil, and repairs on 1 pickup used by field assistant - 2 1/2 months at $50.00 per month (would allow for 700 miles per month)	125.00	
Transportation for consulting geologist, estimated at 100 miles per trip, $0.06 per mile for 33 trips at $6.00 each	198.00	
Core boxes for 1 month's drilling (maximum of 1,000 feet of core) - 25 boxes at $3.50 each	87.50	
Engineering supplies, drafting, and reproduction of maps, drill logs, and reports - 2 1/2 months at $50.00 per month	125.00	
Total operating materials and supplies		535.50
Operating equipment		
Rental		
1 pickup for field assistant - 11 weeks at $25.00 per week (drive yourself rates)	275.00	
1 house trailer for living quarters - 2 1/2 months at $60.00 per month	150.00	
Purchased - none		
Depreciation - none		
Total operating equipment		425.00
Initial rehabilitation or repairs		
None		
New buildings and equipment		
None		
Miscellaneous		
Accounting - 2 1/2 months at $50.00 per month	125.00	
Sampling and analysis - maximum of 25 samples analyzed for U_3O_8 and V_2O_5 at $5.00 each	125.00	

Probing 12 holes with Babbel probe at $15.00 per hole for use of counter, or equivalent stand-by time for Geological Survey probing	$180.00	
Payroll taxes and insurance at 5 percent of $781.00	39.05	
Total miscellaneous		$ 469.05
Total Stage I		$15,905.55

Stage II

Estimated time for completion - 4 months

Independent contracts		
Move in and move out bulldozer three times at $100.00 each time	300.00	
Prepare 18 drill sites - estimated time 72 hours at $12.00 per hour	864.00	
Plug drilling 3,560 feet in 18 holes at $2.10 per foot	7,476.00	
Core drilling 3,240 feet at $3.00 per foot	9,720.00	
Total independent contracts		18,360.00
Labor and supervision and technical services		
Labor - none		
Supervision		
Sampler and field assistant full time at $14.00 per day, time and one half for over 40 hours per week, 6 days per week - 17 weeks at $71.00 per week	1,207.00	
Technical services		
Consulting services by Geo. Engineering - 4 months at $650.00 per month	2,600.00	
Total labor, supervision, and technical services		3,807.00
Operating materials and supplies		
Gasoline, oil and repairs on 1 pickup to be used by field assistant - 4 months at $50.00 per month	200.00	
Transportation for consulting geologist - estimated at 100 miles per trip at $0.06 per mile, 51 trips at $6.00 each	306.00	
Engineering supplies, drafting, and reproduction of maps, drill logs and reports - 4 months at $50.00 per month	200.00	
Total operating materials and supplies		706.00

Operating equipment

Rental		
1 pickup for field assistant - 17 weeks at $25.00 per week (drive yourself rates)	$425.00	
1 house trailer for living quarters - 4 months at $60.00 per month	240.00	
Purchased - none		
Depreciation - none		
Total operating equipment		$ 665.00

Miscellaneous

Accounting - 4 months at $50.00 per month	200.00	
Sampling and analysis - maximum of 40 samples analyzed for U_3O_8 and V_2O_5 at $5.00 each	200.00	
Probing 18 holes with Babbel probe at $15.00 per hole for use of equipment (or equivalent stand-by time for Geological Survey probing)	270.00	
Payroll taxes and insurance at 5 percent of $1,207.00	60.35	
Total miscellaneous		730.35
Total Stage II		$24,268.35

SUMMARY COST OF PROJECT

	Stage I 12 Holes		Stage II 18 Holes	
	plug drilling (52 percent) 2,340 feet	core drilling (48 percent) 2,160 feet	plug drilling (52 percent) 3,560 feet	core drilling (48 percent) 3,240 feet
1. Independent contracts	$5,265.62	$6,804.48	$8,081.28	$10,278.72
2. Labor, supervision and technical services	1,251.12	1,154.88	1,979.64	1,827.36
3. Operating materials and supplies	232.96	302.54	367.12	338.88
4. Operating equipment	221.00	204.00	345.80	319.20
5. Miscellaneous (except sample analysis)	178.91	165.14	275.78	254.57
Total (less sample analysis)	7,149.51	8,631.04	11,049.62	13,018.73
Total for drilling	$15,780.55		$24,068.35	
Sample analysis	125.00		200.00	
Total per stage	$15,905.55		$24,268.35	
Total for project		$40,173.90		

	Stage I	Stage II
Calculated cost per foot plug drilling -	$3.06	$3.10
Calculated cost per foot core drilling -	4.00	4.02

Suggested cost figures for contract use:

Stage I	- 2,340 feet plug drilling at $3.06	- $7,160.40	
	2,160 feet core drilling at $4.00	- 8,640.00	
	Sample analysis - 25 samples at $5.00	- 125.00	
			$15,925.40
Stage II	- 3,560 feet plug drilling at $3.10	- 11,036.00	
	3,240 feet core drilling at $4.02	- 13,024.80	
	Sample analysis - 40 samples at $5.00	- 200.00	
			24,260.80
	Total for project		40,186.20
	Government participation at 75 percent		$30,139.65

PROPOSED FINANCING

The applicant states that he will furnish his share of costs in cash.

CONCLUSIONS

Geologically there appears to be a reasonable possibility of finding significant uranium ore in individual lenses less than 25 by 50 feet laterally and under 2 feet thick, similar to the deposits at the Rim Rock mine. Using a figure of 200 tons of ore containing 0.30 percent U_3O_8 and 1.50 percent V_2O_5, each ore body might have a value, including initial production bonus, of $11,120.00.

The cost of exploration, development and mining of all ore deposits on the Bachelor claims, where a shaft operation would be necessary, for production assumed as less than 10,000 tons, is estimated as follows: (based on Atomic Energy Commission cost data):

Applicant's share of estimated cost of exploration	- $10,000.00
Camp construction	- 4,000.00
Machinery	- 6,000.00
Hoist, headframe and cabin	- 5,000.00
350-foot shaft at $150.00 per foot	- 52,500.00
Total initial outlay for production	- $77,500.00

Estimated gross return per ton of ore without initial production bonus		- $ 34.80	
DMEA royalty of 5 percent -	$1.74		
Owner's royalty of 12 1/2 percent -	6.58		
Mining charge -	22.00	- 30.32	
Net return without initial production bonus		- 4.48	
Initial outlay estimated at		-	$77,500.00
Initial production bonus 10,000 pounds U_3O_8 - $35,000.00			
Less DMEA royalty - 1,750.00			
Return to operator from initial production bonus -			33,250.00
Amount to be paid out of other ore returns		-	$44,250.00

Production necessary to return the operator his initial outlay - $\frac{\$44,250.00}{4.48}$ = 9,877 tons

Government's estimated expenditure	-	30,120.75
Less royalty on initial production bonus	-	1,750.00
Royalty to be paid out of other ore returns	-	$28,370.75

Production to return Government's expenditure $\frac{\$28,370.75}{1.74}$ = 16,305 tons

Enough production to return the operator his share of the initial cost would require the equivalent of 50 ore bodies containing 200 tons each, assuming that all the ore could be mined from one shaft. While no property in the vicinity has produced this much ore yet, there is a reasonable possibility that 10,000 tons may exist on the Bachelor group. There is, of course, less possibility of mining the estimated 16,000 tons necessary to return the Government its share of the exploration cost.

The Atomic Energy Commission is undertaking a regional study of the area around Wedding Bell mountain which will involve wide-spaced drilling. Because it was possible that the results of this work might have considerable bearing on the proposed exploratory drilling on the Bachelor claims, Ernest R. Gordon of the Commission was consulted.

Mr. Gordan discussed the Commission project with the Bureau of Mines engineer. It was brought out that proposed drilling is very wide-spaced and that tentative locations for drill sites are subject to revision. It is not believed that the results of this work will be likely to have enough value to justify delaying the start of the proposed DMEA exploration, if approved. While AEC drilling is planned on the Bachelor group, as well as in the surrounding area, including the top of Wedding Bell mountain, making a DMEA project dependent on AEC results would delay start of the project indefinitely with the possibility that the AEC results would prove to be of no value. On the other hand, there is always the possibility, although remote, that AEC drilling might make the DMEA project unnecessary.

The proposed exploration would be carried on under the supervision of experienced personnel of Geo-Engineering who have had wide experience on the Colorado Plateau and should be competent to direct the work satisfactorily.

The applicant has continued to do a limited amount of drilling on the claims to comply with lease terms, and some holes in the DMEA exploration program may prove to be duplications if and when it is approved.

RECOMMENDATIONS

It is recommended that a short-form contract for drilling exploration in two stages at a unit cost price, be approved at a cost of $40,186.20, Government participation 75 percent, or $30,139.65.

It is also recommended that the following provisions be made a part of the contract:

Description of the Work

(Refer to fig. 3 with the geologic report which is suggested for use with a contract).

Stage I: A maximum of 12 holes and 4,500 feet of plug-bit and core drilling at locations shown in figure 3.

Stage II: A maximum of 18 holes and 6,800 feet of plug-bit and core drilling to explore further any mineralization or favorable geologic conditions found in Stage I at locations and to the extent satisfactory to the Government. Written authorization for Stage II from the DMEA Field Team, Region III, will be required.

