DMEA Form 9
(Rev. 5/57)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Idm-E No. 816

DMEA NO. 3612

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(Withdrawn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

Contract

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

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

Folder No. 1:

Left Side

Royalty Audits 1/
Certification of Discovery
X Cost Audits 2/
X Termination Notice or Agreement
Recision Notice
Assignment of Contract
X Contract Amendments
X Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
X Application and attachments
Envelope for maps

Right Side

X Project summary
X Work completed analysis
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)
X Interim Field Team Reports
X Operator's monthly reports and all attachments
On-site Exam Report (Tab)
Settlement Sheets
Drill Logs

Additional Folders:

Left Side

Folder No.____:
Analysis of Semi-Annual Inspection Reports
Interim Summary Reports by DMEA Engineers

Right Side

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

Folder No.____: Maps (Use pocket folder or envelope.)

Folder No.____: Settlement Sheets

Folder No.____: Drill Logs

Folder No.____: Royalty material

1/ Or reports of royalty review
2/ Or cost reports of review

R.C.S.

16592

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

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DMEA
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REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City, Utah.

pertaining to Exploration Project Contract No. Idm-8816, Docket No. DMEA-3612, including Amendment No. 1, for the months of September, 1955 ~~to February, 1956, inclusive~~, covering a project for the exploration of uranium on property known as Red Wing Claims, et al. located in Coconino County, Arizona.

My review included an examination of the Monthly Reports (Form MP-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer, DMEA Field Team, 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 reasons:

(a) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible disallowance thereunder;

(b) the monthly reports were supported by documentary proof of the costs claimed under the contract provisions for contribution by the Government on the basis of actual costs incurred;

(c) a major portion ($5,122.00) of the costs incurred covered work performed at unit rates under independent contract; and

(d) of the balance, $2,205.00 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, and the remainder ($1,514.00) was for personal services and supervision.

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

Total cost as billed by Contractor		$9,424.50
Exceptions: (Schedule attached)		
By DMEA Finance Officer	$583.50	
Herewith	0.00	583.50
Total Accepted Cost		$8,841.00

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 Six thousand, six hundred thirty and 75/100ths Dollars

** $6,630.75 **

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.

June 20, 1957

T. H. Brading, Auditor

SCHEDULE OF EXCEPTIONS
MARBLE CANYON URANIUM, INC.

Contract No. Idm-8816 | Docket No. DMRA-3612

PERIOD SEPTEMBER - OCTOBER, 1955		
Core Drilling		
Claimed by Operator 20 feet @ $3.00/ft.	$60.00	
Maximum allowable 20 feet @ $2.50/ft.	50.00	
Amount Disallowed		$ 10.00
PERIOD NOVEMBER - DECEMBER, 1955		
Core Drilling		
Claimed by Operator 339 feet @ $3.00/ft.	$1,017.00	
Maximum Allowable 339 feet @ $2.50/ft.	847.50	
Amount Disallowed		169.50
Non-Core Drilling		
Claimed by Operator 1,316 feet	$2,079.50	
Maximum allowable 1,316 feet @ $1.50/ft.	1,974.00	
Amount Disallowed		105.50
PERIOD JANUARY - FEBRUARY, 1956		
Core Drilling		
Claimed by Operator 80 feet @ $3.00/ft.	$240.00	
Maximum allowable 80 feet @ $2.50/ft.	200.00	
Amount Disallowed		40.00
Non-Core Drilling		
Claimed by Operator 1,226 feet	$1,956.50	
Maximum Allowable 1,226 feet @ $1.50/ft.	1,839.00	
Amount Disallowed		117.50
Field Assistant		
Net claimed by Operator	$855.00	
Amount allowed based on proration	729.00	
Amount Disallowed		126.00
Supervising Consultant		
Net claimed by Operator	$800.00	
Amount allowed based on proration	785.00	
Amount Disallowed		15.00

Costs of Field Assistant and Supervising Consultant were prorated based on the total amount of work performed to total amount of work authorized in the contract. This proration was developed by the Field Team in line with teletype from Chairman, Operating Committee, dated April 6, 1956.

SUMMARY DISALLOWANCES

September - October, 1955	$ 10.00
November - December, 1955	275.00
January - February, 1956	298.50
Total Amount Disallowed	$583.50

Disallowances made by Finance Officer; approved by Auditor.

Docket Copy

Contin

Approved
"Appd. Sol. Off."

Chang (EWS)
Ellis
Talkye
Selfridge
H. J. Simon

TERMINATION AGREEMENT

It is agreed this 9th day of October, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Marble Canyon Uranium, Inc., hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-2816, Docket No. DMEA-3612, dated June 13, 1955, as amended, hereinafter called the "Contract," that:

1. Effective April 1, 1956, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute to allowable costs incurred prior to said effective date.

3. All rights of the Government provided for in the Contract with respect to a certification of discovery or development and a percentage royalty and liens for its payment, and all rights of the Government with respect to records, audits, and recovery of any overpayment, are preserved.

4. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract, except as otherwise provided in this termination agreement.

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

THE UNITED STATES OF AMERICA

By E. M. Hardman
acting Executive Officer
DMEA Field Team, Region III

MARBLE CANYON URANIUM, INC.

By Adiel F. Stewart
~~Mark Ingalls~~, President
Adiel F. Stewart

EXPLORATION PROJECT CONTRACT
MARBLE CANYON URANIUM, INC.
DOCKET NO. DMEA 3612
CONTRACT NO. IDM-E816

AMENDMENT NO. 1

It is agreed this 30th day of January, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government", and Marble Canyon Uranium, Inc., hereinafter called the "Operator," parties to that certain Exploration Project Contract No. Idm-E816, Docket No. DMEA 3612, dated June 13, 1955, hereinafter called the "Contract," that:

1. The time fixed for completion of the work is extended from February 1, 1956, to November 1, 1956.

2. The maximum period for royalty payments and lien for the payment thereof provided for in the Contract is increased to eleven years.

This amendment 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, the fixed unit cost of any item of work, nor any item of allowable cost which is expressly designated "allowable maximum."

Executed in sextuplet the day and year first above written.

UNITED STATES OF AMERICA

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

MARBLE CANYON URANIUM, INC.

By Max Ingalls
Max Ingalls, President

(SEAL)

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MF-200
(Revised June 1954)

Docket No. DMEA - 3612

Commodity Uranium

Contract No. Idm-E 0816

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 13th day of June, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Marble Canyon Uranium, Inc., a Utah corporation,

whose mailing address is ~~587 - 11th Avenue Salt Lake City 3, Utah,~~ 200 Newhouse Bldg. S.L.C. 11, Utah,

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-200), the attached Exhibit "A," Annex I, and maps marked "Figure 1" and "Figure 2."

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 Arizona, County of Coconino, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the[4] see Annex I of[5] See Annex I 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: none.

(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

[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."

of the land (lessor, seller, optionor, etc.), are attached, as follows: Performance Bond furnished in lieu of Owner's Consent to Lien on State-owned land on Redwing Nos. 1, 2, 3, and 6 claims is waived.

(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 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(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 September 15, 1955 shall commence the work, and on or before February 1, 1956 (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."

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) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *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.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $32,440.00. The Government shall contribute 75 percent of the allowable costs as they are incurred in a total sum not in excess of $24,330.00: *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 or not in excess of the amount of the Government's contribution to the cost of property which is or may become subject to disposal as provided in Article 9(c), whichever is greater. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 7(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. "Costs incurred" mean costs that have been paid or have become due and payable, or that in the opinion of the Government have become an obligation. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Estimated costs.*—(a) *Categories of costs.*—The allowable costs of the work to which the Government shall contribute are limited to those that are direct, reasonable, necessary, and that are estimated in Exhibit "A" by categories as specified in this article. If any category or subcategory is omitted from the estimate of costs, or if the word "none" is annexed to the listing thereof, costs under such category or subcategory are not allowable. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost, and any excess over the estimated total allowable cost of the work, shall not be allowable. Any excess over the estimate of any category, subcategory, or item, either as to requirement or related cost, not indicated as a maximum shall be allowable within the limit of the estimated total allowable cost of the work. To the extent that excesses over maximums other than the estimated total allowable cost of the work may be necessary for the performance of the work, the Operator shall incur such excesses for his own account without contribution by the Government; but except for any such necessary excesses in categories, subcategories, or items thereunder the Operator is not obligated to incur more than his agreed percentage of the estimated, total allowable cost of the work.

To the extent specified in this article or in Exhibit "A" the following categories, subcategories, and elements thereof are maximums; but if not so specified either here or in Exhibit "A" they are not maximums, and may be exceeded within the limit of the estimated total allowable cost of the work:

CATEGORY (1)—INDEPENDENT CONTRACTS.—Work to be performed under independent contracts (see Article 4(b)). The estimated total amount of this category and the estimated cost of each unit of work for performance under an independent contract are maximums.

CATEGORY (2)—PERSONAL SERVICES.

Subcategory (a)—Supervision.—All elements of this subcategory (number of supervisors, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)—Technical services.—All elements of this subcategory (number of technicians, periods of employment, rates of pay, and total) are maximums.

Subcategory (c)—Labor.

CATEGORY (3)—OPERATING MATERIALS AND SUPPLIES.—Includes such items as drill bits and steel, explosives, fuel, pipe, power, small tools costing less than $50 each, timber, track.

CATEGORY (4)—OPERATING EQUIPMENT.

Subcategory (a)—Rental.—The number of each object to be rented [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)—Purchases.—The estimated total of this subcategory is a maximum.

Subcategory (c)—Depreciation.—All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)—INITIAL REHABILITATION AND REPAIRS.—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

Subcategory (a)—Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).—The estimated total of this subcategory is a maximum.

Subcategory (b)—Initial rehabilitation and repairs of operating equipment.—The estimated total of this subcategory is a maximum.

CATEGORY (6)—NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

CATEGORY (7)—MISCELLANEOUS.—Repairs and maintenance (other than initial) of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, communications, and any other items of requirement or cost that do not fall within any of the first 6 categories.

THE ESTIMATED TOTAL ALLOWABLE COST of the work is a maximum.

(b) *Nonallowable costs.*—The following costs are not allowable for contribution by the Government:

(1) *Costs of the land,* such as rental, depreciation, depletion, or other cost of acquiring, owning, or holding possession;

(2) *Indirect costs,* such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) *Previous work* performed or costs incurred before the date of this contract; and

(4) *Deferred payments.*—Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods; unless the purchase agreement is approved by the Government in writing.

(c) *Reductions in costs.*—The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original estimated total cost. This provision does not apply to receipts from production which are subject to the Government's percentage royalty under the provisions of Article 9 and see Article 13.

ARTICLE 7. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the 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. If the Government elects to audit said records and accounts relating to the exploration work by certified public accountant, it may do so as a cost of the work to which the Operator shall contribute. 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. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved 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 detailed costs incurred during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and 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 related costs incurred.

(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 8. *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 7) 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 therof 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 9. *Interests in purchased property.*—(a) *Title and ownership.*—All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions, although title thereto shall be taken in the name of the Operator.

(b) *Preservation of property.*—Until the final disposal of any property in which the Government has an interest the Operator shall preserve and protect same for the best interest of the Government, any reasonable and necessary costs thereof to be treated as an allowable cost of the project. After the completion of the work or termination of the Government's obligation to contribute, or when such property is not in use for or needed for the work, the Operator shall neither use it without the written consent of the Government nor without paying a reasonable rental to be fixed by the Government for its interest.

(c) *Disposal of property.*—Upon the completion of the work or termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator or the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government the Operator shall not sell at any price any item of property the cost of which was more than $500, and shall not sell at less than 25 percent of the purchase price any item of property which cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or himself cares to give. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, or explosives, or pipe, or rails), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the project.

(d) *Default of the Operator re disposal.*—If within 90 days after the completion of the work or termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, or after such further time as the Government may in writing allow, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may pursue one of the following two courses: (1) the Government, by written notice to the Operator, may place upon such property what in its opinion is a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *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: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) 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.

(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: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) 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 10 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 11. *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 12. *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 13. *Changes and added provisions.*—
To the extent that costs are set forth in Exhibit "A" as "Fixed Unit Costs" they are in lieu of the actual costs that would otherwise be allowable under Article 6 of the contract.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. Mitchell Dorr
Administrator, Defense Minerals
Exploration Administration
(for Hoffland)
"Appd. Sol. Off."

MARBLE CANYON URANIUM, INC.
(Operator)

By Max Ingalls
Pres.

Ching
Ellis
Talbot
Selfridge
J. Johnson

I, PARKER L. CAMPBELL, certify that I am the secretary of the corporation named as Operator herein; that MAX INGALLS who signed this contract on behalf of the Operator, was then PRESIDENT 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.

Parker L. Campbell

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70617-1

EXPLORATION PROJECT CONTRACT
MARBLE CANYON URANIUM, INC.
DOCKET NO. DMSA-3612

ANNEX I

The land referred to in Article 2 of the contract consists of 43 unpatented lode mining claims situated in Sections 2 and 3, T. 40 N., R. 7 E., and Sections 34 and 35, T. 41 N., R. 7 E., Coconino County, Arizona. The claims are recorded at the office of the County Recorder as follows:

Name of Claims	Book	Page
Redwing No. 1	57	494
Redwing No. 2	57	495
Redwing No. 3	57	496
Redwing No. 4	57	497
Redwing No. 5	57	498
Redwing No. 6	57	499
Redwing No. 7	57	458
Redwing No. 8	57	459
Redwing No. 9	57	460
Redwing No. 10	57	461
Sourvall No. 1	57	462
Sourvall No. 2	57	463
Sourvall No. 3	57	464
Sourvall No. 4	57	465
Sourvall No. 5	57	466
Sourvall No. 6	58	92
Sourvall No. 7	58	93
Happy No. 1	57	456
Happy No. 2	57	457
Leone No. 1	57	467
Leone No. 2	57	468
Leone No. 3	57	469
Lehnheer No. 1	58	86
Lehnheer No. 2	58	87
Lehnheer No. 3	57	477
Lehnheer No. 4	57	478
Marion No. 1	57	486
Marion No. 2	57	487
Marion No. 3	57	488
Marion No. 4	57	489
Marion No. 5	57	490

Name of Claims	Book	Page
Ingalls No. 1	52	597
Ingalls No. 2	52	598
Ingalls No. 3	52	599
Ingalls No. 4	52	600
Jeannie No. 1	53	2
Jeannie No. 2	53	3
Jeannie No. 3	53	4
Jeannie No. 4	53	5
Jeannie No. 5	53	6
Mary Y No. 1	53	14
Mary Y No. 2	53	15
Mary Y No. 3	53	16

Red Wing No. 1 and No. 2 claims are held under a State mining lease and Red Wing No. 3 and No. 6 claims are partially held under State mining lease and partially held through location. All other claims are held through location.

The claims are shown on map, Figure 2, and the location of the claims is shown on an index map, Figure 1.

EXPLORATION PROJECT CONTRACT
MARBLE CANYON URANIUM, INC.
DOCKET NO. DMEA-3612

RECEIVED
SEP - 6 1955

EXHIBIT "A"

Description of the Work

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

The drill holes shall test a potential ore-bearing sandstone unit which occurs about 150 feet above the base of the Chinle formation. It is anticipated that the average depth of the holes will be approximately 100 feet, of which an average of 20 feet is likely to be cored. The coring shall begin just above the potential ore-bearing sandstone unit and the holes shall be bottomed as soon as it is recognized that the drill has passed through this unit. All holes shall be BX in size except where maintenance of this size is impractical, in which case a minimum size of AX is allowable.

The required drilling is estimated at 12,600 feet, of which it is estimated that 2,520 feet will be core drilling and 10,080 feet noncore drilling. It is estimated that 1,500 feet of reaming and casing may be required. All drilling, reaming, and casing will be performed by independent contractor or contractors.

All drill core and all 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 uranium and copper.

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 four stages. If, in the opinion of the Government, the results of each preceding stage warrant further work the Operator shall perform that work outlined in each succeeding stage which the Government approves in writing in advance.

The location, 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 20 holes aggregating an estimated 2,000 feet, more or less, on a 400-foot grid pattern. The locations of Stage I holes are indicated by circled X's on the attached map, Figure 2. If the 20 holes require more than 2,000 feet of drilling to reach the desired horizon, the excess footage shall be deducted from Stage II.

Stage II

Stage II work consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 50 holes aggregating not more than 5,000 feet, on a 200-foot grid pattern as indicated by X's on the attached map, Figure 2. Those Stage II holes which are in areas determined as unfavorable by Stage I work shall be eliminated.

Stage III

Stage III work consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 28 holes aggregating not more than 2,800 feet as offsets to Stages I and II holes which show encouraging mineralization. The offset holes shall not be drilled closer than 50 feet to any previously drilled hole.

Stage IV

Stage IV work consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 28 holes aggregating not more than 2,800 feet. These holes may be extensions of the 200-foot grid outlined under Stages I and II or 50-foot offsets around ore holes. The purpose of Stage IV drilling is to follow up or extend

definite ore trends, or further explore mineralized ground found under this or previous stages.

Estimated Costs of the Project

Actual Costs

Category (1) Independent Contracts		
2,520 feet core drilling @ $2.50/ft.	$ 6,300.00	
10,080 feet nonsoore drilling @ $1.50/ft.	15,120.00	
1,500 feet reaming and casing @ $1.75/ft.	2,625.00	$24,045.00
Category (2) Personal Services		
Supervising consultant - 30 days @ $50/day	1,500.00	
Field Assistant - 6 months @ $450/mo.	2,700.00	4,200.00
Categories (3) through (7) - None		
Estimated Total Actual Costs		$28,245.00

The Government will contribute to the requirements set forth below on the basis of the "Fixed Unit Costs" specified therefor, as these costs accrue, in lieu of actual costs. These costs include all costs of the project whatsoever except those costs scheduled above under Categories (1) and (2).

Fixed Unit Costs

200 hours bulldozer work @ $12.50/hr. (includes moving in and moving out time)	2,500.00

126 holes @ $10/hole for radiometric probing and stand-by costs	$ 1,260.00	
87 chemical sample analyses @ $5.00/sample	435.00	
Estimated Total Fixed Unit Costs		$ 4,195.00

SUMMARY

Estimated Total Actual Costs	$28,245.00
Estimated Total Fixed Unit Costs	4,195.00
Estimated Total Cost of Project	$32,440.00
Government Participation @ 75%	$24,330.00

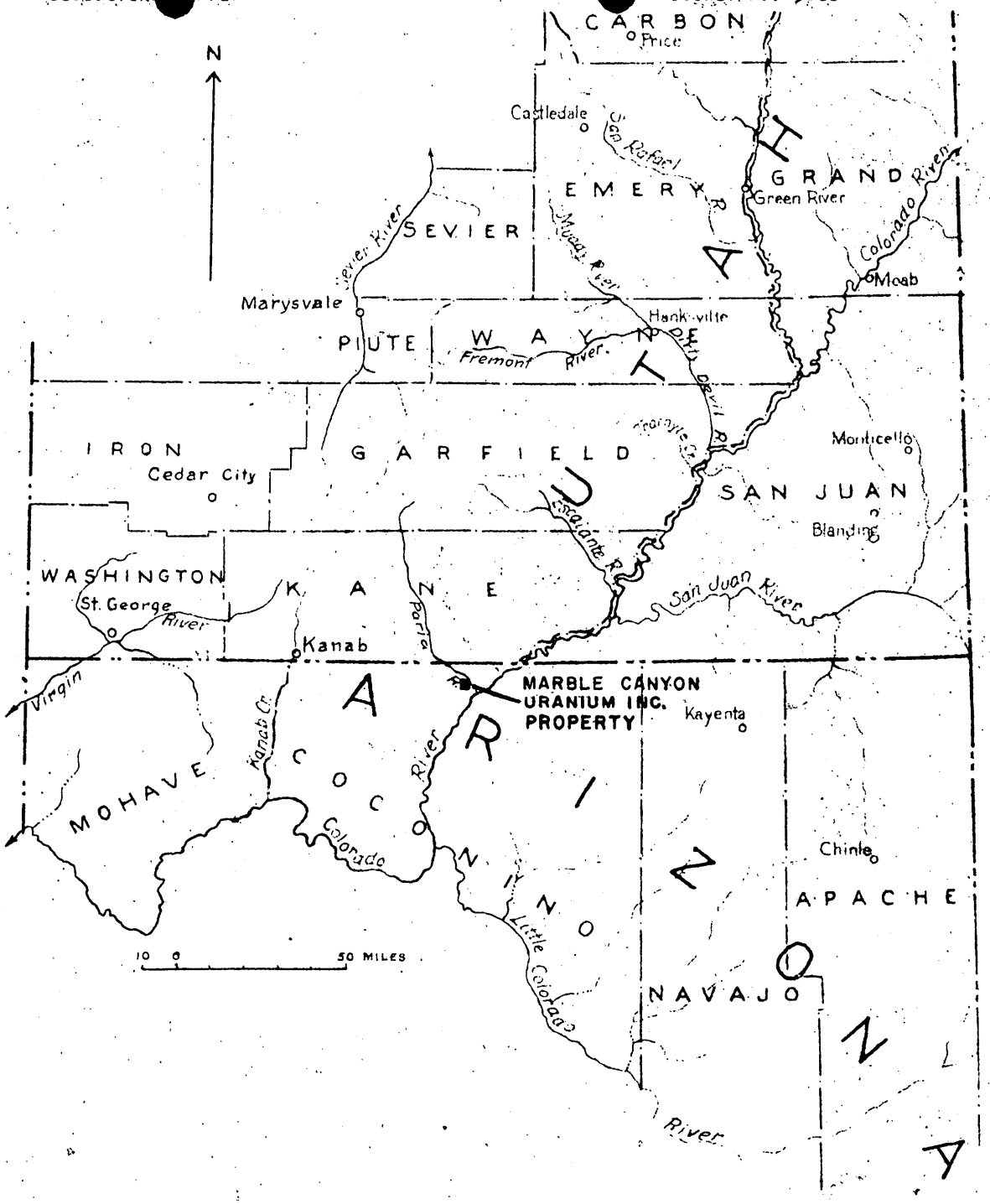

Figure 1. INDEX MAP OF PARTS OF ARIZONA AND URAH SHOWING LOCATION OF MARBLE CANYON URANIUM INC. PROPERTY COCONINO COUNTY, ARIZONA

PHONE 4-3675

6-6-55
Gm

Marble Canyon Uranium, Inc.