Drilling Summary

Stage I (see fig. 2)

Proposed hole No.	Collar elevation (feet)	Bottom elevation (feet)	Total depth (feet)	Length to be plug drilled (feet)	Length to be core drilled (feet)
B-2	6,770	6,360	410	230	180
B-3	6,790	6,380	410	230	180
B-5	6,800	6,400	400	220	180
B-6	6,800	6,410	390	210	180
B-7	6,800	6,430	370	190	180
B-8	6,790	6,440	350	170	180
B-9	6,720	6,350	370	190	180
B-10	6,710	6,370	340	160	180
B-11	6,740	6,390	350	170	180
B-12	6,770	6,410	360	180	180
B-13	6,770	6,420	350	170	180
B-14	6,810	6,440	370	190	180
12			4,470	2,310	2,160

(Rounded to 2,340 feet of plug drilling and 2,160 feet of core drilling or 4,500 feet in Stage I).

Stage II

Eighteen holes averaging 378 feet deep for a total of 6,800 feet.

Average plug-bit drilling depth - 198 feet

Average core drilling depth - 180 feet

Note: Plug and core drilling depths in both stages are estimated and true depths may vary.

Holes in Stage I are to be drilled at locations designated on figure 3 with the geologic report, made a part of the contract, on a minimum of 300-foot centers, and no hole is to be closer than 300 feet to any previously drilled holes. Holes are to be plug drilled to a point 10 feet above the top of the Salt Wash member of the Jurassic Morrison formation and core drilled through the Salt Wash member to a point 300 feet above the top of the underlying Entrada formation, an estimated distance of 180 feet.

Holes in Stage II are to be drilled on minimum centers of 100 feet and no hole is to be closer than 100 feet to any previously drilled hole.

Cutting samples from plug-bit drilling for each 10-foot interval, and sludge samples from core drilling, corresponding to each coring interval, should be taken, if required by the Geological Survey geologist, and may be discarded after inspection by him, except that sludge samples corresponding to any coring interval in which core recovery was unsatisfactory should be retained.

All core should be stored in core boxes until it can be examined and released by a DMEA representative, after which all but mineralized portions may be discarded.

Sections of the core in which mineralization is indicated radiometrically should be split and one-half sampled in intervals representing not more than 1 foot of core, to be analyzed chemically for U_3O_8 and V_2O_5. The other half should be delivered to the Monogram Mesa camp of the Geological Survey for the use of the Government. Analysis of a maximum of 25 samples in Stage I and 40 samples in Stage II should be allowed.

A sampler and engineering assistant should be present on the property at all times while drilling is in progress.

Geological consultation should include a field visit by a competent geologist at least every other working day, hole logging, and hole probing either by the consultant or with Geological Survey equipment.

No uncompleted holes should be paid for, and no hole should be started unless there remains enough footage to complete it without exceeding contract maximums.

Claims for reimbursement shojld be supported by certified drill and geologic logs, and certified copies of analytical returns.

Any proposed holes which prove to be duplications of holes which the applicant is continuing to drill, or are otherwise found to be unnecessary, should not be drilled.

An agreement from the owner of the claims providing for an extension of the period for completing exploration will probably be required.

/cm

IN REPLY REFER TO:

DMEA
Date Rec'd.
MAR 1 1955
BUREAU OF MINES
Denver, Colorado

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

February 28, 1955

TRANSMITTED
MAR 18 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3555, W. A. Greer, Bachelor group of claims, San Miguel and Montrose Counties, Colorado

Enclosed are 10 copies of a memorandum by A. F. Holzle, U. S. Geological Survey, which contains additional data on the subject property.

The memorandum is in response to my request for additional data on the size, shape, grouping, and geologic habit of known ore bodies on claims adjacent to the Bachelor claim group.

Contrary to the implications in the first paragraph of the memorandum by Holzle, the request should not have involved any guess work on his part. It was made in an attempt to secure factual data on the character of the ore deposits at the Jackmife, September Morn, Rimrock No. 2, Main Street, and Hot Shot mines, listed in the report as being in the vicinity of the Bachelor claim group but not described by Holzle.

Based on the data contained in the original report and the supplemental report, it appears that exploration, tentatively recommended in my transmittal letter of February 11, 1955, is warranted.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

ENHarshman:arh

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

MINERAL DEPOSITS
DMEA
RECEIVED
FEB 28 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

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

February 21, 1955

TRANSMITTED
MAR 18 1955

Memorandum

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

From: W. P. Williams

Subject: Supplementary information to accompany field examination report on DMEA 3555, W. A. Greer, Bachelor group

Transmitted herewith are 11 copies of a memorandum by A. F. Holzle, which contains supplementary information requested by you on the above-referenced application.

Holzle gives some information concerning the size of ore bodies in the vicinity of the subject application area and also gives information concerning two drill holes which were recently completed on the property.

Inasmuch as we no longer have the brochure for this application, we suggest that it might be possible for you to put the two drill holes on the maps accompanying Holzle's original field examination report.

W P Williams

W. P. Williams,
Geologist

WPW/mlr

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

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

TRANSMITTED
MAR 18 1955

February 21, 1955

Memorandum

To: W. P. Williams

From: A. F. Holzle

Subject: Supplementary information to accompany field examination report on DMEA 3555, W. A. Greer, Bachelor group

The official crystal ball of Monogram Mesa has developed a tremendous rupture. By necessity, therefore, we are experimenting with freshly-cut Juniper boughs (having read somewhere that they have miraculous predicting potential). At any rate, I hope the following will satisfactorily serve as the supplentary information asked for in your memo of February 9, 1955.

Production statistics and ore reserve calculations of individual mines in the district indicate that one might reasonably expect to discover ore deposits of about 5,000 short tons. It is unlikely, though not impossible, that a deposit of over 10,000 tons would be found on the property.

Two drill holes have been completed on the property recently. Drill sites of these holes may be found by referring to the claim map (in pocket) accompanying the application report prepared by Geo-Engineering.

The first hole, bottomed approximately December 20, 1954, was drilled at site, B-2. It was barren. The second hole, drilled at the approximate position of proposed site, B-5, was completed Feb. 8, 1955. Radiometric logging with U. S. Geological Survey equipment showed that the hole cut 2.3' (two and three-tenths feet) of ore grade material with an average equivalent U_3O_8 content of 0.37%. Although chemical assay data are not available at present, inspection of the drill core disclosed an appreciable vanadium content in the ore.

The actual computation on the second drill hole above is as follows:

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

IN REPLY REFER TO:

Date Rec'd.

FEB 11 1955

BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

February 11, 1955

TRANSMITTED

MAR 1 8 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3555 (uranium), W. A. Greer, Bachelor group of claims, San Miguel and Montrose Counties, Colorado

Enclosed are 10 copies of a geologic report by A. F. Holzle, U. S. Geological Survey, on the above subject property.

There are no exposures of the ore-bearing Salt Wash member of the Morrison formation on the Bachelor claims. However, as shown on Figure 2 accompanying the report, outcrops of Salt Wash occur north, west, and south of the claims at distances of 3,000 to 6,000 feet. The outcrops are lithologically favorable for uranium ore, and a number of commercial uranium deposits have been discovered in these areas. An apparent ore trend, striking N. 45° - 50° W, is inferred from regional studies and examinations of mines in the area. This trend passes through the Bachelor group of claims.

Holzle concludes that the proposed program will result in the discovery of uranium ore and recommends that the application be approved to permit exploration as outlined in his report.

Appraisal of the proposed program depends to a great extent on a knowledge of the geologic habit, size, and grade of possible targets. Although grade figures for ore shipped from mines surrounding the Bachelor claims are given, the report contains no data on the size, shape, grouping, or geologic habit of ore bodies in the area. These data have been requested and will be contained in a supplement to the report.

In order to expedite processing of the application, the report is forwarded with a tentative recommendation for approval of Holzle's program of exploration. Final action on the part of DMEA should await receipt of the supplemental report.

Nine extra copies of the three figures in Holzle's report are enclosed, and the Survey copy of the brochure is returned herewith.

E. N. Harshman

E. N. Harshman
Member, Field Team

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

Enclosures (38)
ENHarshman:arh

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

February 1, 1955

TRANSMITTED
MAR 1 8 1955

Memorandum

To: E. N. Harshman

From: W. P. Williams

Subject: Docket DMEA 3555 (Uranium), W. A. Greer, Batchelor group of claims, San Miguel and Montrose Counties, Colorado

Transmitted herewith are 11 copies of a geologic report by A. F. Holzle covering a field examination of the above-referenced property.

Because of the proximity of the property to significant uranium mines, and because the possibility is strong that a favorable mineralized trend crosses the property, Holzle recommends that a DMEA contract be prepared to provide for exploration work as outlined in the report. I concur with Holzle's recommendations.

The Exploration Division, USAEC, Grand Junction Operations Office, assisted in evaluating this application. The application was discussed with Mr. E. R. Gordon and Louis Garbrecht of the Commission.

We are enclosing 9 extra copies of the maps accompanying Holzle's report, together with copy of the brochure.

W P Williams

W. P. Williams
Geologist

WPW/je

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

UNITED STATES DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3555, W. A. Greer, Bachelor group of claims Nos. 1-6,
Bull Canyon Mining District, Montrose-San Miguel Counties, Colo.

Uranium

Geologic Report

by

A. F. Holzle
U. S. Geological Survey

January 31, 1955

Reviewed by
DMEA OPERATING COMMITTEE
3-25-55
(date)

DMEA 3555

INTRODUCTION AND SUMMARY

Mr. W. A. Greer, 502 Aliso Drive, Albuquerque, New Mexico, has applied to the Defense Minerals Exploration Administration (Docket No. 3555) through Geo-Engineering consultants, 304 Main Street, Grand Junction, Colorado, for aid in exploratory drilling for uranium on the Bachelor group of claims, numbers one through six inclusive. The property is located in the Bull Canyon mining district in secs. 15, 22, T. 45 N., R. 18 W., Montrose and San Miguel Counties, Colorado, (fig. 1).

The property was examined January 5, 1955 by M. H. Salsbury, U. S. Bureau of Mines, A. E. Flint and A. F. Holzle, U. S. Geological Survey, and L. P. Gaggini, representative for the applicant.

The Bachelor group of claims are at the head of Bachelor Draw between Wedding Bell Mountain and Radium Mountain. They may be reached by travelling approximately 30 miles southwest from Natuita, Colorado, over all-weather roads.

Geo-Engineering, a local consulting group, has prepared the application, and upon approval of the loan, would act in a supervisory and consulting capacity.

GEOLOGY AND ORE DEPOSITS

Rocks exposed on the Bachelor claims include part of the Brushy Basin member of the Jurassic Morrison formation and the overlying Lower Cretaceous Burro Canyon formation. The Salt Wash member of the Morrison formation does not crop out on the property.

At its nearest exposure, about 3,000 feet to the southwest, the Salt Wash member is about 375 feet thick. It contains five lenticular, cross-bedded, medium-fine to fine grained sandstone layers which are exposed as resistant, protruding ledges, separated by mudstone intervals that range in thickness from a few feet to a maximum of 60 feet. The uppermost sandstone ledge characteristically is split into two nearly equal parts by a varicolored, predominantly red, mudstone seam that may range from a few feet to as much as 25 feet in thickness.

The basal Salt Wash sandstone, which averages about 100 feet thick, is a massive, crossbedded unit. An ore horizon of secondary importance occurs about one-third of the way above its base. The proposed drilling is not designed to intersect this horizon since the deposits usually found at that stratigraphic position are almost everywhere small and scattered.

Above the basal sandstone unit occurs a sandstone-mudstone interval averaging 130 to 150 feet in thickness, containing from two to four sandstone ledges alternating with mudstone units.

The principal ore zone in the vicinity of the claims is approximately 260 feet above the base of the Salt Wash member, or about 100 feet from the top. Because of pronounced lenticularity of the sandstone strata in the region, this ore zone may occur 30 to 50 feet higher or lower in the beds but consistently occurs in the second sandstone unit from the top of the member. The presence of the following geologic characteristics are considered favorable for the occurrence of mineralization.

1. Upper Salt Wash sandstone units more than 20 feet thick.
2. Crossbedded, medium-grained sandstones.
3. Gray-green altered mudstone pebbles and seams in the sandstone.
4. Brown, limonite-stained sandstones.

These criteria are present in Salt Wash exposures, approximately 3,000 feet southwest of the Bachelor group.

The nearest working mine to the claimed area is the Jacknife mine, which is owned and operated by the Four Corners Uranium Company. The mine is approximately one mile west of the claimed area and occurs in the principal ore zone mentioned above, (fig. 2).

The September Morn workings, owned by the Vanadium Corporation of America, occurs in the major ore zone previously mentioned. The mine is about one mile northeast of the center of the Bachelor group of claims. These workings are currently being reopened under lease in order to develop an ore deposit indicated by company drilling.

The Rimrock #2 mine, owned by the United States Vanadium Corporation, is being operated under lease at present. These workings are one mile northwest of the approximate center of the Bachelor claims, and are shipping ore from the favorable zone.

Other mines in the district that are developed in the previously-mentioned most favorable ore zone include the Main Street mines and the Hot Shot mines.

An apparent ore trend of N. 45°-55° W. has been inferred from regional study and supported by examinations of mine workings. Figure 2 shows that this trend is likely to extend into the ground covered by the Bachelor claims.

The Finance Division, U. S. Atomic Energy Commission, Grand Junction Operations Office, supplied the following production figures for mines in the vicinity of the Bachelor group for the period 1948 through November 1954:

Claim name	Dry tons	Percent U_3O_8	Percent V_2O_5
Rimrock No. 2	6,642	.34	1.80
Groundhog	80	.25	1.38
Jackknife	952	.26	1.68
Jackknife No. 3	7,039	.33	1.67
September Morn	653	.20	1.98

PEOPOSED EXPLORATION

Should DMEA assistance be approved, the following drilling program is recommended.

Stage I

Stage I would consist of 12 holes, set out in two rows of six holes each at approximately 500 feet from the common claim end boundaries, the rows being about 1,000 feet apart. No hole would be closer than 300 feet to any previously drilled hole, (fig. 3). The average hole depth of Stage I drilling would be approximately 375 feet for a total of about 4,500 feet. Individual holes would be bottomed in red mudstone within a 20-foot zone beneath the favorable ore horizon mentioned above. This drilling pattern is recommended as a modification of the original proposal submitted by the applicant. The drilling pattern is designed to gain a maximum of information for the least cost, as determined by experience in the district. In the opinion of the writer, the pattern would take greater advantage of the shallowest drilling possible and would reduce bulldozer work to a minimum while preserving a sufficiently wide drill-hole coverage of the claimed area.

Stage II

Stage II drilling would begin only after completion of stage I drilling and upon receipt of written authorization by DMEA field team, Region III. The purpose of stage II drilling is to explore areas inferred from stage I drilling to be favorable for the occurrence of ore.

Stage II would provide for a maximum of 18 holes, located no closer than 100 feet to any previously drilled hole. The average depth also would be 375 feet, making a total of 6,800 feet of drilling.

It is believed that an average of 180 feet of coring per hole would be sufficient to acquire the information desired. The coring interval should begin about 10 feet above the top sandstone unit of the Salt Wash member and should be concluded as described in procedure for bottoming holes, under stage I drilling above.

CONCLUSIONS AND RECOMMENDATIONS

Consideration of the proximity of the property to working uranium mines and the probable ore trend that crosses the claimed area, indicates that an exploration program as outlined in this report may reasonably find uranium ore. It is recommended that the program as outlined be approved.

Discussion of this application with personnel of the U. S. Atomic Energy Commission, Grand Junction Operations Office, indicates that the AEC plans to do some exploration drilling soon on the Bachelor claims. No other information concerning evaluation of the property was available from the Commission.