587 - 11TH AVENUE
SALT LAKE CITY 3, UTAH

June 3rd, 1955.

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Adm.,
Dept of Interior,
Wash., 25, D. C.

RECEIVED
JUN - 6 1955

Dear Mr. Mittendorf:

Re: Doc. DMEA 3612 (Uranium)
Red Wing Claims, etal.
Coconina, County, Ariz.

In answer to your letter of May 19, 1955, we are enclosing herewith for your records photo-stat copy of Deed from George L. Dockstader, etal. to Marble Canyon Uranium, Inc. for your records.

We noted what you said about the bond for the $33,000 on the State leased claims and we have applied to the American Surety Company for this bond, and we will have them issue it when you advise us the exact amount you want, and that our application has been approved.

Thanking you in advance for your early advise, we are

Yours very sincerely

MARBLE CANYON URANIUM, INC

By [signature] President

MRI/et

1.95

RECEIVED
JUN - 6 1955

This Deed, Made this 27 day of April

in the year of our Lord one thousand nine hundred and fifty five, between George L. Dockstader and Neta Dockstader, his wife and Allied Underwriters, a partnership

part ies of the first part,

and Marble Canyon Uranium Inc.

the part y of the second part,

WITNESSETH, that the said part ies of the first part, for and in consideration of the sum of One Thousand Dollars - - - - - - ($1,000.00) - - - - - - - DOLLARS, and other good and valuable consideration lawful money, to ~~parties of first part~~ paid by the party of the second part, the receipt whereof is hereby acknowledged, by these presents do grant, bargain, sell, remise, release and forever quit-claim unto the said part y of the second part, their successors and assigns, forever their right title and interest, in and to all their certain right s to land Mining claim s ~~and property~~ situate in Marble Canyon Mining District

Mining District, Coconina County, State of Arizona, viz.:

Red Wing Claims Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10;
Souvall Claims Nos. 1, 2, 3, 4, 5, 6, 7;
Happy Claims Nos. 1, 2;
Leone Claims Nos. 1, 2, 3;
Lehnherr Claims Nos. 1, 2, 3, 4;
Marion Claims Nos. 1, 2, 3, 4, 5;
Ingalls Claims Nos. 1, 2, 3, 4;
Jeannie Claims Nos. 1, 2, 3, 4, 5;
Mary Y Claims Nos. 1, 2, 3.

INDEXED No. 4896 Photostated

RECORDED AT REQUEST OF VanCott, Bagley, Cornwal' & McCarthy
May 19th A. D. 19 55 At 9:00 o'clock A. M
In Book 74 Official Recs Pages 257-258
Records of Coconino County, Ariz.
Edna Mae Thornton County Recorder
By Edna L. Bishopp Deputy

TOGETHER with all dips and spurs, rights, privileges and franchises, tenements, hereditaments and appurtenances thereto incident or belonging, or therewith used and enjoyed, and all the estate, right, title, interest, property, claim and demand whatsoever, legal and equitable, as well in possession as in expectancy, of the part ies of the first part, of, in or to said premises, and every part thereof.

TO HAVE AND TO HOLD the same unto the part y of the second part, their successors and assigns forever.

IN WITNESS WHEREOF the said part ies of the first part have hereunto set their hand s and seal s the day and year first above written.

Signed, Sealed and Delivered in Presence of

George L. Dockstader
George L. Dockstader

Neta Dockstader
Neta Dockstader

Allied Underwriters, a partnership
By. Rulon T. Jeffs
Rulon T. Jeffs

STATE OF Utah
County of Salt Lake } ss.

On the 27 day of April, A. D. 1955 personally appeared before me George L. Dockstader and Neta Dockstader his wife, and Rulon T. Jeffs one of the partners of Allied Underwriters, a partnership.

the signers of the above instrument, who duly acknowledged to me that they executed the same.

Notary Public.
Residing at Salt Lake City, Utah

My commission expires

No.

Mining Deed
(QUIT CLAIM)

TO

Dated , 19

Recorded at the Request of

, A. D. 19

at min. past o'clock M.,

in Book of

County

See Max Ingalls' letter April 27, attached to Mr. Traver's memo to Operating Committee, 5/4/55, that further communications should be addressed:

Max Ingalls, President
Marble Canyon Uranium, Inc.
587 - 11th Avenue
Salt Lake City 3, Utah

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. 3612
Metal or Mineral Uranium
Date Received
Estimated Cost $93,987
Participation (Government %)

Address all correspondence
Attention: Mr. Gould
725 Denver National Bldg.
Denver, Colorado AC 2-2765

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: Marble Canyon Uranium, Inc., a Utah corporation
Max Ingalls, President - 587 11th Avenue, Salt Lake City, Utah
Andrew W. Souvall, V.P., 1559 Cherokee Circle, Salt Lake. Parker Campbell, Secy., 130 2nd Ave., Salt Lake. Louis E. Holley, Treasurer, 543 - Salt Lake

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

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

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

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

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

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise owner, except for state leases as indicated in attached sheet.

(*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. Attached

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

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

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

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

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

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

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

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

(see attached sheets)

(*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. See attached sheets

(*c*) The work will start within 45 days and be completed within 6 months from the date of an exploration project contract.

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

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

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

(*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 DEC. 15, 1954

MARBLE CANYON URANIUM, INC.
(Applicant)

By Max Ingalls

PRESIDENT

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

MARBLE CANYON URANIUM, INC.

Supplemental Information Attached to
Application for DMEA Exploration Project Contract

3. Applicant's Property Rights

(a), (b), (c), (d), and (f) DESCRIPTION OF PROPERTIES

Name of Claims	Book	Page	Location
Redwing No. 1 (state lease)	57	494	T 40 N, R 7 E, Sec. 2
Redwing No. 2 (state lease)	57	495	" " "
Redwing No. 3 (partially state lease)	57	496	" " "
Redwing No. 4	57	497	" " "
Redwing No. 5	57	498	T 40 N, R 7 E, Sec. 3
Redwing No. 6 (partially state lease)	57	499	T 40 N, R 7 E, Sec. 2
Redwing No. 7	57	458	" " "
Redwing No. 8	57	459	" " "
Redwing No. 9	57	460	" " "
Redwing No. 10	57	461	" " "
Souvall No. 1	57	462	T 40 N, R 7 E, Sec. 2
Souvall No. 2	57	463	" " "
Souvall No. 3	57	464	" " "
Souvall No. 4	57	465	" " "
Souvall No. 5	57	466	" " "
Souvall No. 6	58	92	T 40 N, R 7 E, Sec. 3
Souvall No. 7	58	93	" " "
Happy No. 1	57	456	" " "
Happy No. 2	57	457	" " "
Leone No. 1	57	467	" " "
Leone No. 2	57	468	" " "
Leone No. 3	57	469	" " "
Lehnheer No. 1	58	86	" " "
Lehnheer No. 2	58	87	" " "
Lehnheer No. 3	57	477	" " "
Lehnheer No. 4	57	478	" " "
Marion No. 1	57	486	" " "
Marion No. 2	57	487	" " "
Marion No. 3	57	488	" " "
Marion No. 4	57	489	" " "
Marion No. 5	57	490	" " "
Ingalls No. 1	52	597	T 41 N, R 7 E, Sec. 34
Ingalls No. 2	52	598	T 41 N, R 7 E, Sec. 34 & 35
Ingalls No. 3	52	599	T 41 N, R 7 E, Sec. 35
Ingalls No. 4	52	600	" " "
Jeannie No. 1	53	2	T 41 N, R 7 E, Sec. 34
Jeannie No. 2	53	3	" " "
Jeannie No. 3	53	4	" " "
Jeannie No. 4	53	5	" " "
Jeannie No. 5	53	6	" " "
Mary Y No. 1	53	14	" " "
Mary Y No. 2	53	15	" " "
Mary Y No. 3	53	16	" " "

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Supplemental Information
Attached To
DMEA Exploration Project Contract Application
Marble Canyon Uranium, Inc.

4. Physical Description

(a) Referring to Exhibit 1A, at Cut #1 on Red Wing 4, a split-check contract has been executed with the Allred Company to mine the Chinle ore from a small slump-hill which apparently has high grade ore running all the way through it. Initial bull-dozed cuts on both sides exposed ore running from .23 to 3.76% U_3O_8. (See assay Exhibit (2) attached.)

At Cut #2 on Red Wing 3 a 30 ft. drift recovered 25 tons of high grade ore which has been stock-piled at a loading dock constructed at the bottom of the access road on Red Wing 4.

A mining camp has been constructed approximately 2 miles up the Paria Creek from these workings. This camp site was chosen because of a fresh water spring. The camp has comfortable sleeping quarters for about 12 men, and a separate mess building as well as sanitary latrine accomodations. In the operations conducted so far, the camp facilities have proved quite adequate for mining operations.

The mine workings are easily accessible for examination: Take Highway to Marble Canyon; proceed along a dirt county road north for 8 miles to Paria Creek. From this point a road has been constructed along the Paria as shown in Exhibit 1(A) to the dug-way at Red Wing 4. All of the workings can be reached by pick-up or jeep.

Following the recommendations of the geological report by J. J. Beeson (Exhibit (3)) a radiometric reconaissance survey of the claims along the Paria Creek has resulted in numerous scintillometer readings indicative of commercial ore. The locations of these also have been plotted in Exhibit 1(A).

(b) First shipments of ore are presently taking place. Approximately 30 tons have been shipped from the Red Wing No. 4 split check operation. No estimates of reserves have been made except that the slump-hill on Red Wing No. 4 has been roughly estimated to contain approximately 20,000 tons of ore which averages .23% uranium oxide. This is from the Chinle formation sandstone, not including the higher assays from the clay and vein as shown in the attached assay Exhibit

(2). This is a bull-dozing operation in which over 235 feet of the total 918 feet of perimeter of the slump-hill has been bull dozed, revealing a sandstone bed averaging 5 feet in thickness.

(c) The Paria Creek has cut a canyon which reveals Wingate Cliffs at some distance to southwest of the creek. Chinle formation reaching from the base of these cliffs to banks of the creek, where a number of shows of ore in the Chinle have been found. The immediate area in the vicinity of the creek is characterized by numerous slump-hills of assorted sizes, some showing good radiometric readings in the Chinle and in a few cases, good readings in the Shinarump. Looking across the creek to the northeast, several excellent examples of Shinarump conglomerate channels are apparent with trends in a southwesterly direction towards the Marble Canyon Uranium claims. Fragments and exposures of these channels are also apparent on the southwest side, but evidence of considerable leaching and washing by the Paria Creek and its tributaries could account for absence of high readings in most of the Shinarump outcrops. Very few of these outcrops are in place. A few Shinarump rocks have excellent readings. On the whole, the configuration suggests that Shinarump in place (to southwest) should be very promising. This is supported by good A.E.C. findings in the Shinarump in nearby claims (2 miles to McCary-Beacon), also on the southwest side of the creek. For more details on geology, see report by J. J. Beeson, Exhibit (3).

(d) The general location of the claims is shown in Exhibit 1(c) (arrow). Adequate access roads to the limits of the area to be explored already exist. These are indicated in Exhibit 1(A); also refer to 4(a). Access roads to the various drill sites described hereinafter will have to be bull dozed and are a part of the project for which an Exploration Contract is sought. These are indicated in Exhibit 1(A). Shipping distances to ore buying stations closest to the area are approximately as follows:

Grants, New Mexico - 360 miles
Blanding, Utah - 197 miles
Marysvale, Utah - 206 miles
Shiprock, New Mexico - 393 miles

Mr. Butson of Grants, New Mexico A.E.C. has visited the area and expressed interest in the possibility of establishing

an ore buying station in the area, probably at Cameron, Arizona which would be approximately 84 miles distant.

The principal fair-sized town is Knab, Utah, about 60 miles west of the area, a reliable source of supplies. Flagstaff, Arizona is approximately 160 miles south of the area. Good paved highways link the area with these towns. Marble Canyon is a very pleasant point of residence.

(e) Plentiful water exists from both Paria Creek adjoining claims and the Colorado River some 2 miles distant. In addition, there are several springs for drinking water supply.

Electrical power is available locally at Marble Canyon and plans for a hydrolectric power dam a few miles up the Colorado River are in an advanced stage.

The adjoining Navajo reservation insures a plentiful supply of mining labor. Many Navajoes are already engaged in small mining operations.

The Utah-Arizona Motor Truck Lines makes several trips daily through Marble Canyon from Salt Lake to Flagstaff and return, insuring quick delivery of equipment, supplies, materials and parts.

A very good air landing strip is in active use at Marble Canyon.

5. <u>The Exploration Project</u>

(a) We wish to explore for uranium.

(b) The proposed exploration project consists of drilling 74 exploratory holes ranging in depth from 260 to 340 feet at the locations indicated in Exhibit 1(A); bull-dozing adequate access roads to the various locations, and making radiometric probing of the holes. Eighteen of the holes will be core-drilled for the purpose of establishing geologic and radiometric control. These are distributed to provide best overall geological and radiometric control, as indicated by squares on Exhibit 1(A).

The holes are laid out on a 420 foot grid pattern tilted in a northwesterly direction for greatest convenience in carrying out the surveying, access roads and drilling. No hole is closer than 300 feet from the outer limits of the claims.

The objective of the project will be to test the claims for further mineralization in the Chinle formation, such as encountered in the outcrops along the Paria Canyon and to delineate and test the claims for the indicated channel trends in the Shinarump formation.

A cross-sectional sketch of the area is presented in Exhibit 1(B) and shows the relation of the proposed exploration work to topography exposed ore-bearing beds, channels, etc. It also shows the reason for drilling to depths ranging from 260 to 340 feet.

No attempt to explore the Mary, Jeannie, Ingalls or Souvall claims at present, because of relative inaccessibility and rugged terrain. Should the present project prove successful, exploration of these claims may be indicated.

(c) The work will start within 45 days and be completed within 6 months of date of an exploration project contract.

(d) The applicant is sub-contracting this work to experienced and qualified exploration companies. Edwards Mining & Exploration will do the drilling. Geophysical Core-Drilling Company will do the supervision and engineering.

6. Estimate of Costs

(a) Independent Contracts

(1) Drilling

No. of Holes	Cored Holes	Non-Cored Holes	(feet) Depth	Price Per Foot	Footage: Cored Holes	Footage: Non-Cored Holes	Cost: Cored Holes	Cost: Non-Cored Holes	Total
2		2	340	$3.20		680		$2,176	$2,176
	0		340	3.90	0		-		
4		2	330	3.20		660		2,112	4,686
	2		330	3.90	660		$2,574		
6		6	320	3.20		1,920		6,144	6,144
	0		320	3.90	0		-		
8		4	310	3.20		1,240		3,968	8,804
	4		310	3.90	1,240		4,836		
10		10	300	3.20		3,000		9,600	9,600
	0		300	3.90	0		-		
12		6	290	2.95		1,740		5,133	11,310
	6		290	3.55	1,740		6,177		
14		14	280	2.95		3,920		11,564	11,564
	0		280	3.55	0		-		
14		8	270	2.95		2,160		6,372	12,123
	6		270	3.55	1,620		5,751		
4		4	260	2.95		1,040		3,068	3,068
	0		260	3.55	0		-		
74	18	56			5,260	16,360	$19,338	$50,137	$69,475

Total Footage: 21,620

Estimated Stand-By Time: 1½ hours per hole @ $12.00 per hour $1,332.00 $ 1,332

	Unit or Footage	Unit Price	Total
(2) Estimated reaming and casing of holes to prevent cave-ins, poor core recovery and sticking tools	3,000	$3.50	$10,500
Sub-Total Drilling			$81,307

	Unit or Footage	Unit Price	Total
(3) Additional access roads Estimated bull-dozing hours	296	$12.50	$3,700
(4) Additional surveying of drill locations - 74 locations	74	$20.00	$1,480
(5) Supervision, radiometric probing, geological counseling, evaluation report after drilling, logging and analysis of cores, estimated time required: 100 working days	100	$75.00	$7,500
	Total		$93,987

(b) Labor, supervision, consultants - None other than included above.

(c) Operating materials and supplies - None other than included above.

(d), (e), (f), (g), (h) None other than included above.

Summary of estimated costs, including drilling, coring, assays, preparation of additional access roads, surveying in drill sites and hole locations, supervision, radiometric probing, counseling, evaluation reports and all possible contingencies: Total estimate of costs $93,987 divided by 21,620 feet of drilling equals $4.35 per foot for completed turn-key operation.

P. O. BOX 1888
165 SOUTH WEST TEMPLE ST.

CERTIFICATE OF ASSAY

BLACK & DEASON

ASSAYERS AND CHEMISTS

TELEPHONE 3-2563

~~Max Ingalls~~

SALT LAKE CITY 10, UTAH, June 19, 1954

ASSAY PER TON OF 2000 POUNDS

NAME	NO.	GOLD OUNCES	VALUE GOLD PER TON	SILVER OUNCES	WET LEAD %	COPPER %	INSOLUBLE %	ZINC %	% Uranium (U_3O_8)	IRON %	%
#1 Vein ..at.	1½								3.76		
# 2 Bottom of clay seam 2(									1.65		
# 3 4' above 4 claim									0.23		

CHARGES $ 15.00

B W Deason

J. J. BEESON
MINING GEOLOGIST
DOOLY BLDG.
Salt Lake City, Utah

August 7, 1954

GEOLOGIC REPORT ON PROPERTY OF

MARBLE CANYON URANIUM, INC.

By: J. J. Beeson

1. LOCATION, CLAIMS, AREA

The property owned or controlled by the Marble Canyon Uranium, Inc. is located within the Uranium Region of the Colorado Plateau about 50 miles east (airline) from Fredonia, Coconino County, Arizona. Being near the common Utah-Arizona boundary the property is approximately the same distance from Kanab, Kane County, Utah. The claims being about two miles up the Paria River from its junction with the Colorado River in Marble Canyon at the original site of Lees Ferry.

The claims are reached from paved U. S. Highway 89 by driving about 4 miles up the Colorado from the Lees Ferry Bridge, over dirt road, thence up the Paria River over Jeep road.

The property consists of 43 unpatented lode mining claims of which 6 are within a state section and held under lease or lease application from the State of Arizona. The group covers about 850 acres in Sections 34 and 35 in Township 41 North; Range 7 East and Sections 2 and 3 in Township 40 North; Range 7 East. Checking of locations, surveys and titles are not within the scope of this report.

Examinations of the geology of the above group were made on June 22 and July 28, 1954.

2. GENERAL GEOLOGY

The general geology of the Marble Canyon claims is similar to that over large areas in the surrounding Colorado Plateau and the formations and ore zones are similar. Thus on approaching the claims almost vertical walls of dark red Moenkope shales rise abruptly from the narrow valley of the Paria River. At a height of some 300 feet a 10 to 20 foot bed of gray Shinarump conglomerate and sandstone caps the Moenkopi. The resistance of the Shinarump to erosion has formed extensive flat benches but usually after 100 to 500 feet of terrace the Chinlee shales form steep slopes of gray (just above the Shinarump) and gradually grade into varying shades of brown and red sandstones and shales. The total thickness of the Chinle is probably 700 feet in this region, largely shales but with three prominent sandstone beds near the central part - the latter are of importance because of uranium occurances in this area. The Chinle is capped by the great vertical walls of Wingate sandstone here termed the "Vermillion Cliffs." The claims under consideration cover large areas of the Shinarump and Chinle formations, largely along the terraces on the southwest side of the Paria River.

EXHIBIT (3)

3. DETAILS OF DEVELOPMENT, GEOLOGY AND URANIUM SHOWINGS

This property is a new discovery without previous background or history. The initial discovery was made by Messrs. Black and Johnson in May, 1954. At the time of my first visit to the property, a road had been bulldozed from the canyon bottom to the new discovery some 200 feet above. Near the end of this road (in Cut No. 1), the bulldozer had exposed two showings of high grade uranium about 40 feet apart. The uranium between the two showings appeared to be non-continuous mineralization in the footwall part of a sandstone bed in the middle upper Chinle and in a landslide block which brought this member down to within 15 feet of the top of the Shinarump. A one foot channel sample was taken of the west showing and it gave the following chemical assay:

Uranium	U_3O_8	0.923
Vanadium	V_2O_5	0.31
Copper	Cu	1.45

This sample does not represent an average of any substantial amount of ore. The showing has been expanded by recent work but no tonnage can be estimated until further work is done.

On the second examination - July 28, 1954 - the road had been extended to reach a mineralized sandstone about 150 feet vertically above the discovery and a bulldozer cut was being made at this horizon. Also a prospect cut was in progress about midway between the lower and upper cuts. To simplify description the above cuts will be referred to as:

Cut No. 1 is the lowest and the location of the initial discovery.

Cut No. 2, the intermediate prospect cut.

Cut No. 3, the present highest bulldozer cut.

Cut No. 2 is about 20 feet in length along the strike of a sandstone bed dipping about 35° west. In this face a lense about 6 feet long and a foot thick at the center cut across the sandstone beds. The material in the lense contains green copper stains and disseminations of copper carbonate, it gave a high scintillometer count. Three channels across this mineralization; two feet apart were consolidated and sent for chemical analyses, the returns have not been received but the USBM scaler count indicates 1.06% U_3O_8.

This showing is too small for substantial tonnage shipments. Also the mineralization is in a landslide block probably from the same formation as exposed in Cut No. 3.