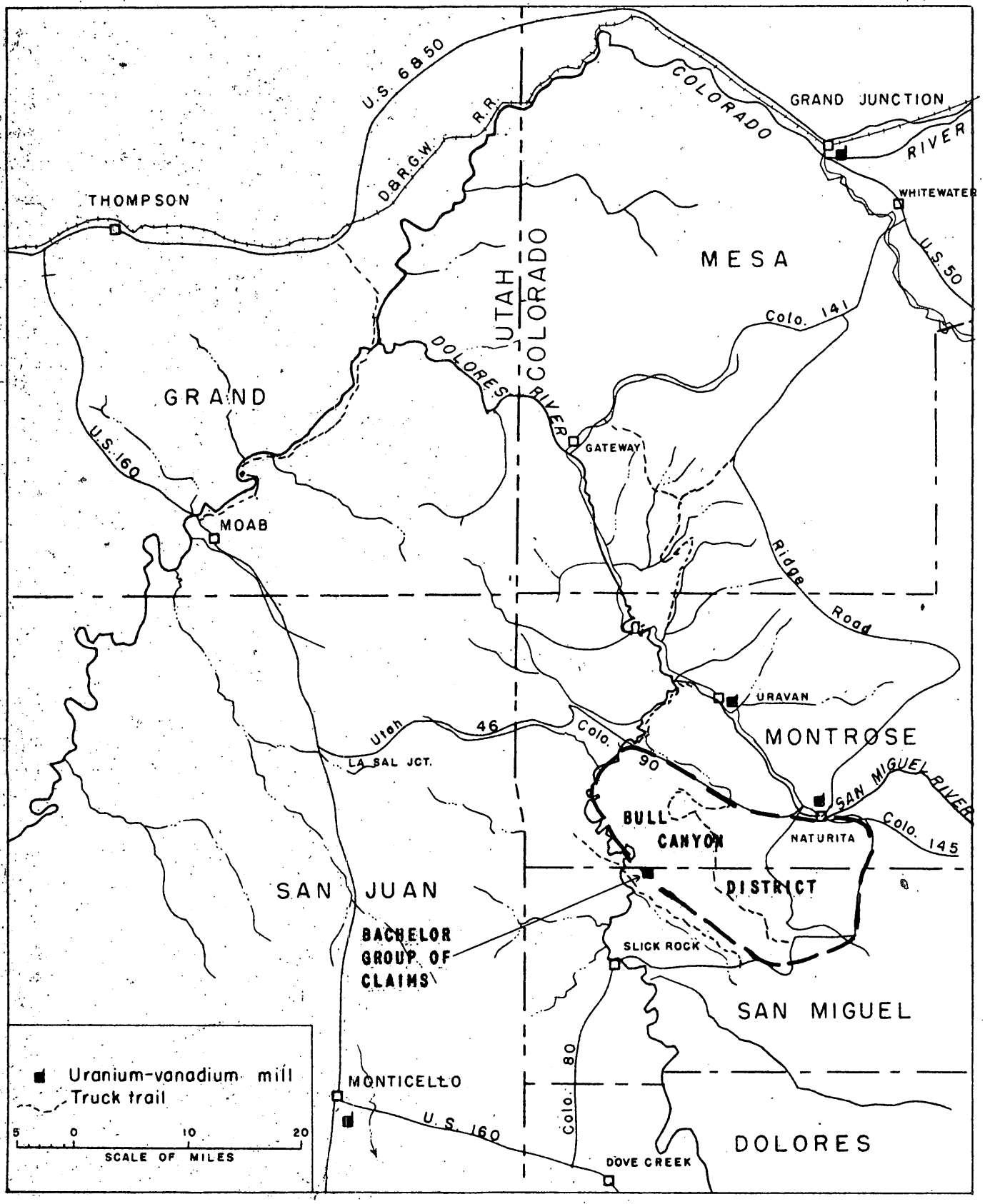


Figure 1. INDEX MAP OF PART OF COLORADO PLATEAU SHOWING LOCATION OF BACHELOR GROUP OF CLAIMS, W. A. GREER, SAN MIGUEL COUNTY, COLORADO

Depths	Footage		eU_3O_8 (%)
386.5-387.1	0.6'	.....	0.48% eU
387.1-387.8	0.7'	.....	0.21% eU
387.8-388.8	1.0'	.....	0.42% eU

In addition to the above, Bill, it has been suggested that it might be advisable for Ken Gardner to add these holes to the sepia of Gaggini's map and have a set of these revised maps sent to Harshman in Denver with the above information.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3555

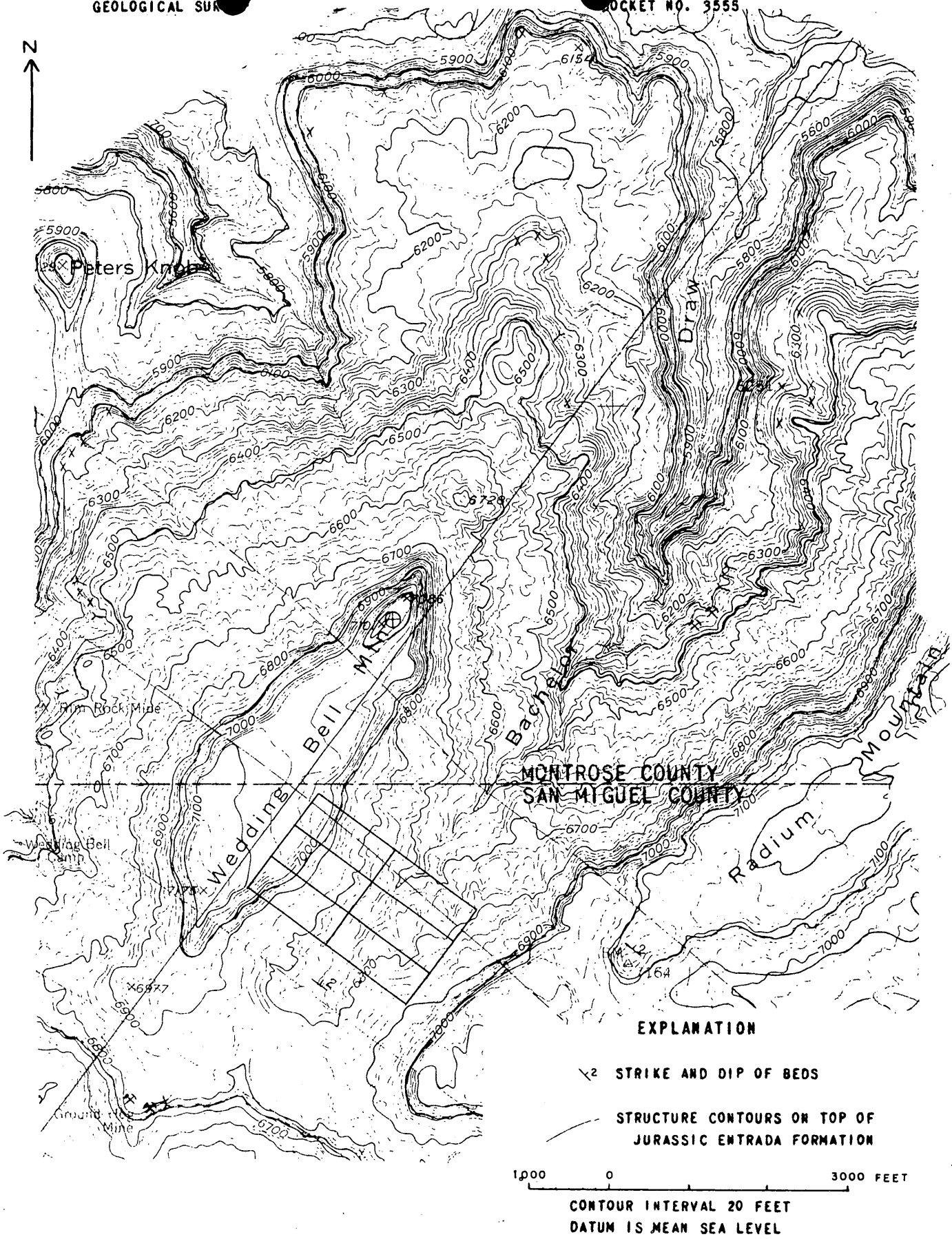
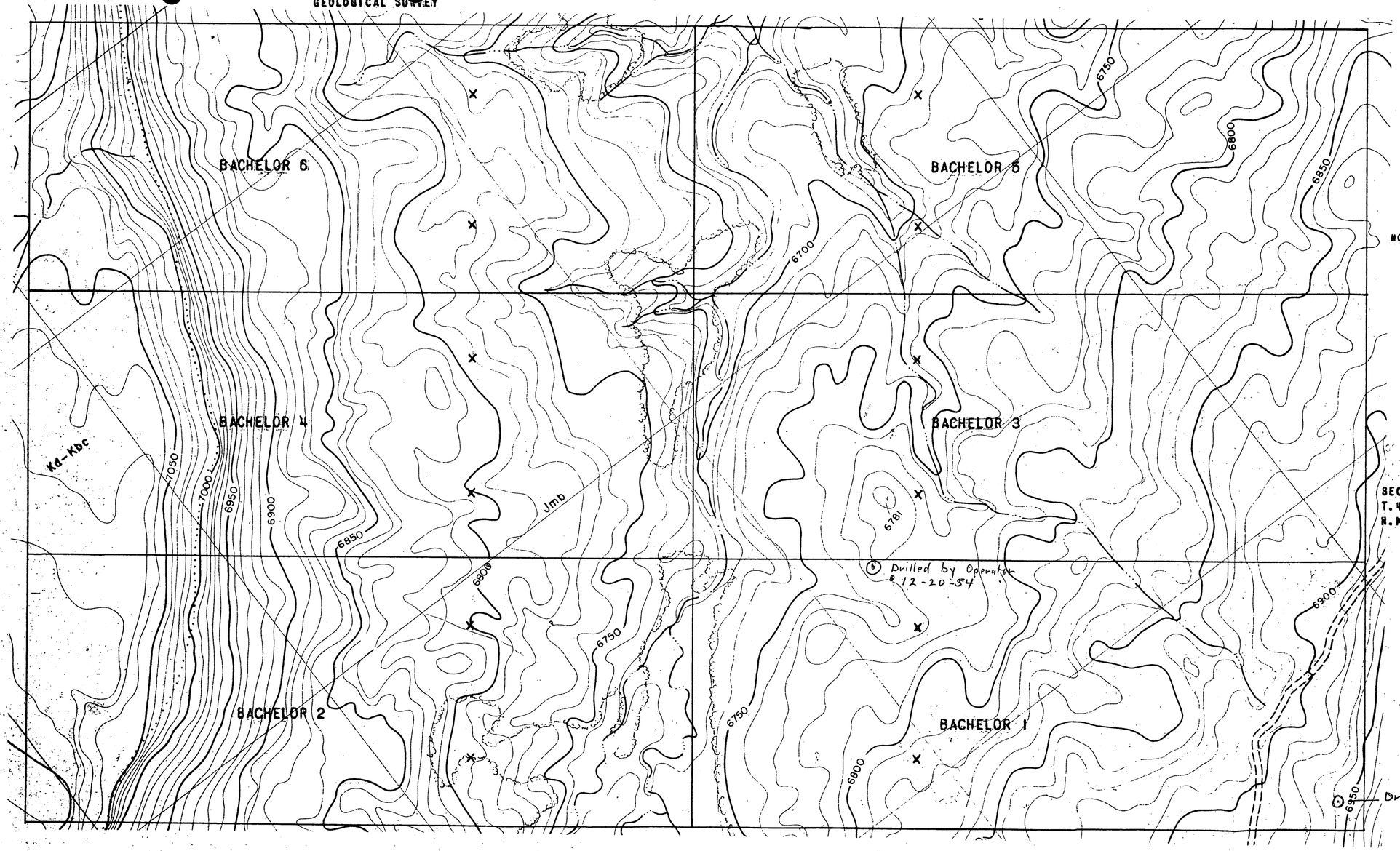


Figure 2. MAP OF PART OF BULL CANYON DISTRICT SHOWING LOCATION OF BACHELOR CLAIM GROUP OF CLAIMS, W. A. GREER, AND SURROUNDING MINES AND PROSPECTS, SAN MIGUEL COUNTY, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3555

Department of the Interior
Defense Minerals Administration
MAR 21 1955



EXPLANATION

Kd-Kbc	CRETACEOUS DAKOTA-BURRO CANYON
Jmb	JURASSIC MORRISON BRUSHY BASIN MEMBER
X	LOCATION OF PROPOSED DRILL HOLES, STAGE 1
.....	FORMATION CONTACT

NOTE: TOPOGRAPHY, GEOLOGY AND CLAIM BOUNDARIES FROM APPLICANTS MAP

N

SECTION 15 (UNSURVEYED)
T. 45 N., R. 18 W.
N.M.P.M.

200 0 400 FEET

CONTOUR INTERVAL 10 FEET

Figure 3. MAP OF PART OF BULL CANYON DISTRICT SHOWING LOCATION OF PROPOSED DRILL HOLES ON BACHELOR GROUP OF CLAIMS, W. A. GREER, SAN MIGUEL COUNTY, COLORADO

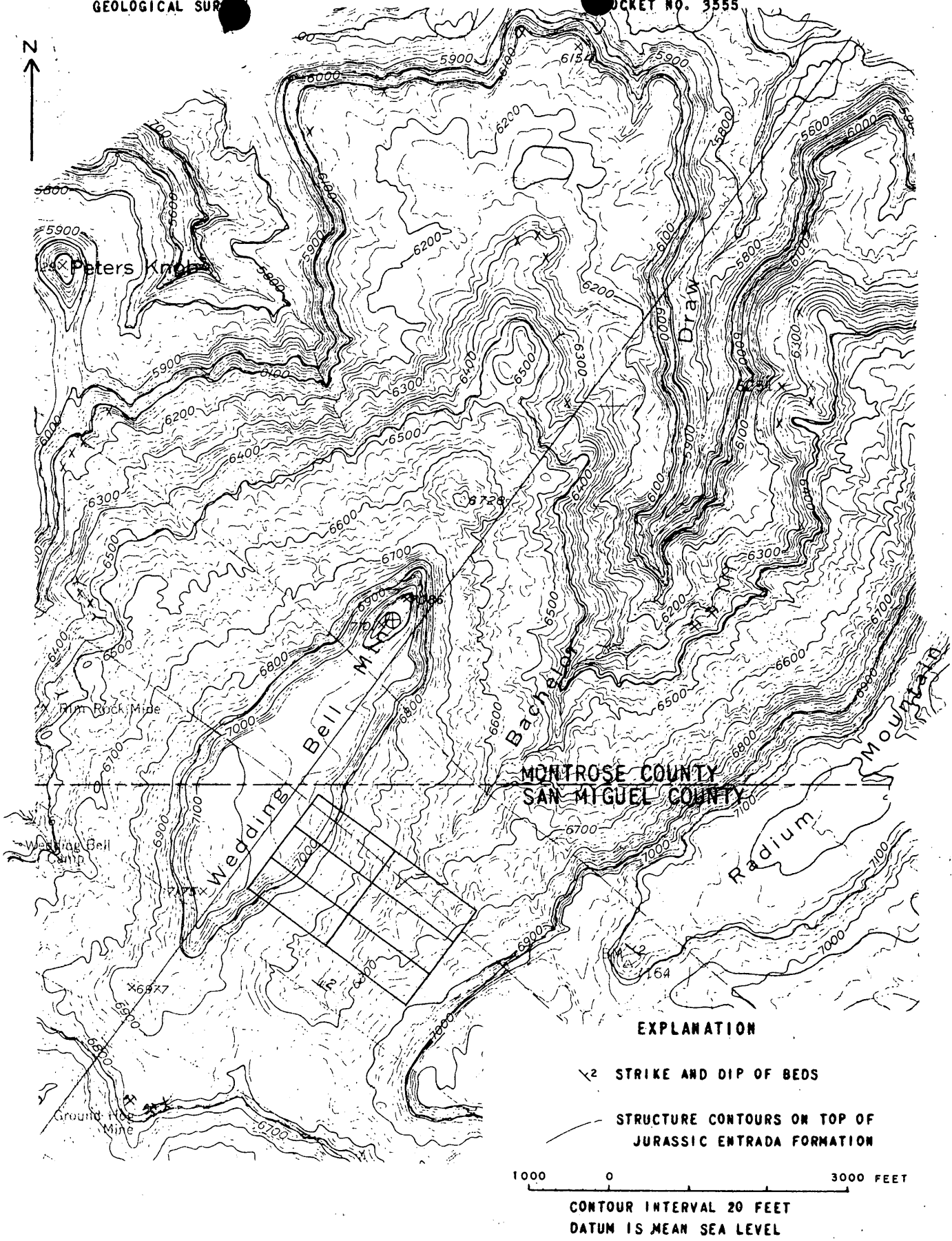


Figure 2. MAP OF PART OF BULL CANYON DISTRICT SHOWING LOCATION OF BACHELOR CLAIM GROUP OF CLAIMS, W. A. GREER, AND SURROUNDING MINES AND PROSPECTS, SAN MIGUEL COUNTY, COLORADO

12/3/54 vgla

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

224 New Customhouse
Denver 2, Colorado

November 29, 1954

Memorandum

To: A. Brokaw (w/brochure)

From: DMEA Field Team, Region IV

Subject: DMEA Docket 3555 (Uranium)
W. A. Greer, Bachelor group
San Miguel and Montrose Counties, Colorado

Enclosed is a copy of the subject application and copies of memoranda from R. D. Trace of the U. S. Geological Survey and John E. Crawford of the U. S. Bureau of Mines with transmittal letter from the Chairman, DMEA Operating Committee.

Please review the application to determine if a field examination of the property is warranted. If a formal examination is indicated, please make the customary examination and prepare a report for the use of the Washington office. If sufficient information is available to justify denial without a field examination, a memorandum report will be sufficient. If a field examination indicates that the application will be approved, please notify the Executive Officer so that arrangements can be made to have a Bureau of Mines Engineer make the customary examination.

The Atomic Energy Commission should be contacted in regard to this application to obtain any knowledge they may have concerning the property. A statement that this source of information was referred to should be included in your report.

John F. Shaw
John F. Shaw
For W. H. King

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

Enclosure

RDB:mn
cc: W.M.Traver
A.H.Koschmann
Sec. to Oper. Comm. (2)
DMEA Docket 3555
Chron.

Surname 700

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

Ching
Ellis
Hedges
Newcomb
Selfridge
Kilham

NOV 19 1954

Mr. Louis P. Gaggini
Geo-Engineering
304 Main Street
Grand Junction, Colorado

Re: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Bachelor Group
San Miguel and Montrose Counties
Colorado

Dear Mr. Gaggini:

The subject application, under the above-captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region IV at the following address:

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

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

Sincerely yours,

C. O. Mittendorf

Administrator

MChing:am
11-17-54
cc to: Admr. Reading File
Docket
Code 700
DMEA Field Team, Region IV(2)
Mr. Ching

R.C.H.

Surname 700

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

Ching
Ellis
Selfridge
Johnson

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse
555 Battery Street
San Francisco, California

NOV 19 1954

Re: Docket No. DMEA-3555 (Uranium)
W. A. Greer
Bachelor Group
San Miguel and Montrose Counties
Colorado

Dear Mr. King:

Enclosed are two copies each of comments and recommendations by R. D. Trace and John E. Crawford of the Uranium Commodity Committee, dated November 8 and November 10, 1954, respectively, regarding the subject application.

It appears that the Applicant has presented all the information available to him regarding uranium mineralization on the property.

It is possible, however, that the Geological Survey or AEC in Grand Junction may have additional information which would justify a field examination. We are therefore referring the application to you for a preliminary investigation followed by a regular field examination if you find the latter justified.

Should this application be processed further, your attention is called to the fact that the Owner's Consent to Lien submitted has been superseded by the form revised on July 1, 1954. In addition, a Subordination Agreement would be required of Louis P. Gaggini, the assignor of the mining lease.

MChing:am
11-17-54
cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
Enclosures

APPROVED:
J. H. Hedges by ESJ
Member, Bureau of Mines

E. L. Newcomb by ESJ
Member, Geological Survey

Sincerely yours,

George C. Selfridge by ESJ
Chairman, Operating Committee

T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching

R.C.h.