Cut No. 3, when examined, was about 35 feet long in a horizontal bulldozer cut which exposed a bank 4 to 7 feet high. The footwall of the sandstone had not been exposed in place, however, about 10 feet along the north end of the pit had clay filling between

sandstone boulders that contained a general sprinkling of green copper stained ore. Several sacks of similar material had been saved for ore. One of these sacks (about 50 lbs.) was taken to Salt Lake by the writer for quartering down and chemical analsyes. The returns were:

		AEC Price before hauling
(Uranium)	0.346% U_3O_8	$54.00
(Vanadium)	0.19% V_2O_5	1.15
	Total	$55.15

The presently exposed face of the above material is not large but its significance will not be known until it is found in place. At this location the surface outcrop is broken only by minor slips and the formation should soon continue into the mountain.

It is probable that the ore showings in Cuts Nos. 1 and 2 are on sections of the same sandstone partially exposed in Cut No. 3, if this is the case the mineralization has been indicated for a length of about 70 feet in a westerly direction. Continuing in this direction there is a vertical break in the formation which passes into the mountain below a shale covered terrace. The same is the case with the uranium bearing formation. The copper bearing uranium ore so far discovered is believed to be residual after surface weathering and leaching. It is expected that below the shale covering, the leaching will be less, resulting in an increase in thickness and extent along the sandstone bedding.

In the above descriptions it will be noted that the uranium ore has been found in a Chinle sandstone bedding around 175 feet above the Shinarump conglomerate. Because of uranium mines discovered and developed in this formation at numerous other locations in the Colorado Plateau, it is my opinion that the Shinarump, though not mineralized on the outcrop, may contain ore bodies below the shale covering where leaching is less intense. Thus there are at least two sandstone horizons to be considered.

4. PROPOSED FURTHER EXPLORATION

At present work is continuing on the property and it is proposed to continue exploring the present Uranium showings to prove further mineralization. It is evident that this work has its limitations and driving of tunnels is too slow thus it is proposed to secure AEC assistance if possible in the diamond drilling of this new and promising area. In any event, the work will be expedited as rapidly as possible. As a preliminary to extensive diamond drilling additional scintillometer or Geiger counter reconnaissance should be carried on along the outcrop of the Chinle and Shinarump ore horizons and when drilling is started both horizons should be penetrated in as many holes as practical.

5. CONCLUSIONS

(A) The property of Marble Canyon, Inc. covers a large area of

favorable formations, the Chinle and Shinarump. In the latter major Uranium deposits have been found in widely separated areas of the Colorado Plateau.

(b) The presence of a number of uranium showings running from 0.25 to 1 per cent U_3O_8 indicate mineralizers unusually high in uranium. Only a small amount of development has been done to date and the occurances do not represent substantial ore tonnages, however, it is expected that when exploration is carried on to greater depth below the surface leaching will be less and size and continuity of ore will improve in the favorable formations.

(c) The present bulldozing is being used to advantage to expose mineralization in the outcrop but soon either drifting or diamond drilling can be employed to explore the ground at depth. The topography is such that drilling can be done to advantage. Therefore, it is my recommendation that a program of diamond drilling be considered at an early date and that substantial funds be raised to carry on the work.

(d) The venture at present is a speculation, but with extensive areas underlain with favorable formation and small showings of high grade uranium on the surface the chances of finding sizeable bodies of good ore are much better than average.

Respectfully submitted,

(signed) J. J. Beeson

JJB:rp

Docket

Ching
Ellis

Project Summary Report

By: Michael Ching Date: July 17, 1957

1. Docket No.: DMEA-3612 (Uranium)
   Contract No.: Idm-E816

   Operator: Marble Canyon Uranium, Inc., a Utah corporation
   587 - 11th Avenue
   Salt Lake City 3, Utah

   Property: 43 unpatented lode-mining claims, Redwing Nos. 1-10, Souvall Nos. 1-7, Happy Nos. 1-2, Leone Nos. 1-3, Lehnheer Nos. 1-4, Marion Nos. 1-5, Ingalls Nos. 1-4, Jeannie Nos. 1-5 and Mary Y Nos. 1-3, situated in secs. 2 & 3, T. 40 N., R. 7 E., and secs. 34 and 35, T. 41 N., R. 7 E., G.&S.R.M.&B., Coconino County, Arizona.

   Operator's Property Rights - Red Wing No. 1 and No. 2 claims are held under a State mining lease and Red Wing No. 3 and No. 6 are partially held under a State mining lease and partially held through location. All other claims are held through location. Consent to Lien on state land was waived.

2. Contract (Long Form) - dated June 13, 1955
   Final starting date - Sept. 15, 1955
   Actual starting date - Sept. 14, 1955
   Contract completion date - Nov. 1, 1956
   Termination Agreement - dated Oct. 9, 1956, effective April 1, 1956

   Work Authorized:

   Test a potential ore-bearing sandstone unit occurring about 150 feet above the base of the Chinle formation by core and non-core drilling in four stages as follows:

   Stage I - 20 holes totaling 2,000 ft. on 400-ft. grid.
   Stage II - 50 holes totaling 5,000 ft. on 200-ft. grid.
   Stage III - 28 holes totaling 2,800 ft. as offsets to mineralized holes.
   Stage IV - 28 holes totaling 2,800 ft. as extension of 200-ft. grid or as 50-ft. offsets to mineralized holes.

   Estimated Costs:

   Allowable Actual Costs:

2,520 ft. core drilling @ $2.50/ft.	$6,300.00	
10,080 ft. non-core drilling @ $1.50/ft.	15,120.00	
1,500 ft. reaming & casing @ $1.75/ft.	2,625.00	
Supervision and technical services	4,200.00	$28,245.00

Fixed Unit Costs:

200 hrs. bulldozing @ $12.50/hr.	$2,500.00	
Radiometric probing - 126 holes @ $10/hole	1,260.00	
87 chemical sample analyses @ $5/sample	435.00	$4,195.00

Estimated Total Cost of the Project .....$ 32,440.00
Government Participation @ 75% .....$ 24,330.00

Amendments:

No. 1 - dated Jan. 30, 1956 - extends contract completion date from Feb. 1 to Nov. 1, 1956 and increases royalty repayment period from 10 years to 11 years.

Work Completed:

Stage I - 13 of 20 holes completed

439 ft. core drilling @ $2.50/ft.	$1,097.50
2,683 ft. non-core drilling @ $1.50/ft.	4,024.50
Supervision & technical services	1,514.00
166 hrs. bulldozing @ $12.50/hr.	2,075.00
Probing - 13 holes @ $10/hole	130.00

Total $8,841.00
Government Participation @ 75% $6,630.75

Work was begun September 14 and suspended February 27, 1956 after 13 holes of Stage I had been completed through the lower Hartley member of the Chinle formation. The Operator claims to have extended all these holes to the base of the Shinarump and in addition, drilled 74 holes in the area, all for its own account. Because of poor results under both the DMEA drilling and company drilling, the Operator, in a letter dated August 8, 1956, requested termination of the contract.

Final Reports Received:

Operator's - dated May 6, 1957, received June 21, 1957
Field Team - dated March 12, 1957, received June 17, 1957

3. Auditor's Report of Review, dated June 20, 1957

Total cost as billed by Operator	$9,424.50
Exceptions	$ 583.50
Total Accepted Cost	$8,841.00
Government Participation @ 75%	$6,630.75

4. Certification of Discovery - None

5. Results and Comments:

The property is underlain by the Chinle formation of Triassic age. Two Hartley sandstone members, occurring about 150 and 200 feet, respectively, above the base of the Chinle, were considered the most favorable horizons for uranium mineralization in the area. From rim exposures and drilling on nearby properties the Shinarump, underlying the Chinle in the area, appears to be composed of clean sandstone and conglomerate, and does not have much potential for uranium deposits.

The 13 DMEA holes were all essentially barren, with only traces of uranium mineralization. As a result of its own drilling, the Operator reported a channel in the Shinarump crossing Red Wing Nos. 1 and 2 claims, about 40 feet deep, 1,200 feet wide and traced for approximately 5,000 feet, which showed evidence of uranium and copper mineralization. However, neither this drilling nor the deepening of the DMEA holes to the base of the Shinarump succeeded in finding significant mineralization.

The contract drilling adequately explored the most promising area within the property. The Operator requested termination of the contract, but appears to believe that further drilling is warranted in other areas. It claims to have spent $70,000 on the project.

Results of the work do not justify a certification of discovery nor further work by the Government.

Michael Ching

Michael Ching, Mining Engineer
Div. of Rare & Misc. Metals

ited

Certified

me Marble Canyon Uran. Co.

State Coconino County, Arizona

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of July 17, 1957
Incl. Voucher for Jan.-Feb., 1956

Commodity Uranium

☒ Actual Cost
☐ Agreed Unit Costs

Docket No. 3612

Idm-E No. 816

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Drilling (Specify) Core	2,520	11,655.00 ~~29,505.00~~	439	1,919.50 ~~6,766.00~~	1,919.50 ~~6,766.00~~
Non-Core	10,080	17,850.00	2,683	4,846.50	4,846.50
Surface Excavation					
Underground Excavation					
Roads and Trails		2,500.00		2,075.00	2,075.00
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) Chem. Analyses		435.00		–	
Totals		$ 32,440.00		$ 8,841.00	8,841.00

Prepared by Michael Ching

71626

Form 7
56)

OFFICIAL FILE COPY

Date	Surname	Code
11-15	Ching (8)	700
"	Ellis	700
11-18	Chambers	800
11/18	Selbedy	120
"	Johnson	110
"	Mittendorf	100
11/19	C	[illegible]
		700

NOV 18 1957

Mr. Adiel F. Stewart, President
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City 1, Utah

Re: Docket No. DMEA-3612 (Uranium)
Contract No. Idm-E816
Red Wing Claims et al.
Coconino County, Arizona

Dear Mr. Stewart:

Reference is made to your terminated exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of discovery or development under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this project. Your attention, however, is called to the provisions of the contract which require the operator to keep and preserve certain records for the period indicated.

Your interest in the DMEA exploration program and participation therein are fully appreciated.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

MChing/izm 11-15-57
cc: Mr. Ching
Admr.'s Reading File
Contract Adm. & Audit Div.
DMEA FT Reg. 3 (2)

8623

224 New Customhouse
Denver 2, Colorado

July 11, 1957

EXTRA COPY
DMEA
RECEIVED

DATE		CODE
7/15	94	110
"	~~Chron~~	700

...ndum

Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3612 (Uranium) Contract Idm-E816, Marble Canyon Uranium, Inc. (Red Wing et al claims) Coconino County, Arizona - FINAL PAYMENT

Enclosed are two copies of a memorandum to T. A. Christensen, dated July 8, 1957, relative to final payment under the terms of the subject contract.

Original signed by
W. H. KING

W. H. King

Enclosures

JDC:jy

cc: Harshman
DMEA, ~~DPC~~ SLC
MF-104 File, Reg. III
Chron.

224 New Customhouse
Denver 2, Colorado

July 8, 1957

EXTRA COPY DMEA RECEIVED JUL 15 1957		
DATE	INITIALS	CODE

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket-3612 (Uranium) Contract Idm-8816
Marble Canyon Uranium, Inc. (Red Wing et al claims)
Coconino County, Arizona - FINAL PAYMENT

Reference is made to our memorandum of July 11, 1956, whereby we transmitted the final Form MF-104, Operator's Final Report and Voucher, for January, February 1956, and requested that you withhold the amount of $500.00 pending possible resumption of work under the contract.

Work was not resumed and the contract was terminated effective April 1, 1956. The Operator's final report was received, therefore we recommend that final payment to the Operator be made on the following basis, which is in conformance with the Report of Review of reported project expenditures by the Contract Administration and Audit Division, dated June 20, 1957. Final payment has been deferred pending receipt of an acceptable final report from the operator.

Basis for Final Payment

Total accepted cost	$8,841.00
Government participation at 75%	6,630.75
Total prior payments	6,130.75
Balance due the Operator	$ 500.00

$500.00
375

Original signed by
W. H. KING
W. H. King

JBC:mmh
cc: Chem. Op. Comm. (2) 7/10/57 DMA 58-4
Harshman
DMEA, ~~JPC~~ SLC
Townsend
MF-104 file, Reg. III
Corres. file, Reg. III
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 11 1957

DATE	INITIALS	CODE
7/11	C	220
7/12	[illegible]	800
"	[illegible]	700

July 8, 1957

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 3612 (Uranium), Contract No. Idm-E816, Marble Canyon Uranium, Inc. (Red Wing claims et al.), Coconino County, Arizona.

Supplementing the Field Team's final report, dated June 14, 1957, we have today processed final payment to the Operator, in conformance with the Report of Review of reported project costs by the Contract Administration and Audit Division, DMEA, dated June 20, 1957, which was released to this office July 5, 1957.

Total accepted costs are $8,841.00, toward which the Government contributed 75%, or an amount of $6,630.75.

W H King

W. H. King

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7-2	Chambers	800
7/2	C	220
		700

JUL - 2 1957

Mr. Thomas H. Breding
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Reports of Review
Antelope Mines
Idm-E1011, DMEA-4184

Marble Canyon Uranium, Inc.
Idm-E816, DMEA-3612

Dear Mr. Breding:

The recently submitted copies of your Reports of Review covering the above-cited projects are acceptable and normal distribution is authorized.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

EDTalbert/wb
July 2, 1957

Copy to: Docket (2)
Admr. Reading File
Mr. Chambers

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

June 14, 1957

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Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA-3612 (Uranium), Contract No. Idm-E816
Marble Canyon Uranium, Inc. (Red Wing claims, et al.)
Coconino County, Arizona - FINAL REPORT

Enclosed are the original and three copies of a joint final engineering and geologic report dated March 12, 1957, by M. H. Howes and Walter Bank, Mining Engineers, Bureau of Mines, and F. M. Byers, Jr., Geologist, Geological Survey, pertaining to operations under the subject contract, and memoranda of transmittal thereof dated March 13 and March 15, 1957, from Stephen R. Wilson and J. William Hasler, respectively.

The Operator has not rendered an acceptable final report; therefore, the Operator's accounts have not been audited or final settlement of the account made.

The contract was terminated before completion of all work provided for by Termination Agreement dated October 9, 1956, which was made effective April 1, 1956.

The exploration work completed consisted of the drilling of 13 holes under Stage I, aggregating 439 feet of core drilling and 2,683 feet of non-core drilling at a tentatively accepted total cost of $8,841.00, which is subject to audit.

The exploration work completed under the contract did not result in a discovery or development of a significant quantity of uranium ore; therefore, certification of the project as a discovery or development under the provisions of the contract is not recommended.

Enclosures

W. H. King
W. H. King

E. N. Harshman
E. N. Harshman

Reviewed by
DMEA OPERATING COMMITTEE
6-21-57
(date)

FINAL F.T. REPORT

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224 New Customhouse
Denver 2, Colorado

June 14, 1957

Mr. M. F. Larson, Office Secretary
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City, Utah

Re: Docket No. DMEA-3612 (Uranium)
Contract No. Iam-2816
Marble Canyon Uranium, Inc.
(Red Wing claims, et al.)
Coconino County, Arizona

Dear Mr. Larson:

In your letter of May 21, 1957, you indicated that the required additional copies of the maps to accompany your final report would be forthcoming in the very near future. However, considerable time has elapsed and as we have not received the maps, we will appreciate prompt attention to the matter so that proceedures relative to closing the account can be resumed.

Very truly yours,

Original signed by
W. H. KING

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

JWF:bh
cc-Chairman, Op. Comm. (2)
Harshman
DMEA/SLC
Easler
Townsend
Corres. File
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
6-21-57

IN REPLY REFER TO:

MINERAL DEPOSITS
DMEA
RECEIVED
MAR 18 1957
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
DEPARTMENT OF THE INTERIOR
MAR 18 1957
REGION III
DENVER, COLORADO

P. O. Box 360
Grand Junction, Colorado

March 15, 1957

Memorandum

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

EMH

From: J. William Hasler

Subject: Docket No. DMEA 3612 (Uranium), Contract Idm-E 816, Marble Canyon Uranium, Inc. (Red Wing claims, et al), Coconino County, Arizona

Transmitted herewith are 11 copies of a joint final report on the above-referenced docket, which was forwarded to us by Mr. S. R. Wilson.

We have reviewed the report and find it to be in order.

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RECEIVED JUN 17 1957

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		1302
		220

J. William Hasler
J. William Hasler,
Geologist

JWH/mlr

Enclosure

cc: S. R. Wilson
J. F. Shaw

Reviewed by
DMEA OPERATING COMMITTEE
6-21-57
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

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March 13, 1957

Memorandum

To: J. W. Hasler, Geological Survey, Grand Junction, Colo.

From: Stephen R. Wilson

Subject: Docket No. DMEA-3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc. (Red Wing claims, et al.), Coconino County, Ariz.

Enclosed are 12 copies of a final engineering and geologic report pertaining to contract work completed by Marble Canyon Uranium, Inc. Information in the report was assembled by M. H. Howes and Walter Bank of this office and F. M. Byers, Jr., Geological Survey. Included with the report are 12 prints each of figures 1 and 2. Figure 3 is to be prepared in your office by Byers.

Please review the report to determine if it is satisfactory to you and Byers. If the report meets with your approval, please transmit 11 copies with the maps to E. N. Harshman.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

cc: W. H. King
J. B. Clemmer

Reviewed by
DMEA OPERATING COMMITTEE
6-21-57
(date)

MARBLE CANYON URANIUM, INC.
RED WING CLAIMS, ET AL.
COCONINO COUNTY, ARIZONA
DMEA-3612 - Idm-E816
Uranium

1957
130
220

Final Engineering and Geologic Report

By M. H. Howes and
Walter Bank
Mining Engineers
Bureau of Mines

and

F. M. Byers, Jr.
Geologist
Geological Survey

March 12, 1957

Reviewed by
DMEA OPERATING COMMITTEE
6-21-57
(date)

MARBLE CANYON URANIUM, INC.
RED WING CLAIMS, ET AL.
COCONINO COUNTY, ARIZONA

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ILLUSTRATIONS

Fig. 1 Location map, Marble Canyon Uranium, Inc., Coconino County, Arizona
Fig. 2 Claim map
Fig. 3 Geologic map showing location of drill holes

SUMMARY

An application for Government assistance, dated December 15, 1954, under docket No. DMEA-3612, was submitted by Marble Canyon Uranium, Inc., to explore for uranium ores on the Red Wing claims, et al., Coconino County, Arizona. The operator's proposed project, estimated to cost $93,987, consists of 74 drill holes laid out on a 420-foot grid pattern designed to explore both the Chinle formation and the Shinarump conglomerate. Drill hole depths were expected to range from 260 to 340 feet.

After an examination January 26 and 27, 1955, by H. S. Johnson and T. E. Mullins of the Geological Survey and M. H. Howes of the Bureau of Mines, a contract, dated June 13, 1955, arranged in four stages, was proposed to, and accepted by, the applicant. Exploration was planned in the "Hartley" members, potential ore-bearing sandstone units which occur about 150 and 200 feet, respectively, above the base of the Chinle formation. A maximum of 126 holes averaging 100 feet in depth is permitted by contract. Stage I holes were planned to cover a 400-foot grid. The estimated total cost of the project is $32,440, of which the Government's share is $24,330.

Project work began September 14, 1955. The operator drilled 13 holes under Stage I as per contract, and then continued several holes down to the Shinarump-Moenkopi contact on company account. In addition, 52 holes near or within the DMEA contract area, most of them passing through the "Hartley" unit and down to the base of the Shinarump, were drilled on company account. Results of drilling indicate that the Shinarump contains a channel which ranges from 40 to 60 feet in depth, up to 1,200 feet in width, and 5,000

feet in length. Results of probing all holes indicate that significant uranium mineralization is lacking in the "Hartley" members within the DMEA area.

The 13th hole was completed under contract February 27, 1956. Amendment No. 1, dated January 30, 1956, extended the time of completion to November 1, 1956. No subsequent work was done, however, and the applicant requested termination of the contract August 8, 1956. Examining engineers and geologists concurred with the request, and the Executive Officer, DMEA Field Team, Region III, recommended termination of the contract without issuing a Certificate of Discovery or Development. Forms MF-104 and MF-104A, submitted by the operator for the period January-February, 1956, constitute the operator's final accounting report. Total costs pending final audit are $8,841.00, with the Government's participation, at 75 percent, totaling $6,630.75. The operator's final engineering and geological report has not been received.

INTRODUCTION

The Red Wing, et al. claims in the Marble Canyon district, Coconino County, Arizona, were explored by the Marble Canyon Uranium Corp., 200 Newhouse Building, Salt Lake City 11, Utah, in cooperation with the Defense Minerals Exploration Administration, docket No. DMEA-3612, under Contract Idm-E816, dated June 13, 1955. Project work began September 14, 1955, and continued to February 27, 1956, when work was suspended in order to evaluate data. The project was terminated October 9, 1956. A progress examination was made June 26, 1956, by M. H. Howes, Bureau of Mines, accompanied

by P. W. Johnson, representing the applicant; another progress examination was made July 26, 1956, by F. M. Byers, Jr., Geological Survey, accompanied by A. Richard Tagg, AEC geologist.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The Red Wing, et al. claims are in secs. 2 and 3, T. 40 N., R. 7 E., and secs. 34 and 35, T. 41 N., R. 7 E., G. and S. R. P. M., in the Marble Canyon district, Coconino County, Arizona (fig. 1). The claims lie along the Paria River valley, 2 miles above Lees Ferry and 8 miles north of the Navajo Bridge on U. S. Highway 89. The claims cover benches or terraces which lie at the base of the Vermilion Cliffs. Altitudes range from 3,170 feet at Lees Ferry to 4,200 feet at the base of the cliffs.