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

November 10, 1954

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
NOV 12 1954

Memorandum

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

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

Subject: DMEA Docket 3555, W. A. Greer, 502 Aliso Drive, Albuquerque, New Mexico

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 suggest that the attached application be returned to W. A. Greer for proof of uranium mineralization on the Bachelor Group of claims. The information submitted does not give sufficient evidence of a uranium occurrence on the property to make consideration of the application possible.

John E. Crawford

John E. Crawford

Attachment

DEPARTMENT OF THE INTERIOR
Bureau Mines Administration
RECEIVED
NOV 12 1954

11/9/54 glr

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 8 = 1954

November 8, 1954

Memorandum ✓

REVIEW OF APPLICATION DMEA-3555 (Uranium)

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

From: R. D. Trace, U. S. Geological Survey

Applicant's name and address: W. A. Greer, 502 Aliso Drive, Albuquerque, New Mexico

Name of property: Bachelor group

Location of property: San Miguel County, Colorado

Summary of applicant's proposal:
1) 14,730 feet of "wide-spaced" drilling.
2) 12,000 feet of "exploratory" drilling.

Sources of information on applicant's property:
U.S.G.S. Geologic map of Bull Canyon Quadrangle, by F. W. Cater, Jr.
No other information available in Washington on Bachelor group.

Comments: This project proposes to drill an untested area that is bounded on three sides, at distances of a half to one mile, by small mines and prospects (see Bull Canyon Quadrangle). The upper part of the Brushy Basin member of the Morrison formation crops out over most of the project area; nowhere on the property do any of the ore-bearing horizons crop out, although we know that they are present from the logs of drill holes B-1 and RH 1-7.

If my memory hasn't failed me, the nearby mines are small -- at most they may have produced a few thousand tons of ore each. The Ground Hog mine, about half a mile southwest of the Bachelor group, is in a conglomerate lense near or at the base of the Brushy Basin, whereas most of the other nearby deposits appear to be in the topmost massive sandstone of the Salt Wash member.

The logs of the drill holes presented in the application are of only slight assistance in evaluating the project area. The eU_3O_8 of 0.09 percent in RH 2 is encouraging, and, based strictly on geologic criteria, the main ore-bearing sandstone looks favorable. (A chemical analysis of the 5.5 feet of 0.09 core, if recovered, would have been extremely helpful.) However, the holes surrounding RH 2 found only some 0.02 pips, which mean little or nothing. In addition, my interpretation of the main ore-bearing sandstone in these holes at best is semi-favorable, because of the consistent thickness of 70-80 feet of the sandstone, plus the scarcity of carbon and green mudstone splits, "interstitials", and bottoms. The main ore-bearing sandstone in hole B-1, the only hole on the property, looks unfavorable; however, one hole obviously cannot condemn 6 claims.

The 200 feet of coring suggested for each hole is probably high, even if the Brushy Basin ore horizon is cored. Also, I doubt that a 1-drill contract, as suggested, is the best procedure.

RECOMMENDATION: Unless the Survey or Commission in Grand Junction has more and encouraging information, I doubt whether this project is justifiable exploration.

R. D. Trace

R. D. Trace

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

November 2, 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 - 3555 W. A. GREER

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

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

November 2, 1954
Subject: DMEA-3555
Re: Exploration Assistance
W. A. Greer (Bachelor Group)

Mr. Louis P. Gaggini
Geo-Engineering
304 Main St.
Grand Junction, Colo.

Dear Sir:

The receipt of your application dated October 27, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3555 and referred to the Rare and Miscellaneous Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

VIA AIR MAIL

20 CENTS

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1954

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

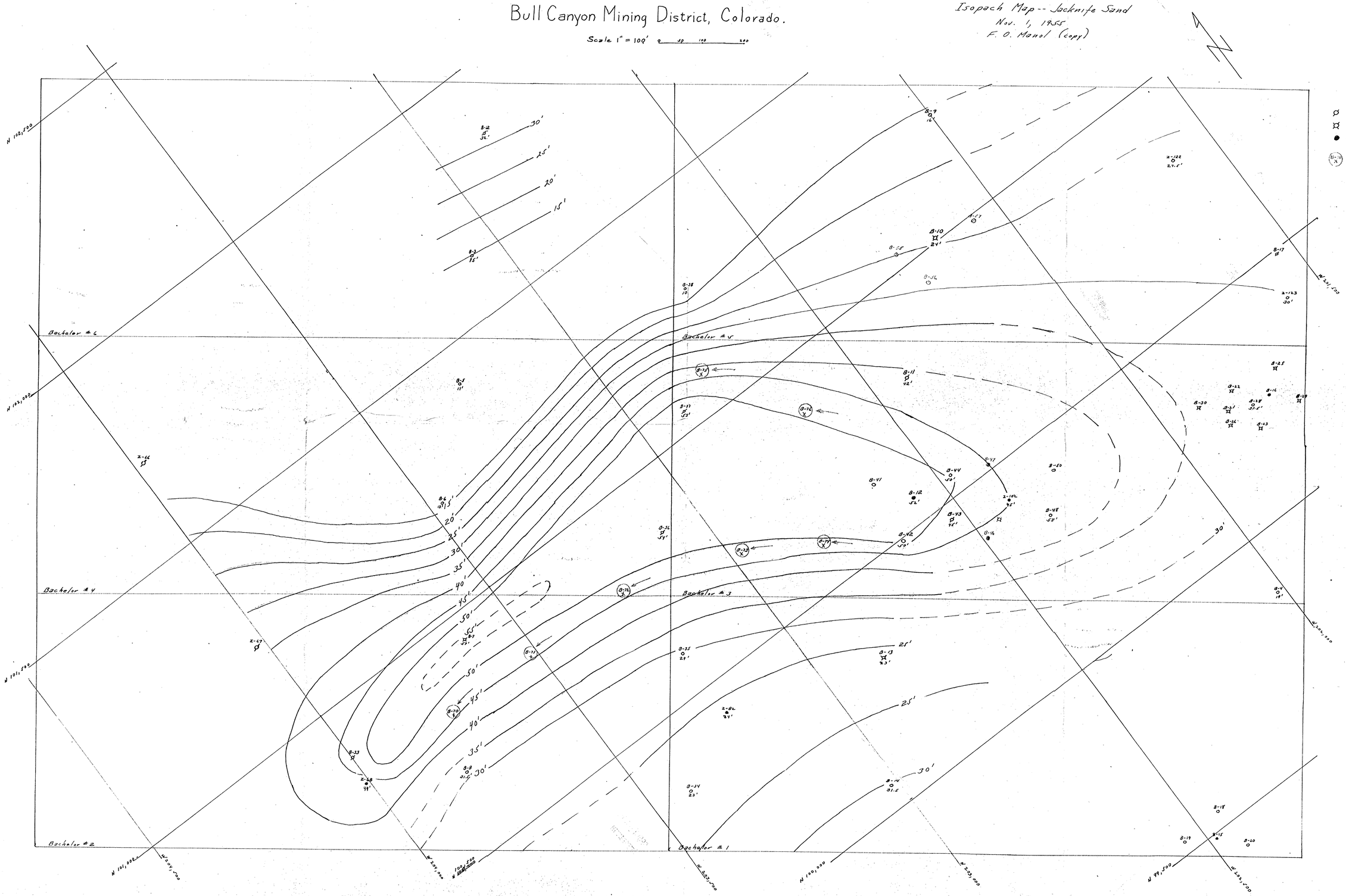
VIA AIR MAIL

BACHELOR CLAIM #1 THRU #6

Bull Canyon Mining District, Colorado.

Scale 1" = 100' 0 50 100 200

Isopach Map -- Jacknife Sand
Nov. 1, 1955
F. O. Manol (copy)

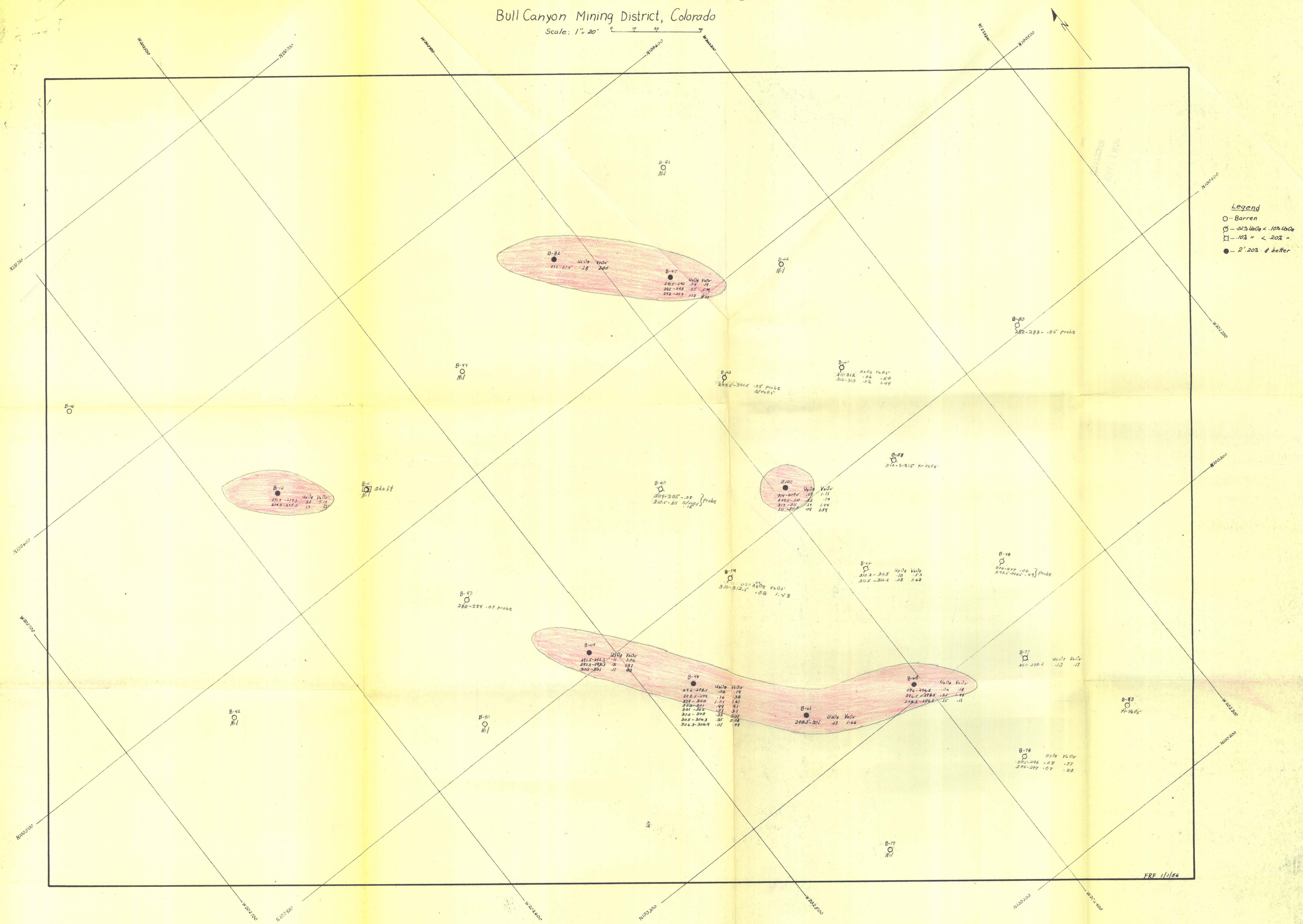


DMEA-35555 Fig. 1

ASSAY MAP - BACHELOR #3

Bull Canyon Mining District, Colorado

Scale: 1" = 20'


Legend
O – Barren
Ø – .02% U3O8 < .10% U3O8
¤ – .10% " < .20% "
● – 2'.20% & better
B-81 Nil
B-82 282-284 .28 .208
B-47 291.5-292 .05 .19 292-293 .05 .79 293-294 .28 .30
B-62 Nil
B-50 282-283 - .05 probe
B-44 Nil
B-43 299.5-301.5 .05 probe
B-61 311-312 .06 .50 312-313 .02 1.44
B-41
B-58 310-312.5' tr V2O5
B-42 273.3-273.5 .88 5.14 274.3-275.0 .13 .07
B-60 Nil shaft
B-60 304-305 .08 310.5-311 .16 } Probe
2102 304-305 .21 1.11 309.5-310 .02 .79 310-311 .21 1.44 311-312 .01 1.59
B-66 310.2-311.5 .10 .53 311.5-312.2 .08 1.62
B-18 276-277 .06 293.5-295.5 .04 } Probe
B-54 310-312.5 .02 1.48
B-43 282-284 .07 probe
B-67 281.5-282.3 .11 1.16 292.3-293.3 .31 1.87 300-301 .11 .82
B-46 295-295.5 .06 .14 295.5-299 .16 .38 299-300 1.01 1.61 300-301 .99 .61 301-302 .57 .31 302-303 .33 3.07 303-304.3 .35 3.08 304.3-304.9 .07 .49
B-68 295-296.5 .06 .18 296.5-298.5 .35 1.48 298.5-299.5 .15 .11
B-27 293-293.2 .10 .17
B-83 tr V2O5
B-92 Nil
B-85 Nil
B-61 298.5-301 .13 1.66
B-78 295-296 .08 .77 296-297 .07 .20
B-79 Nil
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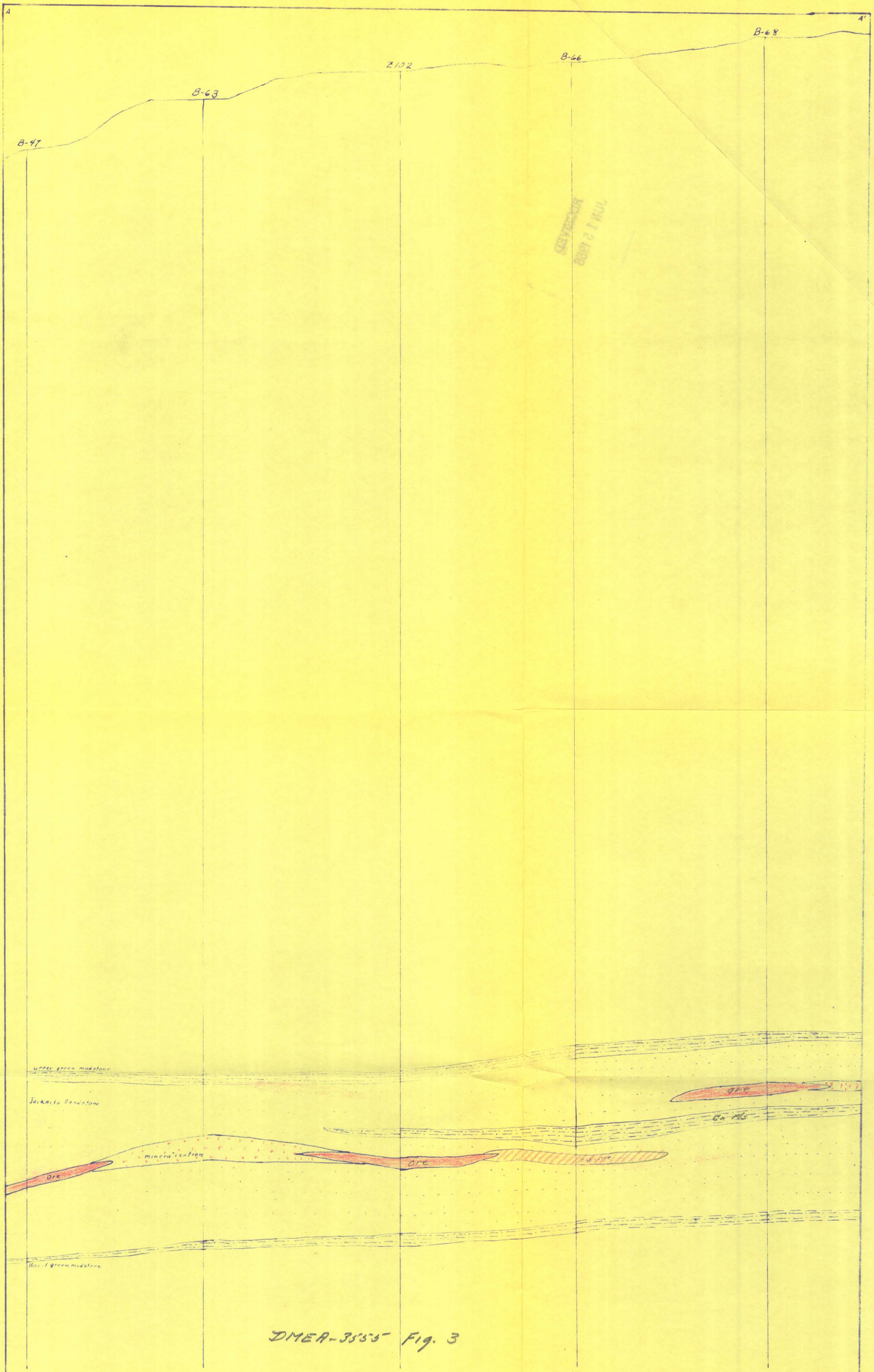
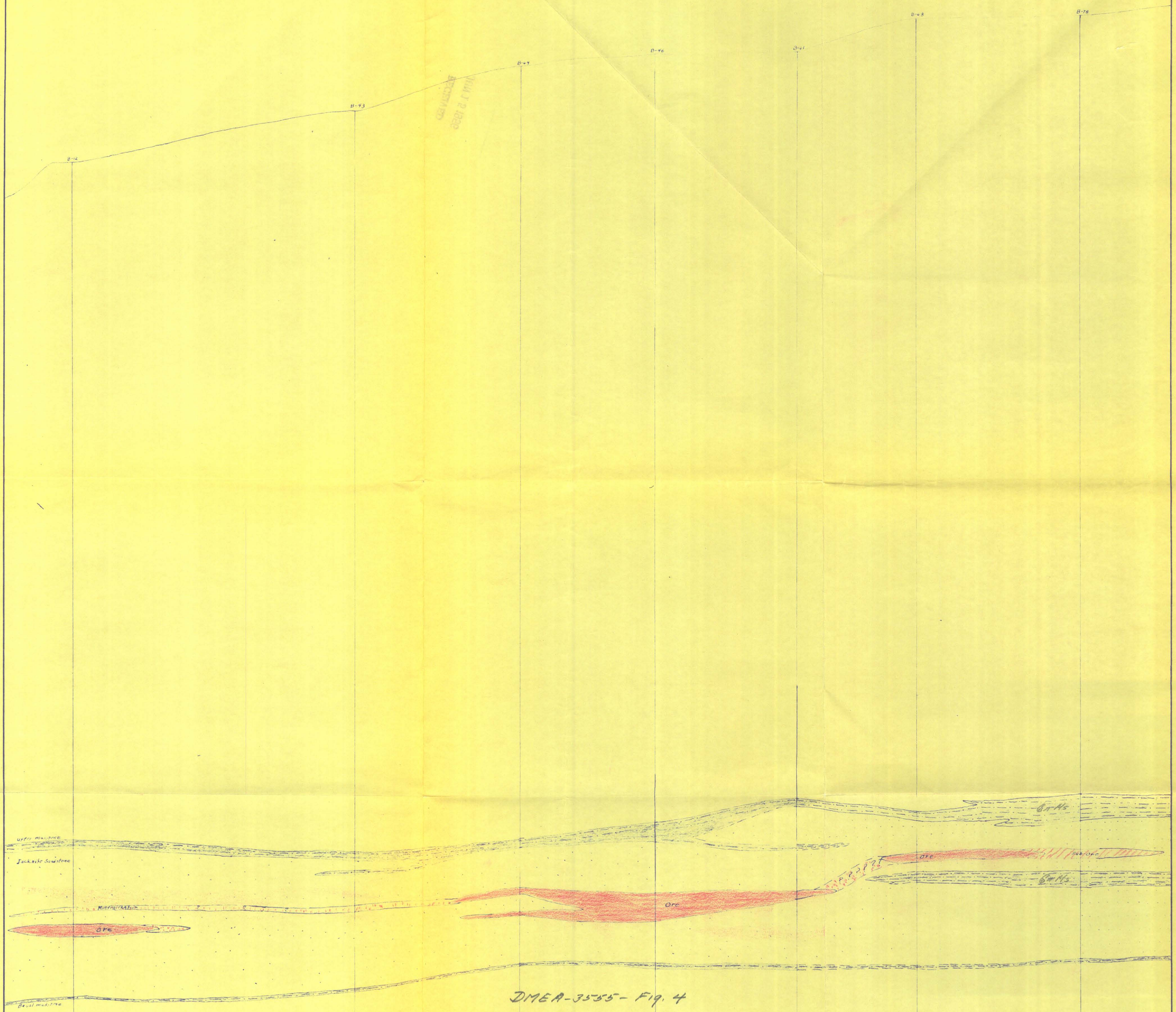