The claims are reached by traveling 4 miles northerly from Marble Canyon Lodge (located on U. S. Highway 89) along an unimproved dirt road to Lees Ferry, and then 2-1/2 miles up the dry bed of the Paria River to the claims. The route can be traversed by pickup or four-wheel-drive vehicle.

Summers are hot and dry; winters are mild, with snow rarely accumulating. Vegetation is scarce and consists mainly of desert plants.

Nearest sources of mining supplies are the towns of Kanab, Utah, about 80 miles to the west on U. S. Highway 89, and Flagstaff, Arizona, about 120 miles to the south. Labor may be had from the nearby Navajo Indian Reservation. A camp has been established alongside the Paria River. A small spring furnishes water for culinary purposes, and the river contains sufficient water for any potential mining and milling operation.

THE PROPERTY

History

Initial discovery of uranium mineralization was made by P. W. Johnson and J. W. Black in May 1954. Marble Canyon Uranium, Inc., acquired the original claims and several other groups in the area from Johnson and Black and others to form the present company's property. Further prospecting of the favorable Chinle sandstone was conducted up the river from the initial discovery, and several uranium occurrences were found on the Lehnheer group of claims.

Production

The following shipments are reported to have been made to the receiving station at Marysvale, Utah, as of January 27, 1955:

	Pounds		Percent	
Lot	Wet weight	Dry weight	U_3O_8	Cu
1971	10,600	10,457	0.58	2.54
1992	33,840	33,434	0.70	1.07
2022	30,810	30,325	0.41	<1.00 (no pay)
2068	15,020	14,742	0.21	<1.00 (no pay)

A split-check contract was executed with the Allred Co. to mine uranium ore from a landslide block of Chinle in the vicinity of Cut No. 1 (fig. 2) on the Red Wing No. 4 claim. The above shipments are the result. No other shipments have been reported.

Ownership and Claims

Marble Canyon Uranium, Inc., is a Utah corporation with officers, at time of contract initiation, as follows:

Max Ingalls, President
587 11th Avenue
Salt Lake City, Utah

Andrew W. Souvall, Vice President
1559 Cherokee Circle
Salt Lake City, Utah

Parker Campbell, Secretary
130 2nd Avenue
Salt Lake City, Utah

Louis E. Holley, Treasurer
1515 Stratford Avenue
Salt Lake City, Utah

Correspondence was addressed initially to Martin Gould, 725 National Building, Denver, Colorado; currently the mailing address is 200 Newhouse Building, Salt Lake City 11, Utah, attention Adiel F. Stewart, President.

Company lode claims are recorded in the office of the County Recorder, Flagstaff, Coconino County, Arizona, and consist of the 43 claims listed below (fig. 2):

Name of Claim	Book	Page	Location		
Red Wing No. 1 (State Lease)	57	494	T. 40 N.,	R. 7 E.,	Sec. 2
Red Wing No. 2 (State Lease)	"	495	"	"	"
Red Wing No. 3 (Partially State Lease)	"	496	"	"	"
Red Wing No. 4	"	497	"	"	"
Red Wing No. 5	"	498	"	"	Sec. 3
Red Wing No. 6 (Partially State Lease)	"	499	"	"	Sec. 2
Red Wing No. 7	"	458	"	"	"
Red Wing No. 8	"	459	"	"	"
Red Wing No. 9	"	460	"	"	"
Red Wing No. 10	"	461	"	"	"
Souvall No. 1	"	462	"	"	"
Souvall No. 2	"	463	"	"	"
Souvall No. 3	"	464	"	"	"

Name of Claim	Book	Page	Location
Souvall No. 4	57	465	T. 40 N., R. 7 E., Sec. 2
Souvall No. 5	"	466	" " "
Souvall No. 6	58	92	" " Sec. 3
Souvall No. 7	"	93	" " "
Happy No. 1	57	456	" " "
Happy No. 2	"	457	" " "
Leone No. 1	"	467	" " "
Leone No. 2	"	468	" " "
Leone No. 3	"	469	" " "
Lehnheer No. 1	58	86	" " "
Lehnheer No. 2	"	87	" " "
Lehnheer No. 3	57	477	" " "
Lehnheer No. 4	"	478	" " "
Marion No. 1	"	486	" " "
Marion No. 2	"	487	" " "
Marion No. 3	"	488	" " "
Marion No. 4	"	489	" " "
Marion No. 5	"	490	" " "
Ingalls No. 1	52	597	T. 41 N., R. 7 E., Sec. 34
Ingalls No. 2	"	598	" " Secs.34 & 35
Ingalls No. 3	"	599	" " Sec. 35
Ingalls No. 4	"	600	" " "
Jeannie No. 1	53	2	" " Sec. 34
Jeannie No. 2	"	3	" " "
Jeannie No. 3	"	4	" " "
Jeannie No. 4	"	5	" " "
Jeannie No. 5	"	6	" " "
Mary Y No. 1	"	14	" " "
Mary Y No. 2	"	15	" " "
Mary Y No. 3	"	16	" " "

Part of the property owned by the State of Arizona and leased to the company is described as follows:

> "76.36 acres of land lying in the west half of the southwest quarter of section 2, T. 40 N., R. 7 E., G. and S. R. P. M., includes Red Wing No. 1 (entire claim), Red Wing No. 2 (entire claim), Red Wing No. 3 (partial claim), and Red Wing No. 6 (partial claim)."

This land is limited by vertical boundary lines. The lease (State of Arizona Mineral Lease No. 283) is dated August 2, 1954, and will expire

August 1, 1974. The lessees, P. W. Johnson and J. W. Black, assigned the lease to Marble Canyon Uranium, Inc., October 19, 1954. Contract Idm-E816 specifically waives the "Owner's Consent to Lien" on State-owned land on the Red Wing Nos. 1, 2, 3, and 6 claims.

All other lode mining claims listed above have been assigned to Marble Canyon Uranium, Inc. Instruments covering pertinent agreements were submitted with the original application.

Development

Prior to the DMEA work, development beneficial to the property consisted of:

1. Primitive road constructed along the Paria River, approximately 4 miles long, from Lee's Ferry to the campsite.

2. Campsite, about 2 miles upriver from claim area, situated at a fresh-water spring. Camp contained bunkhouse and boarding house large enough to accommodate 12 men.

3. Access road, bulldozed to the top of the canyon rim on the Red Wing claims.

4. Three open cuts as described:

(a) Cut No. 1 on Red Wing No. 4 claim, where favorable horizon was exposed by bulldozer stripping a distance of 235 feet along the strike. Average thickness of bed is 5 feet. Applicant inferred 20,000 tons of ore averaging 0.23 percent U_3O_8; DMEA examiners inferred 10,000 tons averaging 0.10 percent U_3O_8.

(b) Cut No. 2 on Red Wing No. 3 claim exposed a small lens of good ore about 6 feet long and 1 foot thick.

(c) Cut No. 3 on Red Wing No. 3 claim (which) exposed sandstone boulders containing uranium minerals.

5. A 30-foot adit driven on the mineralized sandstone bed at Cut No. 2. Reportedly, 25 tons of ore had been sorted and stockpiled.

GEOLOGY

General Features

Rocks exposed in the vicinity of the Red Wing claims are gently dipping conglomerates, sandstones, siltstones, and shales of the Triassic Moenkopi, Shinarump, and Chinle formations (fig. 3). The Moenkopi formation in this area is approximately 450 feet thick and is composed mainly of thin-bedded, even-layered, reddish-brown siltstone and fine-grained sandstone. Overlying the Moenkopi is the Shinarump formation.

The Shinarump formation is largely conglomerate and conglomeratic sandstone near Lees Ferry and fills channels and scours cut into the Moenkopi surface. The Shinarump may be absent or range in thickness up to 150 feet or more, depending on the depth of scour into the top of the Moenkopi. Channel scours with depths of 150 to 200 feet are known in the area, but in some places on the divides between these channels the Shinarump is absent and the Moenkopi is in direct contact with the overlying Chinle formation. Cross-stratification studies on the Shinarump channel-fill sandstones in the Lees Ferry area show a resultant flow direction of N. 55° W. The Shinarump formation is exposed in a sharp cliff above the

Moenkopi slopes and supports a narrow- to medium-sized bench below the steep slopes formed by erosion of the less resistant Chinle formation. Uranium and copper mineralization is found in the Shinarump in the Lees Ferry area and is largely confined to the bottoms of channel scours.

The Chinle formation is approximately 650 feet thick in the area and consists predominantly of variegated purple and red sandy shale and fine-grained red sandstone in part crossbedded and in part evenly layered. At about 150 and 200 feet above the base of the formation are two continuous and distinctive grey to yellowish brown, bench-forming sandstone units, known locally as the lower and upper "Hartley" sandstones. They carry, in places, small amounts of uranium and copper mineralization and may reach thicknesses up to 50 feet.

Above the Chinle formation is several hundred feet of cliff-forming red sandstone, largely of eolian origin, of the Triassic Wingate formation and Jurassic (?) Kayenta formation and Jurassic Navajo formation.

The regional dip in the immediate vicinity of the Red Wing claims is about 3° northwest. No large faults occur near the claims, but normal faults of a few feet displacement are not uncommon and considerable landslide and slumping have taken place on the Chinle slopes within the boundaries of the claims.

Ore Deposits

In the vicinity of Lees Ferry and the Red Wing claims, uranium and copper mineralization occurs in deposits in sandstone and conglomerate in the Shinarump and Chinle formations. Most of the deposits found to date

are less than 5 feet thick and are thought to be not over a few hundred, or possibly a few thousand, tons in size. The grade probably averages about 0.25 percent U_3O_8 and 1.0 percent copper. Production from this part of the Colorado Plateau has been limited to a few hundred tons of ore.

Deposits in the Shinarump conglomerate in the Marble Canyon-Lees Ferry area contain copper and uranium, and the unoxidized ores probably consist of pitchblende and copper and iron sulfides. On weathered outcrops, secondary yellow and green uranium and copper minerals are easily recognized where present in appreciable quantities. Most of the mineralization is confined to the lower parts or flanks of channel scours and occurs at or within a few feet of the Shinarump-Moenkopi contact. Carbonized wood fragments in the sediments seem to cause a favorable environment for deposits and are often partially replaced by uranium and copper. A bleached zone up to 6 or 8 feet thick occurs immediately beneath the Shinarump and is usually thickest under the deeper parts of the channel scours and under the highest grade mineralization. No direct relationship exists between intensity of mineralization and thickness of the bleached zone, but bleached zones greater than 1 to 2 feet in thickness are thought to be clues to favorable ground in this area. Shinarump channel-fill sediments in the Lees Ferry area appear to be largely clean sandstone and conglomerate and are not considered to be favorable host rocks for uranium deposits.

Approximately 2 miles south-southeast of the Red Wing claims, Universal Allied Uranium Corp. (DMEA-3532), and McCary-Beacom Co. have done considerable drilling to test a well-defined channel at the base of the Shinarump. Results to date show the channel-fill sediments to be predominantly clean sandstone and conglomerate, and no significant quantity of ore-grade mineralization is indicated.

The Shinarump formation underlies most of the Red Wing claim area at depths of 200-350 feet. There is no reason to expect the Shinarump to be lithologically more favorable for uranium deposits than the channel-fill sediments seen on rim exposures and tested by drilling elsewhere in this area.

The Chinle formation in the Marble Canyon-Lees Ferry area is believed to have as much potential for uranium deposits as the Shinarump conglomerate. All significant uranium mineralization found in the Chinle in the area to date is confined to two fairly continuous, bench-forming sandstone units, locally known as the lower and upper "Hartley" sandstones. They range from 15 to 30 feet thick and occur about 150 and 200 feet, respectively, above the base of formation. The two units are composed of poorly sorted, medium to coarse-grained, grey-white to yellowish brown arkosic sandstone. The quartz and feldspar grains are semi-angular and are embedded in a matrix of grey-green bentonitic (?) mud or clay. The average thickness of these units is about 5 to 10 feet, but the more prominent lenses attain a thickness of 30 to 50 feet. Sparse amounts of black carbonaceous or asphaltic (?) material can be seen in the rock, and copper and uranium mineralization is in places associated with the black material in the

thicker lenses. Mineralization of this type is exposed at several places on the Red Wing claims. The zones have thicknesses of 1 to 3 feet and outcrop lengths of 10 to 50 feet. The grade may be more than 1.0 percent U_3O_8 in small concretionlike masses, but usually will average 0.25 percent U_3O_8 or less. Green secondary copper minerals are a guide to the uranium mineralization.

None of the two or three deposits seen on the rim exposures on the Red Wing claims appear to carry more than about a hundred tons of low-grade copper-uranium ore. All mining to date has been highly selective work with pick and shovel in slumped material in cuts I, II, and III (fig. 3) on the Red Wing Nos. 3 and 4 claims. The uranium ore in the slumped material is near equilibrium and, although it has been redistributed as secondary minerals along fracture surfaces, does not appear to have migrated more than a few inches or feet before being reprecipitated.

All 13 holes (fig. 3) drilled under the contract were barren, according to AEC probe or Geological Survey Geiger probe. Hole A-1 drilled by the company was reported by the AEC to contain 0.03 percent $_eU_3O_8$ in the lower "Hartley" sandstone. The cores of DMEA holes 1 to 12 were examined with Geiger probe by H. F. Albee, geologist, Geological Survey, and found to be barren. The AEC probing unit at Kanab probed holes 1, 3, 4, 5, 7, 8, 9, 10, 11, and 12 to points below the base of the lower "Hartley" sandstone and found these holes to be barren (A. Richard Tagg, oral communication, July 1956).

Holes 1, 2, 3, 5, and 6 were noncore drilled below the lower "Hartley" sandstone to the Shinarump on company account. Sporadic, weak mineralization was reported.

Sampling

No samples were assayed chemically because radiometric data indicated absence of significant uranium mineralization. All holes were probed radiometrically by the AEC and by the company, and all holes yielded negative results. Cores were examined by DMEA engineers and geologists at the site of operations. Logs are summarized under "Work Completed."

Reserves

The reserves of the few producing mines in the Marble Canyon area are given in table 1.

Table 1 -- Reserves of the Sun Valley and El Pequito claim groups (AEC records)

Property	Date	Indicated		Inferred	
		Tons	U_3O_8, %	Tons	U_3O_8, %
Sun Valley	January 1956	854	0.48	655	0.26
El Pequito	July 1955	400	0.15	None	-
Red Wing, et al.	April 1955	none	-	None	-

About one-third of the indicated ore at the Sun Valley mine was mined during the spring of 1956.

No reserves were developed as a result of the DMEA drilling on the Red Wing, et al. claims, inasmuch as all holes were barren, by AEC-USGS standards.

DMEA PROJECT

Geologic Justification

Sandstone beds (the two "Hartley" members) near the middle of the lower half of the Chinle formation appear to be favorable horizons for uranium mineralization, as indicated by several high-grade spots of ore found along the outcrops. Approximately 45 tons of ore assaying from 0.21 to 0.70 percent U_3O_8 was mined from a landslide block carrying this sandstone unit. The applicant postulated that the underlying Shinarump conglomerate, although not mineralized along its outcrop, might contain ore bodies, since the Shinarump contains uranium ore at other localities.

Program

The applicant proposed to drill 18 core holes and 56 noncore holes on a 420-foot grid pattern, arranged in northwest-southeast and northeast-southwest directions, to explore the Chinle and the Shinarump on the Red Wing, et al. claims. Depths were expected to range from 260 to 340 feet, with total footage estimated at 21,620 feet. Provision was made for engineering and geological assistance, construction of access roads and drill sites, and hole probing. Total project cost was estimated at $93,987.

DMEA field examiners believed that drill holes for the above program were laid out on a too-widely-scattered program, and that a smaller area in the most favorable known location near mineralized outcrops should be drilled on a 200-foot grid. A contract, dated June 13, 1955, arranged the proposed work in four stages, as follows:

Stage I

To consist of preparation of access roads and drill sites by bulldozer, and drilling 20 holes, aggregating an estimated 2,000 feet, on a 400-foot drill pattern, as shown on figure 3.

Stage II

To consist of preparation of drill sites by bulldozer, and drilling a maximum of 50 holes, aggregating not more than 5,000 feet, on a 200-foot grid pattern superimposed on, but supplementing, the stage I grid as shown on figure 3. Unfavorable areas within the grid area are not to be drilled.

Stage III

To consist of preparation of drill sites by bulldozer, and drilling a maximum of 28 holes, aggregating not more than 2,800 feet, as offsets to stages I and II holes which show encouraging mineralization. Offset holes are to be drilled not closer than 50 feet from any other hole.

Stage IV

To consist of preparation of drill sites by bulldozer, and drilling a maximum of 28 holes, aggregating not more than 2,800 feet. These holes might be extensions of the 200-foot grid outlined under stages I and II or 50-foot offsets around ore holes. The purpose of stage IV drilling is to follow up or extend definite ore trends, or to further explore mineralized ground found under this or previous stages.

The program was designed to test the "Hartley" sandstone members of the Chinle. Average depth of hole was expected to be 100 feet, of

which 20 feet would be cored. Holes were planned to be BX in size unless impractical, then AX would be permitted. Maximum allowable footage is 10,080 feet of noncore, and 2,520 feet of core drilling. Reaming and casing up to 1,500 feet are allowed. All drilling, reaming, and casing are to be done by independent contractor. Drill cuttings and cores are to be saved, stored, split, and analyzed chemically if warranted. All drill holes are to be logged geologically and probed radiometrically. Stages II, III, and IV are subject to formal written approval by the Government prior to start of that particular stage.

The contract states that work is to start on or before September 15, 1955, and end on or before February 1, 1956.

Work Completed

Exploration began September 14, 1955, and continued until February 27, 1956, when the operator suspended work in order to evaluate data. Amendment No. 1, dated January 30, 1956, extended the time for completion of work to November 1, 1956, and extended the maximum period for royalty payments and lien for payment thereof provided for in the contract from 10 to 11 years.

The operator successfully completed 13 holes, aggregating 2,683 feet of noncore and 439 feet of core drilling under stage I as per contract, but then continued some holes down to the Shinarump-Moenkopi contact on company account. In addition, the operator reportedly drilled 52 holes on company account near or within the DMEA contract area, most of them passing through the "Hartley" units of the Chinle and down to the base of the Shinarump. Detailed information concerning these company holes is not available, but

the applicant reports: (a) A channel in the Shinarump, crossing Red Wing Nos. 1 and 2, has been traced for approximately 5,000 feet, is about 40 feet deep and about 1,200 feet wide, and carries sulfides and carbon; uranium and copper minerals were noted. (b) A hole on Lehnheer No. 1 claim showed a count of "approximately .60 percent U_3O_8."

Tabulation of DMEA drill hole data is presented in table 2.

The operator's geologist was unable to determine the presence of any possible subsurface ore control, and radiometric probing showed no readings or thicknesses of commercial value in the DMEA contract area. For these and other reasons, the operator, in a letter dated August 8, 1956, requested termination of the contract. In a memorandum dated August 3, 1956, F. M. Byers, Jr., geologist, Geological Survey, recommended that the contract be terminated as soon as possible, and that no Certificate of Discovery or Development be made. M. H. Howes, engineer, Bureau of Mines, in a memorandum dated August 16, 1956, also recommended that the project be terminated. These DMEA recommendations were based on negative results of both DMEA contract and company drilling, on the small size and scarcity of ore bodies in the "Hartley" sandstones, and on the belief that the Government grid (project area) was adequately explored.

Access roads and drill sites were constructed by a contractor, J. Warren Black, c/o Marble Canyon Lodge, via Cameron, Arizona. A bulldozer was required as standby to pull the rig and heavy equipment from site to site. The supervising geologist was Phillip H. McCary, Jr., of the McCary-Beacom Co., 2155 East Seventh Street, Los Angeles 23, Calif.

Table 2 -- Drill Hole Data

Hole No.	Alluvium, Interval, feet	Upper "Hartley", Interval, feet	Lower "Hartley", Interval, feet	Noncore drilling, feet	Core Drilling, feet	Depth of hole, feet	Remarks
1	0-100	100-122	176-192	172	20	192	0.01 $_eU_3O_8$ at 103-106 feet 0.01 $_eU_3O_8$ at 110-114 feet Rise, background, 115-190 feet
2	0- 15	? -105	? -156	320	77	397	Traces
3	0- 60	60- 96	132-158	105	55	160	Tr. $_eU_3O_8$ at 152 feet
4	0- 70	70-116	170-183	149	51	200	Tr. $_eU_3O_8$ at 180-181 feet
5	0- 40	40- 80	133-155	113	47	160	Tr. $_eU_3O_8$ at 8-122 feet
6	0- 70	124-160	214-240	215	45	260	Tr. $_eU_3O_8$ at 190 feet
7	0- 80	150-178	230-251	194	61	255	Tr. $_eU_3O_8$ at 239 feet
8	0-100	190-196	236-261	260	60	320	0.02 $_eU_3O_8$ at 255-256 feet
9	0-120	194-224	252-287	280	20	300	Tr. $_eU_3O_8$ at 202-204 feet
10	0-170	absent	282-308	310	20	330	Background rise, 212 feet
11	0-100	156-160	204-235	240	20	260	No count
12	0- 20	15- 40	86-110	306	20	326	No count
20	0- 80	99-111	144-170	200	0	200	No count

McClung Mining and Exploration Corp., 5336 Glenwick Lane, Dallas 9, Texas, performed the drilling with a new model 1000 Mayhew rotary, heavy-duty rig equipped to cut a 2-1/8-inch core.