DMEA-3535 Fig. 3

Cross Section Bachelor Ore Body

Scale: 1" = 20'

FRF 12/16/55

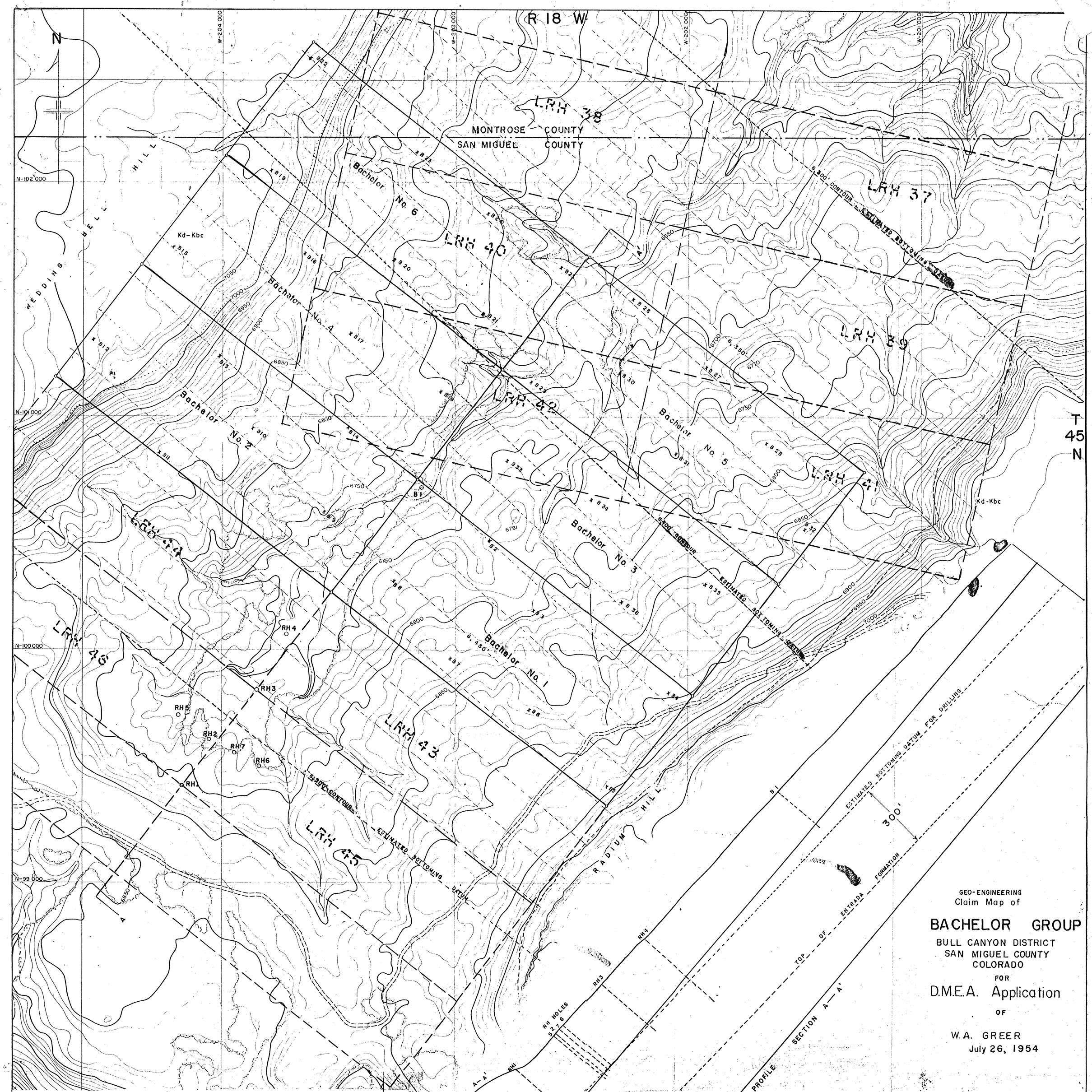


DMEA-3555- Fig. 4

Cross Section Bachelor Ore Body

Scale: 1" = 20'

FRF 12/29/55



GEO-ENGINEERING
Claim Map of

BACHELOR GROUP

BULL CANYON DISTRICT
SAN MIGUEL COUNTY
COLORADO

FOR

D.M.E.A. Application

OF

W. A. GREER
July 26, 1954

EXPLANATION

LRH - Lower Radium Hill claims that post-date the BACHELORS

○ B1 - Drill Holes completed

× B9 - Drill Holes for DMEA Application

Scale 1" = 200'

Hole No.	Claim	Est. Collar Elev.	Est. Bottom Elev.	Est. Hole Depth
B 2	B 1	6770	6430	340
B 3	B 1	6795	6435	360
B 4	B 1	6898	6438	460
B 5	B 1	6945	6455	490
B 6	B 1	6875	6455	420
B 7	B 1	6828	6458	370
B 8	B 1	6768	6450	320
B 9	B 2	6748	6450	300
B 10	B 2	6820	6450	370
B 11	B 2	6870	6460	410
B 12	B 2	7095	6455	640
B 13	B 2	6930	6440	490
B 14	B 2	6790	6430	360
B 15	B 4	7073	6423	650
B 16	B 4	6895	6415	480
B 17	B 4	6815	6415	400
B 18	B 4	6753	6413	340
B 19	B 6	7042	6402	640

Hole No.	Claim	Est. Collar Elev.	Est. Bottom Elev.	Est. Hole Depth
B 20	B 6	6800	6400	400
B 21	B 6	6750	6390	360
B 22	B 6	7060	6370	690
B 23	B 6	6830	6370	560
B 24	B 6	6760	6370	390
B 25	B 6	6680	6360	320
B 26	B 5	6690	6360	330
B 27	B 5	6720	6360	360
B 28	B 5	6780	6360	420
B 29	B 5	6690	6390	300
B 30	B 5	6700	6370	330
B 31	B 5	6750	6380	370
B 32	B 5	6875	6375	500
B 33	B 3	6755	6415	340
B 34	B 3	6765	6405	360
B 35	B 3	6860	6400	460
B 36	B 3	6820	6420	400
		TOTAL		14,730

application