EXPENDITURES

The DMEA contract estimated costs were established as follows:

Actual Costs

Category (1) Independent Contracts

2,520 feet core drilling at $2.50 per foot	$ 6,300.00	
10,080 feet noncore drilling at $1.50 per foot	15,120.00	
1,500 feet reaming and casing at $1.75 per foot	2,625.00	$24,045.00

Category (2) Personal Services

Supervising consultant - 30 days at $50 per day	$ 1,500.00	
Field assistant - 6 months at $450 per month	2,700.00	$ 4,200.00

Categories (3) through (7) None

Estimated total actual costs ---------- $28,245.00

Fixed Unit Costs

200 hours bulldozer work at $12.50 per hour	$ 2,500.00
126 holes at $10 per hole for radiometric probing and standby costs	1,260.00
87 chemical sample analyses at $5 per sample	435.00

Estimated total fixed unit costs ---------- $ 4,195.00

Summary

Estimated total actual costs	$28,245.00
Estimated total fixed unit costs	4,195.00
Estimated total cost of project	$32,440.00
Government participation at 75 percent	$24,330.00

Seemingly excessive costs were incurred in the early stages of the work. A schedule was established for prorating costs of the field assistant, supervising consultant, and bulldozing, and this schedule was referred to Max Ingalls by W. M. Traver, in a letter dated May 2, 1956. Based on this schedule, project costs (subject to final audit) are as shown in table 3.

CONCLUSIONS AND RECOMMENDATIONS

The applicant proposed to explore for uranium ore in the Chinle formation and its basal Shinarump conglomerate. DMEA's modified proposal confined exploration to test only the potential ore-bearing sandstone units ("Hartley" members) which occur at about 150 and 200 feet, respectively, above the base of the Chinle. Stage I of four stages called for 20 holes, averaging 100 feet in depth, on a 400-foot grid. Provisions were made for engineering and geological assistance, preparation of access roads and drill sites, reaming and casing of drill holes, logging and radiometric probing, coring, and assaying.

Under contract, 13 holes, aggregating 2,683 feet of noncore and 439 feet of core drilling, were completed satisfactorily, and some holes were carried down to the Shinarump-Moenkopi contact on company

Table 3 -- Project Costs

Month	Monthly allowable		Category (1) Independent Contracts						Category (2) Personal Services				Fixed Unit Costs					
			Core drilling, $2.50/foot		Noncore drilling, $1.50/foot		Reaming and casing		Supervising Consultant, $50/day		Field Assistant, $450/month		Bulldozer work, $12.50/hour		Radiometric probing, etc. $10/hole		Chemical Analyses, $5/anal.	
	Total	Govt. partic. 75 percent	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost	Units	Cost
Sept. and Oct. 1955	$2,767.75	$2,075.81	20	$ 50.00	141	$ 211.50	-	-----	15.5	$775.00	1.5	$675.00	84.5	$1,056.25	--	-----	-	-----
Nov. and Dec. 1955	3,840.25	2,880.19	339	847.50	1,316	1,974.00	-	-----	--	--	-	-----	81.5	1,018.75	--	-----	-	-----
Jan. and Feb. 1956	2,233.00	1,674.75	80	200.00	1,226	1,839.00	-	-----	.2	10.00	.12	54.00	--	-----	13	$130.00	-	-----
Totals	$8,841.00	$6,630.75 -500.00 1/ $6,130.75	439	$1,097.50	2,683	$4,024.50	0	$00.00	15.7	$785.00	1.62	$729.00	166	$2,075.00	13	$130.00	0	$00.00

1/ Withheld $500.00 pending resumption of work or termination of project with final audit

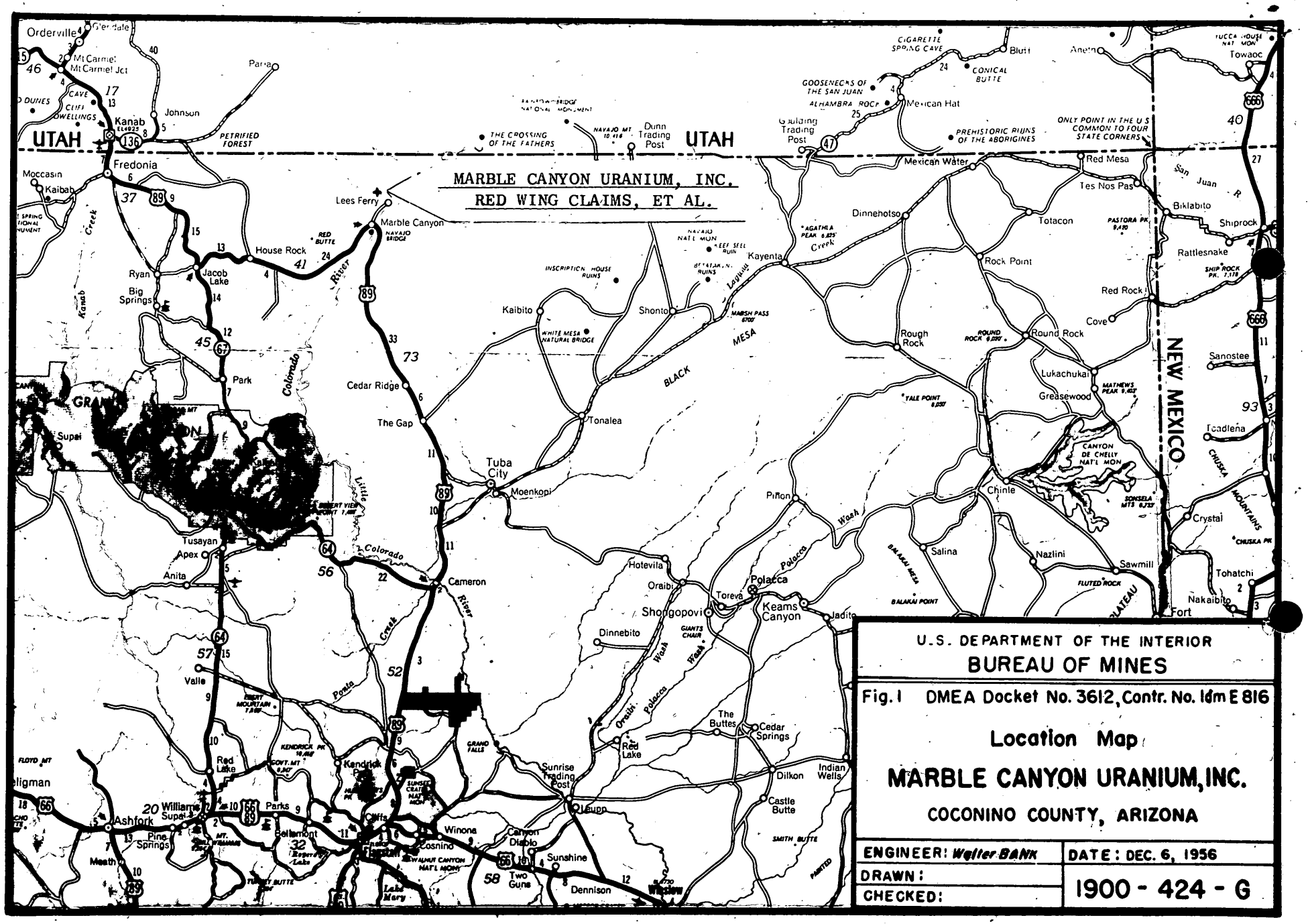
account. Reportedly, 52 company holes were drilled near or overlapping the contract exploration area.

DMEA program work indicated no significant uranium mineralization within the "Hartley" members of the Chinle. Company work indicated a channel with sporadic, weak mineralization in the Shinarump.

No ore reserves were found as a result of either DMEA contract or company work. The incompleted program adequately explored the involved area, and no further work is warranted. The operator, however, plans to do further exploratory work on the property.

The project was terminated at the request of the operator. Government representatives recommended that no Certificate of Discovery or Development be issued. No royalty has been paid to the Government and none is anticipated.

Total contract costs, pending final audit, are $8,841.00 of a $32,440.00 program. Government participation at 75 percent is $6,630.75, with unexpended funds at $17,699.25.


MARBLE CANYON URANIUM, INC.
RED WING CLAIMS, ET AL.
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Fig. I DMEA Docket No. 3612, Contr. No. Idm E 816
Location Map
MARBLE CANYON URANIUM, INC.
COCONINO COUNTY, ARIZONA
ENGINEER: Walter BANK
DATE: DEC. 6, 1956
DRAWN:
CHECKED:
1900 - 424 - G
UTAH
NEW MEXICO
Orderville
Glendale
Mt Carmel
Mt Carmel Jct
Kanab
Johnson
Parria
PETRIFIED FOREST
Fredonia
Moccasin
Kaibab
Lees Ferry
Marble Canyon
House Rock
Jacob Lake
Ryan
Big Springs
Park
Cedar Ridge
The Gap
Tuba City
Moenkopi
Tusayan
Apex
Anita
Cameron
Supai
Valle
Red Lake
Kendrick Pk
Williams
Ashfork
Pine Springs
Meath
Parks
Bellemont
Cosnino
Winona
Sunrise Trading Post
Leupp
Canyon Diablo
Sunshine
Two Guns
Dennison
Winslow
Indian Wells
Dilkon
Castle Butte
Cedar Springs
The Buttes
Red Lake
Dinnebito
Shongopovi
Oraibi
Hotevila
Toreva
Polacca
Keams Canyon
Jadito
Piñon
Chinle
Salina
Nazlini
Sawmill
Crystal
Tohatchi
Nakaibito
Fort
Teadlena
Sanostee
Lukachukai
Greasewood
Rough Rock
Round Rock
Cove
Red Rock
Rock Point
Totacon
Dinnehotso
Kayenta
Shonto
Tonalea
Kaibito
Mexican Water
Red Mesa
Tes Nos Pas
Biklabito
Shiprock
Rattlesnake
Towaoc
Aneth
Blutt
Mexican Hat
Goulding Trading Post
Dunn Trading Post
THE CROSSING OF THE FATHERS
NAVAJO BRIDGE
CIGARETTE SPRING CAVE
CONICAL BUTTE
GOOSENECKS OF THE SAN JUAN
ALHAMBRA ROCK
PREHISTORIC RUINS OF THE ABORIGINES
ONLY POINT IN THE U.S. COMMON TO FOUR STATE CORNERS
INSCRIPTION HOUSE RUINS
WHITE MESA NATURAL BRIDGE
MARSH PASS
BLACK MESA
CANYON DE CHELLY NAT'L MON
SUNSET CRATER NAT'L MON
WALNUT CANYON NAT'L MON
GRAND FALLS
Colorado
Little Colorado
Paria
Polacca
Oraibi
Jeddito
Navajo
San Juan R
Chuska Mountains
Chuska Pk
Lake Mary
Lake Mead
Lake Powell
Grand Canyon
Kanab Creek
Little Colorado
Colorado River
Paria Creek
Polacca Wash
Oraibi Wash
Jeddito Wash
Navajo Wash
Laguna Creek
Agathla Peak
Round Rock
Mathews Peak
Tale Point
Balakai Mesa
Balakai Point
Fluted Rock
Sonsela Mts
Pastora Pk
Ship Rock Pk
Kendrick Pk
Govt. Mt
Floyd Mt
Mt. Williams
Turkey Butte
Smith Butte
Painted
Navajo Mt
Navajo Nat'l Mon
Reef Seel Ruin
Betatakin Ruins
Desert View Point
Tucca House Nat Mon
Petrified Forest Nat Mon

IN REPLY REFER TO:

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 26 1957

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

June 25, 1957
Re: DMEA 3612 Idm E816
Marble Canyon Uranium, Inc.
Red Wing Claims, etc.
Coconino County, Arizona
Uranium

Memorandum

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

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

Subject: Review of Field Team Final Report

The contract, awarded June 13, 1955, approved the expenditure of $32,440 on a 4-stage drilling project. Only 13 Stage I holes were drilled and the contract was terminated, at the request of the operator, $8,841.00 having been spent. The holes drilled and 52 holes drilled by the applicant, some within the project area, failed to find significant mineralization in the "Hartley" members of the Chinle formation and did not extend the small rim orebodies from which a small production had been obtained.

In the opinion of the examiners, the drilling adequately explored the project area and further work is not warranted. The examiners and Field Team recommend that no certification be made. I concur with the recommendation.

N. E. Nelson

N. E. Nelson

DMEA Form 7
(12-56)

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Date	Surname	Code
6/25	Talbert	800
6/25	C	220
		700

JUN 25 1957

Mr. Thomas H. Brading
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Report of Review
Marble Canyon Uranium, Inc.
Docket No. DMEA-3612
Contract Idm-8816

Dear Mr. Brading:

The recently submitted copies of your Report of Review, in lieu of a final audit of the referenced project, are returned herewith for further review and revision as may be necessary.

Reason (c) for the review in lieu of an audit indicates that $6,636.00 of the costs were for work under independent contract. However, the copies of the paid forms MF-104 on file in this Division indicate that only $5,122.00 of the costs were for independent contract work, the difference of $1,514.00 being costs of a supervising consultant and a field assistant under Category (2) Personal Services.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb
June 25, 1957

Copy to: Docket
Admr. Reading File
Mr. Chambers

8623

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DMEA
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DATE	INITIALS	CODE
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

Date June 24, 1957

DMEA Docket No. 3612
DMEA Contract No. Idm-E816
Commodity Uranium
Name of applicant Marble Canyon Uranium, Inc.
Name of property Red Wing claims, et al
Location of property Coconino County, Arizona
Estimated cost of project $8,841.00

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Member JP
Uranium Commodity Committee

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

1. Date of subject document: 6/14/57. 2. Date received by reviewer: 6/20/57

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 ☒
- e. Disagree with Field Team ☐
- f. Support alternate plan ☐
- g. Request another examination ☐
- h. Approval ☐
- i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary) **Certification not recommended.**

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

June 19, 1957

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DMEA
RECEIVED JUN 21 1957

DATE	MINERALS	CODE
6/21	ZW2	220
6/24		800
"	Closing	700

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3612 (Uranium) Contract Idm-E816, Marble Canyon Uranium, Inc. (Red Wing claims, et al.) Coconino County, Arizona

Enclosed are the original and one copy of a final engineering and geologic report, submitted by the Operator, pertaining to work completed under the subject contract.

The Field Team's final report enclosing the original and three copies of a Joint Final Engineering and Geologic Report, by Government field examiners, was forwarded under date of June 14, 1957.

W H King
W. H. King

Enclosures

OP's FINAL REP.

EM
PHONE EL 3-8819

Marble Canyon Uranium, Inc.

200
319 NEWHOUSE BUILDING
SALT LAKE CITY 1, UTAH

May 6, 1957

U. S. Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

DMEA
DEPARTMENT OF THE INTERIOR
MAY 13 1957
REGION III
DENVER, COLORADO

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

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RECEIVED JUN 21 1957

DATE	INITIALS	CODE

Re: Docket No. DMEA 3612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

FINAL ENGINEERING AND GEOLOGICAL REPORT

Gentlemen:

We have delayed sending the final report as we consider previous reports of the area as hastily prepared, and new information had not been thoroughly studied. It has been necessary for us to call in the prospectors, drillers and geologist and more thoroughly analyze all the information.

Enclosed are the following:

Map 1. - General claim map showing the different areas drilled.

Map 2. - Revised map dated 2-17-56 of Lower Hartley showing the latest interpretation of contours and drill holes in the government grid area.

Map 3. - Contour and drill holes of the Shinarump in the Delbridge Channel (adjoining the government grid area).

Brief Review

The area under discussion lies in the Marble Canyon district along the lower Paria River Canyon, Coconino County, Arizona.

The general geology is quite similar to that of a large area of the Colorado Plateau. The uranium values occur in the Chinle and Shinarump formations. An extensive area along the Paria Canyon shows very good uranium mineralization, and there are numerous mineral discoveries.

Uranium was first discovered in the Paria River area in 1954. A good grade of ore was shipped from the Red Wing claims. It was thought that a commercial orebody would be found in place behind the rims. In order to test this area by drilling, an application was made for a DMEA exploration loan. In August, 1955, a long-form exploration project contract was signed by Marble Canyon Uranium, Inc. and the government.

In this contract the drilling objectives, drilling depths and over-all costs were drastically changed by the government and the contract has been a misfit from the start and a continual source of confusion and irritation.

The government contract called for holes to be drilled only to the base of the Hartley formation in the Chinle. As the Shinarump formation was also a promising objective, the Company at its own expense drilled all holes down to test the Shinarump. To date, 13 holes have been drilled on the government grid to the base of the Hartley. These same holes were completed by the Company through the Shinarump, and in addition, the Company has drilled 74 holes in the area at its own expense. These combined holes have given valuable information as to controls in the Chinle, and also a very promising channel was discovered in the Shinarump formation.

In order to give you the benefit of all the information obtained from the drilling, this report will not only cover the government grid area, but also all the drilling we have done in the entire area.

Government Grid Area

See General Map #1. The government grid is marked "Area A." Also see Map #2, contour of the Lower Hartley.

Thirteen holes were drilled on the government grid, under the DMEA contract, to the base of the Hartley. These same holes were completed to the base of the Shinarump at Company expense. In addition, the Company drilled 15 holes (marked "A") in the government grid area at Company expense.

Hartley Objective

The mineralized zone of the Chinle in this area was found in the Hartley sandstone. This sandstone takes its name from a sandstone member found near St. George, Utah. The Hartley was found to be very conformable and its average thickness is approximately 80 feet. It is divided into the Upper and the Lower Hartley.

Upper Hartley

The Upper Hartley is a well-bedded, fine-grained sandstone and shale with a large content of mica. Its thickness is approximately 40 feet with a gray to tan color. It is flat-lying and is generally thicker in the area of a Lower Hartley low. The Upper Hartley contains an abundance of carbonaceous trash which is not confined to any particular zone, although the occurrence of uranium is roughly confined to the lower portion of the Upper Hartley.

Drilling in the Upper Hartley so far has been encouraging and has furnished data on better sub-surface control.

Lower Hartley

The Lower Hartley is a more coarse-grained sandstone and appears to be a better host rock than the Upper Hartley. It is white to reddish in color. The portion lighter in color seems to be more favorable for ore occurrence. The altered zones seem to contain more uranium than the red or unaltered. The abundance of carbon at the base of the Lower Hartley seems to be an ore control. It has been definitely established in drilling and prospecting that the Lower Hartley is the best uranium ore zone in the Chinle.

The thickness of the Lower Hartley seems to control the values. The Lower Hartley sandstone thickness varies from 16 feet to 38 feet. The average seems to be about 25 feet. In nearly all the holes drilled, those with a sandstone thickness of 25 or more feet had some count, while those with 20 feet thickness or less had no count.

Referring to Map #2, structural map of the Lower Hartley, it will be noted that the mineralization in this area is located in a trough, which is not only thicker but also very similar to a Shinarump-type channel. Drill Holes A1, 6, 7, and 10 are close to a low area and show an average thickness of 24 feet of Hartley; Drill Holes 1, 2, A2, and A3 are further from the low area and have an average thickness of 17 feet; Drill Hole DH-8 has an elevation of 3750 feet; Drill Hole A10, 3735 feet; Drill Hole 7, 3744 feet; Drill Hole 2, 3756 feet. These holes indicate the presence of a trough in the Lower Hartley.

In the trough area the sands appear to be thicker and the holes are more mineralized. This appears to be one of the major control factors of mineralization in the Lower Hartley.

Fracturing in the Hartley formation also appears to have a bearing on mineralization. Geologist J. J. Beeson is of the opinion that fractures increase the porosity of ore horizons in the sandstone inducing a greater flow of uranium mineralization in water solution, hot or cold. He further states that generally the best mineralization is along the fissures (fractures) at the base of the Lower Hartley. Furthermore, he states that the government grid area is massive reddish sandstone showing no fracturing and slight alteration, which might account for the lack of mineralization in the government grid area.

In order to test this fracture zone theory in the Chinle, drilling was moved to the northwest to Area B, which appeared to be on the trend of a major fractured zone showing bleaching. Drill Hole 20 is on the government grid; 15P, 16P and 16PB were drilled off the grid. Of these holes, 15P, 16P and 16PB were mineralized. Drill Hole 16PB was one of the best holes drilled in the government grid area. This indicates that the fractured zones perhaps are better mineralized.

As both the fractured zone and low in the Lower Hartley appear to be better mineralized, it is thought that where the fractured zone intersects the trough in the Lower Hartley would be a likely place for ore. (See maps.)

Area C (See General Map)

Drilling work was next moved further northwest, to Area C. A good grade of uranium had been found along the rims in the Chinle. In order to test back of the rim, 8 holes were drilled. One of these showed a high count, and more work should be done there.

Area D (See General Map)

Four holes were drilled to test uranium shows along the rims. Not sufficient work was done to give definite information.

Area E, Delbridge Channel (Shinarump) (See Map #3)

The Company drilling in the government grid area in the Shinarump showed evidence of a channel. Also, there was a Shinarump channel showing on the rim, called the Delbridge Channel. Forty-five holes were drilled at Company expense to delineate this channel. As the channel was drilled northwest from the rim, it showed the presence of uranium and copper minerals with good lithology.

About a mile from the rim the channel made an abrupt turn, the Shinarump thickened, and the material that showed a count thickened. The moisture, mudstone, carbon and sulphide content increased. The last few holes showed a marked improvement in many features necessary for a uranium orebody. Drilling had to be suspended in the most promising area as the Company did not have sufficient money for deep drilling.

Conclusion

1. It should be noted that most of the prospecting has been done along the rims in weathered zones where the values fade out. Future prospecting should be done further back of the rims out of the weathered zones.

2. There is definite evidence that the Chinle formation contains good uranium ore values. Drilling in the Chinle indicates that the fractured zones and the lows of the Lower Hartley formation have better uranium values. More drilling should be done in the areas where the fractured zones intersect the lows in the Hartley.

3. An outstanding Shinarump channel was discovered that was increasing in values when drilling had to be suspended. This channel showed such marked improvement that much more drilling should be done there.

4. We believe the Paria River Canyon contains commercial orebodies. Not nearly enough work has been done to disprove it, and sufficient work has been done to justify much more drilling, drifting and prospecting work.

It should be mentioned that the government has spent approximately $4,956,00, and the Company, approximately $70,000.00 on this program.

In closing, we wish to thank the representatives of the government, both in the field and office, who have worked on this project.

Yours truly,

MARBLE CANYON URANIUM, INC.

By J. D. Herman
J. D. Herman, Manager

JDH:fl
Encls.

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DMEA
RECEIVED JUN 20 1957

DATE		CODE
6/24	C	220
"		800
"	~~C King~~	700

224 New Customhouse
Denver 2, Colorado

June 19, 1957

Memorandum

To: T. H. Brading, DMEA Auditor, Region III

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3612 (Uranium) Contract Idm-E816, Marble Canyon Uranium, Inc. (Red Wing claims, et al.) Coconino County, Arizona

The subject contract was terminated by mutual agreement, effective April 1, 1956. A copy of the "TERMINATION AGREEMENT" was forwarded to you, with copy of our letter to the Chairman, Operating Committee, DMEA, dated October 9, 1956.

The Operator has rendered a final engineering and geologic report and a final accounting as required by the contract. Therefore, final payment of the Operator's account is in order, contingent on the release to this office of a Certificate and Report of Audit or Report of Review of reported project costs, whichever the case indicates.

Acceptable units of work or service completed on a "Fixed Unit Cost Basis" consists of 166 hours of bulldozer time and radiometric probing of 13 holes.

The sum of $500.00 was withheld from reimbursement to the Operator in processing its final accounting report, which was for the period of January and February, 1956.

Original signed by
W. H. KING

W. H. King

JWT:jy
cc: Chm. Op. Comm. (2)
Harshman
Townsend
Corresp. E816
Chron.

EM
PHONE EL 3-8819

Marble Canyon Uranium, Inc.

200
~~319~~ NEWHOUSE BUILDING
SALT LAKE CITY 1, UTAH

May 21, 1957

DMEA
DEPARTMENT OF THE INTERIOR
MAY 23 1957
REGION III
DENVER, COLORADO

U. S. Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

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

Re: Docket No. DMEA 3612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Gentlemen:

We are in receipt of your recent letter stating that we did not furnish you with sufficient maps to accompany our final report.

Mr. J. D. Herman, Manager, has been called out of town for a few days, but before leaving, wrote to the geologist who prepared most of the maps for more copies. The map showing the locations of the government and Company drill holes is being prepared here.

As soon as we have assembled and prepared all the copies you need, they will be forwarded to you promptly.

Yours very truly,

M. F. Larsen
M. F. Larsen
Office Secretary

:mfl

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 27 1957

DATE	INITIALS	CODE
5/27	C	220
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"	~~Chung~~	700

5/23/57 copy distributed to
Chairman (2)
Harshman
Wilson
Hosley
Townsend

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 16 1957

DATE	INITIALS	CODE
5/16	JWD	220
5/16	[illegible]	800
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224 New Customhouse
Denver 2, Colorado

May 13, 1957

Mr. J. D. Harman, Manager
Marble Canyon Uranium, Inc.
800 Newhouse Building
Salt Lake City 1, Utah

Re: Docket No. DMEA 5412 (Uranium)
Contract No. Idm-2816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Dear Mr. Harman:

Thank you for the four copies of the narrative report and one copy each of three maps forwarded under date of May 6, 1957 as your final engineering and geologic report pertaining to work completed under Contract No. Idm-2816.

Article 7(a) of the Contract cites that five copies of a final engineering and geologic report shall be submitted and each copy is to be complete with maps and other pertinent data. We can duplicate your narrative report to provide the fifth copy. However, we do not have facilities for duplicating the maps, provided they were duplicatable. Therefore, we will appreciate your forwarding four additional copies each of maps 1, 2, and 3.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

JWT:prl

cc: Chmn. Op. Comm.-2
Harshman
Wilson
Kadler
Townsend
Corres. file
Chron.

EM
PHONE 3-8819

Marble Canyon Uranium, Inc.

200
~~319~~ NEWHOUSE BUILDING
SALT LAKE CITY 1, UTAH

April 30, 1957

DMEA
DEPARTMENT OF THE INTERIOR
MAY 1 1957
REGION III
DENVER, COLORADO

Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA 3612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Attn: Mr. E. N. Harshman, Acting Executive Officer

Gentlemen:

We have your letter of April 23rd regarding our final report. We are sorry, but we have been doing considerable more research and are awaiting the return of a geologist from Marble Canyon before we will have all the material for this report.

We should be able to finish the report by the end of this week.

Yours truly,

J. D. Herman FL

J. D. Herman, Manager

JDH:fl

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 3 1957

DATE	INITIALS	CODE
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5/3	[illegible]	800
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5/1/57
Copies distributed to:
Chrmn. Op. Comm. (2)
Harshman
Wilson
Hosler
Townsend

OFFICIAL FILE COPY
DMEA
RECEIVED APR 25 1957

DATE	INITIALS	CODE
4/25	C	R20
4/26	[illegible]	800
		225

224 New Customhouse
Denver 2, Colorado

April 23, 1957

Mr. J. D. Herman, Manager
Marble Canyon Uranium, Inc.
319 Newhouse Building
Salt Lake City 1, Utah

Re: Docket No. DMEA 3612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Dear Mr. Herman:

In your letter of March 16, 1957, you advised that your final engineering and geologic report, pertaining to work completed under Contract No. Idm-E816, would be in the mails to us on Wednesday, March 20.

As considerable time has elapsed since that date and we have not received your final report, we thought possibly it might have gone astray. Therefore, we will appreciate advice by return mail as to whether or not the report was forwarded as advised, and if not, when we can expect to receive the report.

Very truly yours,

Original signed by
E. N. HARSHMAN

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

JWT:prl

cc: Chairman, Op. Comm. (2)
Harshman
Wilson
Hasler
Townsend
Corres. file
Chron.

224 New Customhouse
Denver 2, Colorado

March 5, 1957

3-8 C
3/11 w/

	220
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	225

Mr. Adriel F. Stewart, President
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City 11, Utah

Re: Docket DMEA-3612 (Uranium)
Contract Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims, et al)
Coconino County, Arizona

Dear Mr. Stewart:

We have not received the documentation of project costs and explanatory statements which we requested from you by letter of December 18, 1956. It appears to us that we have allowed sufficient time for you to assemble the data and forward it to this office; therefore, if the data is not received by March 19, 1957, the account will be reviewed or audited by the Contract Administration and Audit Division, and disallowances will be made where necessary, for costs which are not properly documented or explained.

Yours very truly,

Original signed by
E. N. HARSHMAN

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

JDC;hh
cc: Chmn. Op. Comm. (2)
Harshman (2)
Wilson
Townsend
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Chron.
Bruding

224 New Customhouse
Denver 2, Colorado

March 4, 1957

DATE	INITIALS	CODE
3-6	C	220
3/6	[illegible]	800
		225

Mr. Adiel F. Stewart, President
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City 1, Utah

Re: Docket No. DMEA 5612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Dear Mr. Stewart:

By letter of December 26, 1956, Mr. J. D. Herman, General Manager, Marble Canyon Uranium, Inc., advised that it was expected to have the required final engineering and geologic report pertaining to operations under the Contract in our hands within fifteen days.

As considerable time has elapsed and we have not received the required final engineering and geologic report as provided in Article 7(c) of the Contract, we will appreciate your advice by return mail as to when we can expect to receive the report.

Very truly yours

Original signed by
E. N. HARSHMAN

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

JWT:prl

cc: Chairman, Op. Comm. (2)
Harshman
Wilson
Hasler
Townsend
Corres. file
Chron.

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 24 1957

DATE	INITIALS	CODE
1-24	ew	220
1/24	[illegible]	800
		225

22d New Customhouse
Denver 2, Colorado

January 21, 1957

Mr. J. D. Herman, General Manager
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City 1, Utah

Re: Docket DMEA-3612 (Uranium)
Contract IAm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims, et al.)
Coconino County, Arizona

Dear Mr. Herman:

Reference is made to our letter of December 18, 1956, requesting additional documentation and clarification of contract costs, and to your reply of December 26, 1956, whereby you informed this office that the requested material would be forwarded as soon as possible. The material has not as yet been received in this office.

We request that the material be forwarded to this office not later than January 25, 1957, if possible.

Very truly yours,

Original signed by
W. M. TRAVER

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

JDC:jy
cc: Chm. Op. Comm. (2)
Harshman
Hasler
Wilson
Townsend
Corresp. E816
Chron.

EM
PHONE 3-8819

Marble Canyon Uranium, Inc.

200
~~319~~ NEWHOUSE BUILDING
SALT LAKE CITY 1, UTAH

DMEA
PARTMENT OF THE INTERIOR
DEC 27 1956
REGION III
DENVER, COLORADO

December 26, 1956

United States Dept. of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 3612 (Uranium)
Contract Idm-E816
Marble Canyon Uranium, Inc.
Red Wing Claims, et al
Coconino County, Arizona

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

Gentlemen:

We have your letters of November 28 and December 18. We have delayed sending you a final report of our operations at Marble Canyon, Arizona, as we have been doing extensive geological work in the area and wish to assemble these data before making a final report. We hope to have this information compiled so the report can be made to you within 15 days.

Regarding the information requested in your letter of December 18, we will assemble this information as fast as possible and send it to you so you can complete your records.

Yours truly,

J. D. Herman

J. D. Herman
General Manager

JDH:fl

PHOTO COPY
CHAIRMAN (2)
ROYALTY
WILSON
HAILSHMAN
TOWNSEND
HABLEY

CORRESP FILE E 816

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

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

November 28, 1956

Mr. Adiel F. Stewart, President
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City 11, Utah

Re: Docket No. DMEA 3612 (Uranium)
Contract No. I4m-8816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Dear Mr. Stewart:

Reference is made to the letter from this office, dated October 9, 1956, wherein your attention was directed to the provisions of Article 7(c) of the contract form, relative to your rendering the final engineering and geologic report pertaining to the work completed under the contract.

Advice by return mail will be appreciated as to the date on or before which we can expect to receive the required final report.

Very truly yours,

Original signed by
W. M. TRAVER

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

JWT:prl
cc: Chairman, Op. Comm. (2)
Marshman
Wilson
Hasler
Townsend
Corres. file
Chron.

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

RECEIVED
OCT 1 2 1956

224 New Customhouse
Denver 2, Colorado

October 9, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

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

Subject: Docket No. DMEA 3612 (Uranium), Contract No. Idm-E816, Marble Canyon Uranium, Inc. (Red Wing claims et al.), Coconino County, Arizona.

Enclosed are the Government's, Division, and Docket copies of the "TERMINATION AGREEMENT" which was forwarded by your letter of September 5, 1956, for signature by the Operator and this office.

We are also enclosing three copies of the Operator's letter of October 3, 1956, by which the executed copies of the TERMINATION AGREEMENT were returned to this office, and wherein the Operator advises of a change in the name of the President of the Marble Canyon Uranium, Inc. and change of address to 200 Newhouse Building, Salt Lake City 11, Utah. Please correct your records as to the change in address.

Copies of the executed TERMINATION AGREEMENT have been forwarded to the Operator, the Finance Office, Region III, and to others concerned.

E. N. Harshman

E. N. Harshman

Enclosures

EM
PHONE 3-8819

Marble Canyon Uranium, Inc.

200
~~319~~ NEWHOUSE BUILDING
SALT LAKE CITY 11, UTAH

DMEA
DEPARTMENT OF THE INTERIOR
OCT 8 1956
REGION III
DENVER, COLORADO

October 3, 1956

U. S. Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 2, Colorado

Attention: Mr. W. M. Traver

Re: Docket No. DMEA 3612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Gentlemen:

Enclosed are several copies of "Termination Agreement" terminating the above contract. All copies have been executed according to your instructions of September 7th, and we understand that the "Operator's Copy" will be returned to us after execution by the DMEA.

Please note that Adiel F. Stewart is now president of Marble Canyon Uranium, Inc., and that our address is 200 Newhouse Building, Salt Lake City 11, Utah. We ask that you correct your records accordingly to insure proper and prompt delivery of your future correspondence with us.

Thank you for your attention to these matters.

Yours very truly,

M. F. Larsen

M. F. Larsen
Office Secretary

:mfl
Encls.

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

RECEIVED
SEP 12 1956

224 New Customhouse
Denver 2, Colorado

CERTIFIED MAIL

September 7, 1956

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
1502 South Fifth Street
Suites 17 and 19, Levitt Building
Las Vegas, Nevada

Re: Docket No. DMEA 3612 (Uranium)
Contract No. Idm-M816
Marble Canyon Uranium, Inc.
(Red Wing claims et al.)
Coconino County, Arizona

Dear Mr. Ingalls:

Enclosed are the Government's, Division, Docket, Operator's, Finance Office, and Field Team copies of a proposed "TERMINATION AGREEMENT" which has been prepared pursuant to the request of J. E. Lohmberr, Business Manager, Marble Canyon Uranium, Inc., dated August 8, 1956, to terminate Contract No. Idm-M816, effective April 1, 1956.

If the "TERMINATION AGREEMENT" is satisfactory, all copies are to be signed by you as indicated, the corporate seal affixed, and all copies promptly returned to this office.

When the properly signed copies of the "TERMINATION AGREEMENT" are returned, the Agreement will be dated and signed by the Executive Officer, DMEA Field Team, Region III, for the Government, after which the "Operator's Copy" will be returned to you.

Very truly yours,

W. M. TRAVER

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

JWT:prl
cc: Chairman, Op. Comm. (2)
Marshman
Wilson
Basler
Townsend
Corres. file
Chron.

700

FILE COPY
Surname:
Murphy
Ellis
Fabrit
Selfridge
Hoffman

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

SEP - 5 1956

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

Re: Docket No. DMEA-3412 (Uranium)
Contract No. Ldm-2816
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona

Dear Mr. Traver:

This is in response to your memorandum of August 20, 1956, and enclosures, relating to the possible termination of the above-referenced contract in its present status.

Enclosed are the original and five copies of a proposed mutual termination agreement prepared for your signature in behalf of the Government.

If you and the Operator find the agreement in order, please insert the date of execution after you and an authorized representative of the corporation have signed the original and all copies. Thereafter, kindly distribute the copies in the usual manner.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

O. M. Bishop (GCS)
Member, Bureau of Mines

W. P. Williams (GCS)
Member, Geological Survey

FMMurphy/izm 8-31-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

R.C.S.

700
Ellis

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

Memorandum

To: The Files

From: F. M. Murphy, Mining Engineer
Rare and Miscellaneous Metals Division, for Michael Ching

Subject: Termination Agreement
Docket No. DMEA-3612 (Uranium)
Contract No. Idm-E816
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona

The object of the project was to explore the Hartley member of the Chinle formation by means of core and non-core drilling.

The work was divided into four (4) stages, drilling 20, 50, 28, and 28 holes, respectively, in each stage, to an average depth of 100 feet. Approximately 80 feet of each hole to be non-core and the remainder core drilled, or a total of 10,080 feet of non-core and 2,520 feet of core drilling.

During the period September 1955, and February 1956, the Operator completed 13 of the Stage I holes, and about 10 other holes in the same area on its own account.

The holes drilled under the contract were logged radiometrically by the AEC. Only one or two of the holes show a slight radiometric anomaly, that is below 0.02% U_3O_8. One of the company-drilled holes contained one foot of 0.03% U_3O_8, according to AEC probe data.

The Operator requested that the contract be terminated because of the unsatisfactory results of the DMEA and the private drilling done in the project area.

The Field Team in a memorandum, dated August 20, 1956, agrees with the field examiners and Operator that further drilling was not warranted and recommended that the contract should be terminated in its present status.

F M Murphy

F. M. Murphy for
Michael Ching

Surname copy

700

Chiay Ellis (EWE)

August 27, 1956

Memorandum

To: Associate Solicitor
Division of Mineral Resources

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

Subject: Termination Agreement
Docket No. DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona

Will you kindly prepare a Termination Agreement between the Government and Marble Canyon Uranium, Inc. in accordance with the attached draft. It should be prepared for the signature of Mr. W. M. Traver.

The request for termination of the contract work was made by the Operator in a letter, dated August 8, 1956, to the Executive Officer, Region III, and in Mr. Traver's memorandum to the Chairman, Operating Committee, dated August 20, which are in the docket file.

Ernest Wm. Ellis

Ernest Wm. Ellis

EWEllis/gla
cc to: Docket
Code 700

DRAFT
8/27/56
EWEllis/gla

TERMINATION AGREEMENT

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 Marble Canyon Uranium, Inc., hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-5816, Docket No. DMEA-3612, dated June 13, 1955, as amended, hereinafter called the "Contract," that:

1. Effective April 1, 1956, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated;
2. The Government shall contribute to allowable costs incurred prior to said effective date;
3. Any work or operations prosecuted or costs incurred by the Operator beginning with said effective date, except as otherwise provided in this termination agreement, shall be for the sole account of the Operator without contribution by the Government;
4. All rights of the Government provided for in the contract with respect to a certification of discovery or development and a percentage royalty and lien for its payment are preserved; and
5. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract, except as otherwise provided in this termination agreement.

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

THE UNITED STATES OF AMERICA

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

MARBLE CANYON URANIUM, INC.

By _____
Max Ingalls, President

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

224 New Customhouse
Denver 2, Colorado

August 20, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., Coconino County, Arizona

Enclosed are four sets of data, consisting of the following, pertaining to termination of the subject contract in its present status:

1. Memorandum, dated August 3, 1956 from F. M. Byers, Jr., Geologist, Geological Survey.

2. Letter from the Operator, dated August 8, 1956.

3. Memorandum, dated August 16, 1956, from M. H. Howes, Mining Engineer, Bureau of Mines.

4. Memorandum, dated August 16, 1956, from Stephen R. Wilson, transmitting the material under items 2 and 3 above.

The Operator, for reasons stated, requests termination of the contract in its present status. The examining engineers and geologists, in their memoranda, recommend termination of the contract, in which this office concurs.

Forms MF-104 and MF-104A submitted by the Operator for the period of January-February, 1956, will constitute the Operator's final accounting report.

The work completed under the contract consists of the drilling of thirteen diamond drill holes, aggregating 2,683 feet of non-core drilling and 439 feet of core drilling.

RECEIVED
AUG 23 1956

We recommend that an appropriate termination agreement be prepared to terminate the contract in its present status, without the issuing of a certification of discovery or development.

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 12, UTAH

DMEA
Date Rec'd.
AUG 20 1956
BUREAU OF MINES
Denver, Colorado

August 16, 1956

Memorandum

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

From: Stephen R. Wilson

Subject: Docket No. DMEA 3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., Coconino County, Arizona

Reference is made to your memorandum dated August 8, 1956, relative to recommendations for continuing or terminating work under the subject contract.

Attached are nine copies of a letter received from the operator dated August 8, 1956, and nine copies of a memorandum prepared by M. H. Howes, dated August 16, 1956. The operator has requested termination of the contract and the inspecting engineer concurs with this request.

F. M. Byers, Jr., U.S. Geological Survey, Grand Junction, Colorado, inspected the Marble Canyon property July 25, 1956. In a memorandum dated August 3, 1956, Byers recommended that the contract be terminated. This office is in accord with recommendations made by Byers and Howes.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

cc: J. B. Clemmer

RECEIVED
AUG 3 0 1956

EM
PHONE EL 3-8819

Marble Canyon Uranium, Inc.

200
~~319~~ NEWHOUSE BUILDING
SALT LAKE CITY 1, UTAH

August 8, 1956

Mr. S. R. Wilson
U. S. Bureau of Mines
1600 East First South
Salt Lake City 1, Utah

Re: Docket DMEA - 3612 (Uranium)
Contract Idm-E816
Red Wing et al claims
Coconino County, Arizona

Dear Mr. Wilson:

After a complete review of the results of our drilling under DMEA Contract Idm-E816, we feel that in the best interests of the Government and our Company we should ask for a termination of the contract. The reasons for our decision are as follows:

1. We have drilled and submitted reports to date on 13 holes on the government grid. Radiometric probing has shown no readings or thicknesses of commercial value. (All holes were drilled through the objective.)

2. Our geologists have been unable to gain any subsurface control or any ore controls by the study of the formations from the cuttings.

3. We have drilled an additional 4 holes within the grid pattern through the objective, on our own and at our own expense, and have still not come up with any favorable showings or controls.

4. Our geologist, Phillip H. McCary, Jr., has also recommended that we discontinue the project.

The only favorable results we have obtained in the area have been in our drilling of the Shinarump formation off the government grid. We have outlined a channel that has both favorable geology and lithology and has shown some good radiometric count; however, our drilling depths have increased to 500 to 600 feet. Because of high drilling costs and limited capital we have had to discontinue this project temporarily.

We feel that we have made every effort to completely explore the possible ore-bearing formation (Hartley member of the Chinle), and that the area within the government grid has proven of no commercial value. Therefore, we hope that you will concur in our recommendation that the contract be terminated.

Yours very truly,

MARBLE CANYON URANIUM, INC.

By: J. E. Lehnherr
J. E. Lehnherr
Business Manager

JEL:fl

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 12, UTAH

August 16, 1956

DMEA
Date Rec'd.
AUG 20 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Stephen R. Wilson

From: M. H. Howes

Subject: Docket No. DMEA 3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., Coconino County, Arizona. Memorandum report on operator's request for termination of contract

Marble Canyon Uranium, Inc., has requested termination of the contract for the reason that 13 of the 20 holes authorized for Stage I have been completed through the objective Chinle beds with negative results. The company believes that the Government grid (project area) has been sufficiently explored to indicate a total absence of ore.

I concur with the operator's opinion that the project area has been adequately explored, and that drilling the seven holes remaining in Stage I would be a waste of money. It is therefore recommended that the contract be terminated.

M. H. Howes

M. H. Howes

RECEIVED
AUG 20 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

IN REPLY REFER TO:
DMEA

MINERALS DIV.
DMEA
RECEIVED
AUG 6 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO
Date Rec'd.
AUG 7 1956
BUREAU OF MINES
Denver, Colorado

August 3, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
J. William Hasler

From: F. M. Byers, Jr.,

Subject: Interim report, DMEA 3612 (Uranium), contract Idm-E 816, Marble Canyon Uranium, Inc., Red Wing claims, Coconino County, Arizona.

The subject DMEA project was visited on July 26, 1956, with A. Richard Tagg, AEC geologist, Kanab, Utah. No representatives of the operator were on the property, and according to the AEC geologist, no one had been on the property for several weeks. Only 12 of the 20 stage I holes had been drilled; the 8 sites remaining to be drilled are on the northwest end of the 4 by 5 drill-hole grid on 400-foot centers. (Memoranda in Grand Junction files indicate only 9 stage I holes drilled as of April 9, the date of the latest memorandum here on the subject docket.) About 10 private holes had also been drilled by the company at sites in between the 12 DMEA holes drilled on 400-foot centers. The 12 DMEA holes of stage I had been drilled as early as March 22, 1956, at the time of the inspection by Howard F. Albee, DMEA geologist, Grand Junction. Hence, there has been no drilling performed by the company under the DMEA contract since March 22, 1956.

An attempt was made to locate cores or cuttings from the 12 DMEA drill holes at the Marble Canyon camp on the Paria River, but all buildings were padlocked.

The 12 DMEA holes have been logged radiometrically by the AEC geologist. Only one or two of the holes show a slight radiometric anomaly that is below 0.02 eU_3O_8. One of the company-drilled holes contained one foot of 0.03 eU_3O_8, according to AEC probe data.

No ore reserves are carried on the Red Wing claim group of Marble Canyon Uranium by the AEC. Prospecting activity along the Triassic Chinle rim exposures in the vicinity has disclosed no sizeable ore bodies either in the two "Hartley" sandstones, 100 to 200 feet above the Shinarump conglomerate, nor in the Shinarump. About 2 miles southeast of the Marble Canyon property, 400 tons of indicated ore containing 0.15 percent U_3O_8 (AEC estimate) has been

blocked out in a Shinarump channel segment on the El Pequito claim (DMEA 3532). From this ore body 38.4 tons containing 0.18 U_3O_8 were shipped in June 1956.

On the basis of the negative results of DMEA and company drilling by Marble Canyon Uranium, Inc., on the Red Wing group, combined with the fact that the two "Hartley" sandstone beds contain small scattered ore bodies containing not over several tons, it is recommended that contract Idm-E 816 be terminated as soon as possible, and that no certification of discovery be made.

These recommendations are based solely on the negative results of drilling to date and on the small size and scarcity of ore deposits. It has also been reported that the Marble Canyon Uranium, Inc., is presently without funds to complete stage I of the DMEA contract.

F. M. Byers, Jr.

F. M. Byers, Jr.,
Geologist

FMB/mlr

cc: S. R. Wilson

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

224 New Customhouse
Denver 2, Colorado CERTIFIED MAIL August 8, 1956

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
1502 South Fifth Street
Suites 17 and 19, Levitt Building
Las Vegas, Nevada

Re: Docket DMEA 3612 (Uranium)
Contract Idm-E816
Marble Canyon Uranium, Inc.
(Red Wing Claims et al.)
Coconino County, Arizona

Dear Mr. Ingalls:

Records in this office indicate that the last work performed under Contract Idm-E816 was during the period of January-February, 1956. Our records also indicate that only thirteen of the twenty drill holes authorized under Stage I have been completed.

Relative to the completion of the authorized project work, which in this instance is at least all of Stage I, your attention is directed to the provisions of Articles 3 and 4 of Exploration Project Contract form MF-200 (Revised June 1954), on which Contract Idm-E816 is prepared.

If for some justifiable reason you cannot or do not wish to complete the work authorized under the Contract, you should immediately present the facts to the Government through this office and request to be relieved of further responsibility under the Contract.

Approval for suspension of work or termination of a DMEA contract prior to completion of all the work initially authorized is not within the authority delegated to this office. Therefore the matter must be forwarded to the Washington Office, DMEA, for their consideration and appropriate action.

DMEA contracts cannot be maintained in an indefinite inactive status. Therefore, your prompt attention to the above is requested. Please furnish this office with the original and five copies of your communication relative to the matter.

Very truly yours,

W. M. TRAVER

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

cc: Mr. J. D. Herman, General Manager
Marble Canyon Uranium, Inc.
200 Newhouse Building
Salt Lake City 11, Utah

JWT:prl

cc: Chairman, Op. Comm. (2)
Harshman
Hasler
Wilson
Townsend
Corres. file
Chron.

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

RECEIVED JUL 16 1956

224 New Customhouse
Denver 2, Colorado

July 13, 1956

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
1502 South 5th Street
Suites 17 and 19, Levitt Building
Las Vegas, Nevada

Re: Docket DMEA-3612 (Uranium)
Contract Idm-E816
Marble Canyon Uranium, Inc.
Red Wing claims, et al.
Coconino County, Arizona

Dear Mr. Ingalls:

Your Monthly Progress Report and Voucher for the period January-February, 1956 is being processed for payment. The following deductions have been made.

Independent Contracts, Category (1)

The following amounts have been suspended.

Core drilling

Amount reported this period, 80 feet at a total cost of	$ 240.00
Maximum allowable cost, 80 feet at $2.50 per foot	200.00
Amount suspended	$ 40.00

Non-core drilling

Amount reported this period, 1226 feet at a total cost of	$1,956.50
Maximum allowable cost, 1226 feet at $1.50 per foot	1,839.00
Amount suspended	$ 117.50

Summary of Suspensions to date:

Core drilling:

Amount previously suspended	$179.50
Amount suspended this period	40.00
Amount suspended to date	$219.50

Non-core drilling:

Amount previously suspended	$105.50
Amount suspended this period	117.50
Amount suspended to date	$223.00

Personal Services, Category (2)

The contract stipulates that 20 holes shall be drilled under Stage I. Only 13 holes have been drilled to date. Therefore, the allowable cost of Personal Services is based on the following schedules.

Field Assistant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Percent for preliminary work on roads, etc.	Percent for Supervision of Drilling Operations and related work	Percent apportioned to each stage	Prorated units of work (Months)	Allowable Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	18	14	32	1.9	$855.00	27	$729.00	$126.00
II	2	30	32	1.9	855.00	0	0.00	855.00
III	0	18	18	1.1	495.00	0	0.00	495.00
IV	0	18	18	1.1	495.00	0	0.00	495.00
Totals	20	80	100	6.0	$2700.00	27	$729.00	$1971.00

Amount reported on Form MF-104 for January-February, 1956		$180.00
Allowable cost to date	$729.00	
Allowable cost previously reported	675.00	
Accepted cost this report		54.00
Amount disallowed		$126.00

Supervising Consultant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Prelim. Geology & Location of Stage I Holes	Location of Holes Stages II-IV	Probing & Logging of Holes	Percent apportioned to each Stage	Prorated units of work (Days)	Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	50%	0	4%	54	16	$800.00	53	$785.00	$ 15.00
II	0	11%	11%	22	7	350.00	0	0.00	350.00
III	0	6%	6%	12	3 1/2	175.00	0	0.00	175.00
IV	0	6%	6%	12	3 1/2	175.00	0	0.00	175.00
Totals	50%	23%	27%	100	30	$1500.00	53	$785.00	$715.00

Amount reported on Form MF-104 for January-February, 1956----------$ 25.00
Allowable cost to date----------$785.00
Allowable cost previously reported---- 775.00
Accepted cost this report---------- 10.00
Amount disallowed---------- $ 15.00

Amount Withheld

The amount of $500.00 is withheld from payment pending resumption of work under the contract.

If you have any question regarding the above, 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. E816
Sec. Op. Comm. (2)
Wilson
Townsend
Chron.

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

June 22, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
JUN 25 1956

Memorandum

To: S. R. Wilson

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3612 (Uranium) Contract I4m-2816, Marble Canyon Uranium Corporation (Red Wing claims), Coconino County, Arizona

Records in this office show the last monthly progress report received on the subject contract was for the months of November-December, 1955 combined.

Please advise the present status of the contract work as shown by your latest engineering monthly inspection.

W. M. TRAVER,

W. M. Traver

WMT:ab

cc: Corresp. M216
Sec. Op. Comm. (2)
Wilson
Townsend
Green.

4-11-56

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

RECEIVED
APR 11 1956

224 New Customhouse
Denver 2, Colorado

VIA AIR MAIL

April 9, 1956

Memorandum

To: S. R. Wilson

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3612 (Uranium), Contract Idm-8816, Marble Canyon Uranium, Inc. (Red Wing Claims et al.), Coconino County, Arizona

In conjunction with matters discussed in our teletype to the Chairman, Operating Committee, of April 3, 1956, and his reply of April 6, copies of which were forwarded to you, we are enclosing the original of forms MF-104 and MF-104A, Operator's Report and Voucher, for the months of November and December, 1955, complete with documentation and other data as submitted to this office.

The contract does not stipulate or imply that it will be necessary to apportion the costs of the Supervising Geologist and the bulldozing to the monthly operation on the basis of the over-all estimate of work to be performed under the contract. However, we have been instructed by the Chairman, Operating Committee, in his teletype of April 6, 1956, to make a determination on this point and to prorate allowable costs on the basis of currently completed work.

The processing of the report by this office has been delayed because of illness of personnel and the resulting heavy work load on the remaining personnel. However, it now appears that it is fortunate that the matter has been deferred.

Please review the matter and have the engineer's report revised to contain his recommendation, relative to apportionment of the costs of the supervising geologist and the bulldozing based on the proportion of the over-all work completed. In reviewing the matter, possible consideration should be given to the fact that a portion of the bulldozing charged to date may have been expended in the preparation of access roads which would also benefit drilling

under subsequent stages. The same may apply, in our opinion, to a portion of the supervising geologist's time. However, a sufficient portion of both categories should be withheld to protect the Government's interest in the event all of the proposed work is not performed. Some consideration should be given the matter of the allowable costs of the Field Assistant also, as undoubtedly the total amount estimated in the contract was intended to cover completion of the entire 126 holes.

Please supply sufficient copies of the engineer's report for our attachment to the remaining copies of the accounting report. In all cases, the original of the engineer's report must be attached to the original NF-104 report instead of a carbon copy as you have supplied heretofore.

W. M. TRAVER

W. M. Traver

Enclosures

JWT:prl
cc: Chairman, Oper. Comm. (2)
Marshman
Hasler
Townsend
Corres. file
Chron.

DEPARTMENT OF THE INTERIOR

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

Ching
14X4401(01) Revolving Fund, Defense Production Act, Interior (Allocated Revolving Fund to Office of the Secy.)
Chambers
Ellis
Guhan
Nelson
Selfridge
Yeomans
Mottendorf

TELETYPE

APR 6 1956

W. M. TRAVER
EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION III
224 NEW CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

REURTT APRIL 3 MARBLE CANYON URANIUM DOCKET 3612. SUPERVISING CONSULTANT AND FIELD ASSISTANT COSTS DO NOT SEEM REASONABLE. CONTRACT COSTS OF PERSONAL SERVICES AS WELL AS FIXED UNIT COSTS WERE ESTIMATED AS REASONABLE FOR THE TOTAL AUTHORIZED WORK. YOU WILL HAVE TO MAKE DETERMINATION ON THIS POINT AND PRO RATE ALLOWABLE COSTS ACCORDING TO YOUR BEST JUDGMENT. OTHERWISE IF DRILLING IS NOT DONE GOVERNMENT WILL BE PAYING COSTS THAT ARE UNNECESSARY.

George C. Selfridge

GEORGE C. SELFRIDGE (GCS)
CHAIRMAN, OPERATING COMMITTEE

MChing/JIChambers:wb
April 6, 1956

Copy to: Docket
Admr. Reading File
Operating Committee
Confirmation to Region III
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
EWEllis
JIChambers

A.C.G.

FILE COPY

Surname:
Ching 700
Ellis
Chambers
Wilson
Baker

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

DEPARTMENT OF THE INTERIOR

DMEA
14X1401(01) Revolving Fund,
Defense Production Act,
Interior (Allocated Working Fund to the
Office of the Secy.)

TELETYPE

W. M. TRAVER
EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION III
20th MEN CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

REDKIT APRIL 3 MARBLE CANYON URANIUM DOCKET 3612. IF SUPERVISING CONSULTANT AND FIELD ASSISTANT COSTS CLAIMED ARE REASONABLE AND NECESSARY PAYMENT SHOULD NOT BE DEFERRED AND PRORATED. SINCE DRILL SITES FOR STAGES I AND II ARE INDICATED ON MAP, IF SOME OF BULLDOZING COVERED STAGE II SITES, COST OF LATTER SHOULD BE DEFERRED. CONTRACT AMOUNTS ARE MAXIMUM AND ANY EXCESS COSTS IN LATER STAGES MUST BE FOR OPERATOR'S ACCOUNT.

GEORGE C. SKLFRINE
CHAIRMAN, OPERATING COMMITTEE

MChing/izm 4-4-56
cc to: Docket
Code 700
Mr. Ching
Admr.'s Reading File
Operating Committee
Confirmation to Region III
Messrs. JECrawford, Rm. 3641
TMKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Chairman, Operating Committee, DMEA

RECEIVED

APR 4 - 1956

BUR MINES DN 235 4-3-56 1-03 PM

CHAIRMAN, OPERATING COMMITTEE, DMEA

RE DMEA DOCKET 3612, CONTRACT IDM-E816, MARBLE CANYON URANIUM, INC. CONTRACT PROVIDES FOR 126 HOLES IN FOUR STAGES. PRIOR WRITTEN APPROVAL REQUIRED FOR SUCCESSIVE STAGES. NINE OF 20 HOLES FOR STAGE I DRILLED. ALL OF SUPERVISING CONSULTANT COSTS, TWO-THIRDS OF FIELD ASSISTANT COSTS, AND ALL OF BULLDOZER WORK ALLOWED BY CONTRACT ALREADY CLAIMED. TO ENABLE US TO PROCESS 104,S WE REQUEST ADVICE BY TELETYPE IF PAYMENT FOR PORTIONS OF THIS WORK SHOULD BE DEFERRED AND PRORATED TO SUBSEQUENT STAGES. CONTRACT DOES NOT SO SPECIFY.

W M TRAVER

Denver, Colorado

7/23/56

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
SPACE III

RECEIVED
JUL 2 3 1956

Administrative Audit Difference Statement

Marble Canyon Granite, Inc.
567 - 11th Avenue
Salt Lake City, Utah

FINAL DISTRIBUTION
MADE JUL 2 0 1956

Date: July 13, 1956
Payee's
Reference: January, February 1956

3612

Gentlemen:

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$ 2,511.50
Difference	$ 298.50
Amount Approved	$ 2,213.00

The reason for the difference was due to:

Suspend:

Core Drilling - Claimed 80 ft. at a total of	$240.00
Maximum allowable cost 80 ft. @ 2.50 per ft.	200.00
Amount to be suspended	40.00
Non Core Drilling Claimed 1126 ft. at a total cost of	1,956.50
Maximum allowable cost, 1126 ft. @ 1.50 per ft.	1,839.00
Suspend	117.50

Disallows:

Field Assistant	$126.00
Supervising Consultant	15.00
	141.00

Total suspensions & disallowances $298.50. Withhold $500.00 pending resumption of work.

Any reclaim for deductions made above must be supported by the original of this form.

Very sincerely yours,

D. E. GRUBB
Audit Section

Maps in envelope

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

RECEIVED
JUL 23 1956

124 New Customhouse
Denver 2, Colorado

July 11, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3612 (Uranium) Contract 14m-E116, Marble Canyon Uranium, Inc. (Red Wing claims et al.) Coconino County, Arizona - Operator's Monthly Progress Report for the period January-February, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work completed is acceptable to the Government. We recommend that payment be made to the Operator on the following basis, subject to your verification of the correctness of applicable rates and arithmetical accuracy of computations.

Category (1), Independent Contracts
Suspensions

Core drilling

Amount reported this period, 80 feet at a total cost of	$ 240.00
Maximum allowable cost, 80 feet at $2.50 per foot	200.00
Amount to be suspended	$ 40.00

Non-core drilling

Amount reported this period, 1226 feet at a total cost of	$1,956.50
Maximum allowable cost, 1226 feet at $1.50 per foot	1,839.00
Amount to be suspended	$ 117.50

Amounts suspended to date, Category (1)

Core drilling:

Amount previously suspended	$179.50
Amount suspended this period	40.00
Amount suspended to date	$219.50

Non-core drilling:

Amount previously suspended	$105.50
Amount suspended this period	117.50
Amount suspended to date	$223.00

Category (2), Labor and Supervision

Field Assistant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Percent for preliminary work on roads, etc.	Percent for Supervision of Drilling Operations and related work	Percent apportioned to each stage	Prorated units of work (months)	Allowable Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	18	14	32	1.9	$855.00	27	$729.00	$126.00
II	2	30	32	1.9	855.00	0	0.00	855.00
III	0	18	18	1.1	495.00	0	0.00	495.00
IV	0	18	18	1.1	495.00	0	0.00	495.00
Totals	20	80	100	6.0	$2700.00	27	$729.00	$1971.00

Allowable cost to date	$729.00
Allowable costs previously reported	675.00
Accepted cost this report	$ 54.00

Amount claimed on Form MF-104 for the period January-February, 1956	$180.00
Accepted cost this report	54.00
Amount to be disallowed	$126.00

Supervising Consultant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Prelim. Geology & Location of Stage I Holes	Location of Holes Stages II-IV	Probing & Logging of Holes	Percent apportioned to each Stage	Prorated units of work (Days)	Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	50%	0	4%	54	16	$800.00	53	$785.00	$15.00
II	0	11%	11%	22	7	350.00	0	0.00	350.00
III	0	6%	6%	12	3 1/2	175.00	0	0.00	175.00
IV	0	6%	6%	12	3 1/2	175.00	0	0.00	175.00
Totals	50%	23%	27%	100	30	$1,500.00	53	$785.00	$715.00

Allowable costs to date---------- $785.00
Allowable costs previously reported---------- 775.00
Accepted cost this report---------- $ 10.00

Amount claimed on Form MF-104 for the period
January-February, 1956---------- $ 25.00
Accepted cost this report---------- 10.00
Amount to be disallowed---------- $ 15.00

Withhold the amount of $500.00 pending resumption of work under the contract. Operations are temporarily suspended pending evaluation of work performed to date under the contract.

Reconciliation with Amount Reported by the Operator on Form MF-104 for the Period January-February, 1956

Amount reported this period----------$2,531.50
Amounts to be suspended:
Core drilling---------- $40.00
Non-core drilling--------- 117.50
Total amount to be suspended---$157.50

Amounts to be disallowed:

Field Assistant----------$126.00
Supervising Consultant-------- 15.00
Total amount to be disallowed--------$141.00

Total of suspensions and disallowances---------- $ 298.50

Accepted cost for January-February, 1956-------- $2,233.00

Government participation at 75 percent---------- $1,674.75
Amount to be withheld---------- 500.00
Recommended payment to the Operator, subject to subsequent review by the Contract Administration and Audit Division, DMEA-- $ 1,174.75

Remarks

Date of Report----------June 14, 1956
Date Received in Field Office---------- June 18, 1956
Date Received in Region Office---------- July 6, 1956

W. M. TRAVER

W. M. Traver

Enclosures

JDC:jy
cc: MF-104 File E816
Sec. Op. Comm. (2)
E. R. Wilson
J. W. Townsend w/copy engr's. report
J. D. Cooper
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 12, UTAH

RECEIVED JUL 23 1956

DMEA
Date Rec'd.
JUL 6 1956

BUREAU OF MINES
Denver, Colorado

July 3, 1956

Memorandum

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

From: Stephen R. Wilson

Subject: Docket No. DMEA-3612 (Uranium), Contract Idm-5516, Marble Canyon Uranium, Inc., Coconino County, Arizona. MF-104 forms for the period January and February 1956

Enclosed are the required copies of the subject operator's report covering exploration completed during January and February 1956. An inspection of the project site was made by M. E. Keuss June 26, 1956. The inspecting engineer verified by measurement and examination of core that the operator completed five drill holes consisting of 1,226 feet of nonscore and 80 feet of core drilling. The work as reported is in conformance with the contract.

No significant uranium mineralization has been encountered in the contract drilling to date. Small amount of radioactivity ~~was~~ was noted in Holes Nos. 1 and 10 by AEC probing. The favorable Chinle sandstone horizons, the Upper and Lower Hartley beds, were cut at variable depths to 380 feet.

The operator has suspended the exploratory work pending a study of results completed to date. It appears probable that the operator will request termination of the present contract and may request additional work in other areas.

It is recommended that the operator be reimbursed by 75 percent of the expenditures as noted in the inspecting engineer's memorandum. Such reimbursement should be subject to clarification of the operator's intentions. An appraisal of the geology should be made by the Geological Survey prior to approval of additional drilling on the property.

The operator's report was received in this office June 18, 1956. Delay in transmitting forms to Denver resulted from the assignment of the inspecting engineer on other work.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

cc: J. H. Clemmer

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 12, UTAH

July 2, 1956

Memorandum

To: Stephen R. Wilson

From: M. H. Mouser

Subject: Docket No. DMEA-3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., Coconino County, Arizona. Progress report for January and February 1956

The Marble Canyon Uranium, Inc. property was inspected June 26, 1956, accompanied by F. W. Johnson. It is verified that 5 holes consisting of 1,226 feet of nonsecre and 80 feet of core drilling, for a total of 1,306 feet, as reported on form MF-104a, is correct, and that the work was performed in accordance with the contract.

Holes Nos. 1, 10, 11, 12, and 20 were completed during the period January and February 1956. A small amount of radioactivity was encountered in Holes Nos. 1 and 10 by AEC probing. The operator reported that Hole No. 20 showed radioactivity on the company probe. The favorable Chinle sandstone horizons, called the Upper and Lower Hartley beds, were cut at variable depths to 308 feet. The holes were all logged geologically and probed radiometrically. Drill cuttings and cores were properly stored for Government use. Tabulation of drill hole data follows:

Hole No.	Alluvium Interval	Upper Hartley Interval	Lower Hartley Interval	Nonsecre Drilling (feet)	Core Drilling (feet)	Depth of Hole	AEC Radiometric Log
1	0'-100'	100'-122'	176'-192'	170'	20	190'	.01 eU$_3$O$_8$ at 103'-106' .01 " " 110'-114' Rise in background 115'-190'
10	0'-170'	absent	282'-308'	310'	20	330'	Rise in background 212'
11	0'-100'	156'-160'	204'-235'	240'	20	260'	No count
12	0'-20'	15'-40'	86'-110'	306'	20	326'	No count
20	0'-80'	99'-111'	144'-170'	200'	0	200'	No count
	Total			1,226	80	1,306'	

Holes No. 1 and 12 were continued from the Lower Hartley member through the Shinarump conglomerate into the Moenkopi at company expense. No radioactivity was encountered below the Chinle formation.

The operator is analyzing the results of the exploratory drilling completed thus far. He reports that, because of the disappointing tests of the Hartley members on the Government grid, he will probably request termination of the present program and apply for authorization to explore on more desirable areas on the property.

The accounts were checked and it is verified that all charges, as reported on form MF-104, were necessary and that, with the exception of charges for noncore and core drilling, they do not appear to be excessive. The maximum allowable cost for 1,226 feet of noncore drilling at $1.50 per foot is $1,839.00 instead of $1,956.50 as reported. The maximum allowable cost for 80 feet of core drilling at $3.50 per foot is $200.00 instead of $240.00 as reported. The amount in excess of the maximum allowable drilling cost is $157.50.

The operator's narrative report and map are considered to be adequate.

It is recommended that the operator be reimbursed $1,780.50, which is 75 percent of $2,531.50 less $157.50, the maximum allowable cost for January and February 1954.

M. H. Howes

M. H. Howes

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED JUL 23 1956

Month of Jan.- Feb., 1956 Docket No. DMEA 3612 Contract No. IDM-E816
Operator's Name Marble Canyon Uranium, Incorporated Minerals Uranium
Address 200 Newhouse Building S.L.C., Utah
Contract Amount, $ 32,440.00 Government Participation: 75 % Amount, $ 24,330.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	2196.50	3368.00	5564.50			
Bulldozing	-	2075.00	2075.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	180.00	675.00	855.00			
Supervision	25.00	775.00	800.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Radiometric Probing & Standby Time	130.00	-	130.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2531.50	6893.00	9424.50	2,233.00	6,893.00	9,126.00
				11	285.00	285.00
					6,608.00	8,841.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 6-14-56 *Payee Marble Canyon Uranium Inc.

Per J.D. Herman Title Gen. Manager

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of $ 1174.75

Signature
(Authorized Certifying Officer)

Date 7/13/56 Vou. No. 57-7

(See other side)

11 Previous Disallowance Withheld 500.00

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E816 in accordance with the terms of the contract.

Signature M. H. Howe Jr. Title Mining Engineer Date July 2, 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Weaver Title Executive Officer Date JUL 12 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED JUL 23 1956 Salt Lake City, Utah

Month of Jan. - Feb. 1956 Docket No. DMEA 3612 Contract No. IDM-2816

Operator's Name Marble Canyon Uranium Incorporated Minerals Uranium

Address 200 Newhouse Building S.L.C., Utah

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
~~Radiometric~~ ~~Probing~~ & Standby Time	Hole	130.00	13	130.00	13	10.00	126	10.00
Shafts								
Winzes								
Drilling: Core	Ft.	240.00	80	1317.00	439	3.00	2520	2.50
~~Churn~~ Non Core	Ft.	1956.50	1226	4247.50	2683	1.58	10080	1.50
Auger								
Stripping Field Asst.	mo	180.00	2/5	855.00	1.9	450.00	6	450.00
Trenching Technical	Day	25.00	1/2	800.00	16	50.00	30	50.00
Test Pits								
Roads and Trails	Hr.	.00	0	2075.00	166	12.50	200	12.50
Total Distributed Costs		2531.50		9424.50				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		2531.50		9424.50				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date _____ Operator Marble Canyon Uranium Inc.

Per J. D. Herman Title General Manager

J.D. Herman

NOTE.—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.

(Instructions on reverse)

REMARKS:

(For Government use only)

M. H. Hoyes, Mining Engineer, 7/2/56

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

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JUL 23 1956

June 4, 1956

Mr. S. R. Wilson
U. S. Bureau of Mines
1600 East First South
Salt Lake City, Utah

Re: DMEA 3612 (Uranium)
Marble Canyon Uranium, Inc.
(Red Wing Claims, et al)
Coconino County, Arizona

NARRATIVE REPORT
January & February 1956

Dear Mr. Wilson:

In our Narrative Report of November and December we reported on drill holes No. 3 to No. 9 inclusive. We now wish to report on drill holes No's 1, 10, 11, 12, 20, inclusive. Enclosed are up to date maps of the Lower and Upper Hartley, Logs and Invoices.

Drill Hole No. 1

Happy No. 2 Claim
Started 1-27-56
Finished 1-27-56

Originally Hole No. 1 was abandoned at the start of the program in September 1955 because of caving ground. The new site was selected as close to the Government Grid stake as possible.

This Hole was drilled to prove that the Lower Hartley contact is rising to the northwest.

Drilled through Hartley 190'. (See Log)

Drill Hole No. 10

Happy No. 1 Claim
Started 1-31-56
Finished 1-31-56

The reason for the change in the location of this Hole was because of severe topography.

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The purpose of this Hole was to prove that the Lower Hartley contact is rising to the west. It was also used to prove that the Upper Hartley is lensing out to the west.

Drilled through the Lower Hartley 330'. (See Log)

Drill Hole No. 11

Happy No. 1 Claim
Started 1-30-56
Finished 1-30-56

The reason for the variation from the Government Grid stake was because of severe topography.

No. 11 was drilled on the Government Grid and was used to prove that the Lower Hartley contact is rising to the west. It was also used to show that the Upper Hartley is lensing out to the west.

Drilled through the Lower Hartley 260'. (See Log)

Drill Hole No. 12

Red Wing No. 3 Claim
Started 2-1-56
Finished 2-1-56

The reason for the change in the location of this Hole was because of severe topography.

The purpose for drilling this Hole was to define the flanks of the Lower Hartley.

Drilled through Lower Hartley 326'. (See Log)

Drill Hole No. 20

Leone No. 3 Claim
Started 2-27-56
Finished 2-27-56

Our Consulting Geologist, J. J. Beeson, recommended that we drill Hole No. 20 as the area was in a fractured zone showing alterations and bleaching.

Drilled through the Lower Hartley 200' depth. Note that Hole No. 20 showed a decided improvement in radiometric count as compared with the Holes drilled on the east side of the Government Grid.

In order to explore the altered and shattered zone in the Chinle two more holes were drilled off the Government Grid on Claim Lease No. 2; the results were encouraging.

The drill rig was then moved further west on Claim Lehnheer No. 1, where eleven holes were drilled at company expense. One of these Holes showed a count of approximately .60 O3O8. This gave us additional information of the control in the Hartley formation.

The drill rig was then moved across the Paria River to Claim Mary I, No. 5.

Five Holes were drilled at Company expense. Although radiometric counts in these Holes were low it gave us more information on the Hartley formation.

As you know our Government Contract only covers the drilling depths through the Hartley on the Government Grid. However, the Company, at its own expense, has carried the Holes down on the Government Grid below the Hartley formation. The Holes drilled off the Government Grid, at Company expense, have mainly been to depths through the Shinarump.

For your information we wish to briefly report on the Shinarump drilling. In the earlier part of the drilling program a Shinarump Channel began to show on Red Wing Claims No's 1 and 2. In order to test this Channel an additional thirty-four Holes have been drilled at Company expense. The Channel has been traced for approximately 5,000' in the sub-surface; and is approximately 40' deep and 1200' wide. The presence of Uranium and Copper minerals have been noted, combined with such criteria as alteration zones and favorable lithology. As the channel trended to the west it deepened to approximately 60' and more sulphides and carbon were present with a good thickness of mudstone. At this point the sub-surface control was harder to determine apparently because of a change of regional dip.

We are suspending drilling pending further geological study. However, it should be evident that we are doing everything possible to find a commercial grade of Uranium ore in the Marble Canyon area.

The drilling we have done in the Marble Canyon area thus far can be briefly summarized as follows:

1. The shallow drilling on the east side of the Government Grid to test the Hartley has been disappointing. We have several geological reasons why this area is not as desirable as other areas in the district.

2. The Holes drilled on the west side of the Government Grid and further west in the altered, shattered and bleached zones of the Chinle have been much more encouraging. This lends credence to the shattered and bleached zone theory of Geologist J. J. Beeson. It is thought that with more exploration work and geological study that commercial ore bodies will be found in the Hartley formation of the Chinle.

3. Drilling in the Shinarump formation has indicated an extensive Channel that is worthy of much more drilling to prove the Channel contains commercial ore.

At this time we are analyzing the drilling and exploration work that has been done so far. In the near future we will either request an amendment of our present Contract or we will request a cancellation and apply for a new and enlarged DMEA Loan.

Very truly yours,

J. D. Herman
General Manager

Original Signed

JDH:bd

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JUL 23 1956

CLAIM Happy #1 PROJECT Marble Canyon Uranium Inc DRILLER McSlung COUNTY Coconino STATE Arizona

HOLE NO. 10 LOCATION T40N, R7E Sec. 3, SE 1/4 COORDINATES COLLAR ELEV. 3967.2'

STARTED 1-31-56 OVERBURDEN DEPTH 172' TOTAL DEPTH 330' ANGLE FROM HORIZ. 90°

FINISHED 1-31-56 DEPTH TO WATER dry LOGGED BY McCary-Beacom Co. BEARING

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
0			cuttings			
		Jn	Overburden & slump			
10		Trc	no recovery		10	
20					20	
30					30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	
100						

ASSAYS

MISC. REMARKS

DH # 10

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
100		Jn	over burden + slump		00	
110		Trc	no recovery		10	
120					20	
130		✓			30	
140					40	
150					50	
160					60	
170			cuttings		70	
180		Trc	grey with some red f. gr. ss. + mudstone. mostly grey mudstone somewhat variegated		80	
190		✓			90	
200					200	
210					210	slight rise in background at 212' on AEC probe
220		Trc	grey to grey white med gr. ss. some grey mudstone. probably a very local sand lens		220	
230		Trc	grey + red f. gr. ss. + mudstone variegated. The upper Hartley appears to be absent in this hole		230	
240					240	
250		Trc	lite pink to white med. to c. gr. ss. This could be the middle Hartley sand lens which also seems to be lensing out.		250	
260		Trc	red + red grey f. gr. ss. + mudstone some thin lite pink c. gr. sands at 272 to 276'. then more f. gr. ss. + mudstone until contacts L.H.		260	
270		✓			70	
280			Top of L. H. 282'		80	
		Trc	core lite pink to white c. to v. c. gr. ss.			
290	100	Trc	grey white to white c. to v. c. gr. ss. massive. At 300' becomes somewhat finer grained and has a more red cast		90	
300					00	

DH #10

TYPE & SIZE OF HOLE	CORE REC-OVERY	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV
300	100%	Trc	greyish lite to lite pink med to c. gr. ss.		00
		Trc	cuttings— lite pink to white c. to v. c. gr. ss.		
310		Trc	contact L.H. 308' red to red grey f. gr. ss. & mudstone, veriegated		10
320		✓			20
330			Bottom 330'		30
			Bottom A.E.C. probe 314'		
340					40
350					50
360					60
370					70
380					80
390					90
400					00
10					10
20					20
30					30
40					40
50					50
60					60
70					70
80					80
90					90
00					00

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

CLAIM Happy #1 PROJECT Marble Canyon Uranium Inc. DRILLER McClung COUNTY Coconino STATE Arizona

HOLE NO. 11 LOCATION T40N R7E Sec 3, SE¼ COORDINATES COLLAR ELEV. 3892.3'

STARTED 1-30-56 OVERBURDEN DEPTH. 100' TOTAL DEPTH 260' ANGLE FROM HORIZ. 90°

FINISHED 1-30-56 DEPTH TO WATER dry LOGGED BY McCary-Beacom Co. BEARING

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
0			cuttings			
		Jn	overburden + slump			
10		Trc	no recovery		10	
20					20	
30		√			30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	
100			cuttings			

ASSAYS

MISC. REMARKS

ROCK TYPE	GEOLOGY	SAMPLES NO.
Trc.	grey f gr. ss. & mudstone, fairly well bedded, much carbon. micaceous. looks somewhat like upper Hartley.	
Trc	red & grey f. gr. ss. & mudstone verigated section	
	Top of U.H. 156'? Does not look like U.H.	
Trc	red & grey f. gr. ss. & mudstone.	
	contact U.H. 160'?	
Trc	red med. to c. gr. ss. some mudstone that is red. This is probably middle Hartley sand lens.	
Trc	red. f. gr. ss. & mudstone. more sandy near base.	
	Top of L.H. 204'	
Trc	lite red to white massive c. gr. ss.	
	Core	
Trc	white c. to v. c. gr. ss. some red mudstone falls at 230'. a good massive ss. section of L.H.	
	cuttings — contact L.H. 235'	
Trc	grey & red f. gr. ss. & mudstone, verigated. Becomes more sandy near 260'.	
	Bottom 260'	
	No count on A.E.C. probe	
	Bottom A.E.C. probe 244.2'	

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

CLAIM Happy #2 PROJECT Marble Canyon Uranium Inc DRILLER McClung COUNTY Coconino STATE Arizona

HOLE NO. 1 LOCATION T40N, R7E Sec. 3, SE 1/4 COORDINATES COLLAR ELEV. 3856.4'

STARTED 1-27-56 OVERBURDEN DEPTH. 100' TOTAL DEPTH 400' ANGLE FROM HORIZ. 90°

FINISHED 1-28-56 DEPTH TO WATER dry LOGGED BY McCary-Beacom Co. BEARING

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
0			cuttings			
		Jn	overburden + slump			
10		Trc	no recovery		10	
20					20	
30					30	
40					40	
50		↓			50	
60					60	
70					70	
80					80	
90					90	
100			cuttings			

ASSAYS

MISC. REMARKS

D.H. # 1

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
100		Trc	cuttings Top of U. H. 100' Lite brown with some grey med. to f. gr. ss. fairly well bedded. micaceous. some carbon near contact		100	103-106 .01% U_3O_8 on AEC probe? 110-119 .01% U_3O_8 on AEC probe.
110					110	
120			contact U. H. 122' red f. gr. ss & mudstone. mostly mudstone		120	very slight rise in background from 115' to 190' on AEC probe
		Trc				
130		Trc	red with some grey white med & f. gr. ss. This is probably middle Hartley sand lens. This is a very local feature.		130	
140		↓	Top of middle Hartley about 128' base of middle Hartley about 170'		140	
150					150	
160		Trc	grey white c. gr. ss.		160	
		Trc	red med to f. gr. ss. middle Hartley sand lens			
170			core red to red white f. gr. ss. & mudstone micaceous, versicolored		170	
	100	Trc	Top of L.H. 176'			
180		Trc	grey white grading to white c. to v. c. gr. ss. some limonite.		180	
	100		Some red mud galls at 187'			
190		Trc	cuttings white & some red c. gr. ss. contact L.H. 192'		190	
		Trc	red & red grey f. gr. ss. & mudstone. This is variegated section between L.H. & Trs.			
200					200	
210					10	
220					20	
230		↓			30	
240					40	
250					50	
260					60	
270					70	
280					80	
290					90	
300					00	

DH # 1

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
300		Trc	red & grey f. gr. ss. & mudstone This is verigated section between L.H. & Trs.		00	
310					10	
320					20	
330					30	
340		Trc	red To red grey c. to v.c. gr. ss. This is coarse sand lens just above Trs		40	
350					50	
		Trs?	grey white To white med. to c. gr. ss. - some grey mudstone			
360			contact Trs - Trm 362'?		60	
		Trm?	grey f. gr. ss & shale well bedded altered Trm			
370		Trm?	red v. f. gr. ss. & shale. well bedded		70	
380					80	
		Trm?	grey white f. to med. gr. ss. possible white sand lens			
390			red v. f. gr. ss & shale, well bedded		90	
		Trm?	grey to red v. f. gr. ss. & shale possibly some more altered Trm along bedding planes. Bottom 400'			
400					00	
410			Bottom A.E.C. probe 381'		10	
420					20	
430					30	
440					40	
450					50	
60					60	
70					70	
80					80	
90					90	
00					00	

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CLAIM Red Wing #3 PROJECT Marble Canyon Uranium Inc DRILLER McClung COUNTY Coconino STATE Arizona

HOLE NO. 12 LOCATION T40N R7E Sec 2, SW 1/4 COORDINATES COLLAR ELEV. 3762.4'

STARTED 2-1-56 OVERBURDEN DEPTH. 20'? TOTAL DEPTH 326' ANGLE FROM HORIZ. 90°

FINISHED 2-1-56 DEPTH TO WATER dry LOGGED BY McCary-Beacom Co. BEARING

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR
			cuttings			0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
0		Jn	over burden + slump			
		Trc	no recovery			
10					10	
			Top of U.H. 15'?			
		Trc				
20			cuttings		20	
		Trc	lite brown with some grey med. & f. gr. ss. some carbon. micaceous quite well bedded.			
30					30	
40			Contact U.H. 40'		40	
		Trc	red f. gr. ss. + mudstone mostly red mudstone			
50					50	
		Trc	red with some grey white f. gr. ss. + mudstone. mostly red ss. This is possibly middle Hartley sandstone			
60					60	
		Trc.	red f. gr. ss + mudstone some red c. gr. ss near Top of L.H.			
70					70	
80					80	
			Top of L.H. 86'			
		Trc	lite pink c. to v.c. gr. ss.			
90			Core		90	
	100	Trc	lite red to grey white c. to v.c. gr. ss			
100						

ASSAYS

MISC. REMARKS

D.H. #12

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.
100	100	Trc	1' fe red to white c. to v. c. gr. ss quite white in color near 110' some grey mudstone galls.		00
110			cuttings — contact L.H. 110'		10
		Trc	red & grey f. gr. ss. + mudstone. This is verigated section between base of L.H. & Top of Trs.		
120					20
130					30
140					40
150					50
160					60
170					70
180					80
190					90
200					00
210					10
220					20
230					30
240					40
250					50
260		Trc	red to red grey c. to v. c. gr. ss. lower Trc sand		60
			Top of Trs 266'?		
270		Trs?	white c. to v. c. gr. ss.		70
		Trs?	grey f. gr. ss. + mudstone. mostly mudstone. Carbon		
280		Trs?	red f. gr. ss + mudstone		80
		Trs	grey f. gr. ss. + mudstone. mostly grey mudstone. Carbon		
290					90
300					00

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

D.H. 12

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.
300		Trs	grey f. gr. ss. & mudstone. carbon		00
		Trs	white v. c. gr. ss. some congl. sulphides		
310			contact Trs – Trm 310'		10
		Trm	grey f. gr. ss & shale. altered Trm		
			Top of massive Trm 312'		
320		Trm	white v. f. gr. ss. massive Trm		20
			Bottom 326'		
330			Bottom AEC probe 312.5'		30
			no count on AEC probe.		
340					40
350					50
360					60
370					70
380					80
390					90
400					00
10					10
20					20
30					30
40					40
50					50
60					60
70					70
80					80
90					90
00					00

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

CLAIM Leone 3	PROJECT Marble	DRILLER McClung	COUNTY Coconino
Marble Canyon Uranium Inc.			STATE Arizona
HOLE NO. 20	LOCATION T40N, R7E Sec 3, SE¼	COORDINATES	COLLAR ELEV. 3783.6'
STARTED 2-27-56	OVERBURDEN DEPTH 80'	TOTAL DEPTH 200'	ANGLE FROM HORIZ. 90°
FINISHED 2-27-56	DEPTH TO WATER dry	LOGGED BY McCary - Beacom Co.	BEARING

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
0		Jn Trc	overburden + slump. no recovery			
10					10	
20					20	
30					30	
40					40	
50					50	
60					60	
70					70	
80			cuttings		80	
90		Trc	lite grey f.gr. ss. fairly well bedded. micaceous, carbon. some grey mudstone poss. bly u.H. but not typical.		90	
100		Trc				

ASSAYS

MISC. REMARKS

DH #20

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV
100		Trc	red f.gr. ss + mudstone. mostly mudstone U.H. is lensing out.		00
110		Trc	red. f.gr. ss + mudstone. mostly sandstone.		10
120					20
130		Trc	red med. with some c.gr. ss. some mudstone. possibly middle Hartley sand lens.		30
140			Top of L.H. 144'		40
150		Trc	lite pink to white med. to c. gr. ss. quite massive. micaceous some grey mud galls.		50
160					60
170		Trc	Contact L.H. 170' red, some grey, f.gr. ss. + mud-stone. some mica.		70
180					80
190		Trc	Tan to grey med. gr. ss. possibly a local sand lens below the L.H.		90
200			Bottom 200'		00
210			Bottom AEC probe 191.5' No count		10
220					20
230					30
240					40
250					50
260					60
270					70
280					80
290					90
300					

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

February 28, 1956

Memorandum

To: Hazel Berry, Operating Committee

From: Irene Z. Mainster, Rare and Miscellaneous Metals Division

Subject: Amendment to contract

Mr. Ching has reviewed and approved Amendment No. 1, dated January 30, 1956, to Contract No. Idm-2816, Docket No. DMEA-3612, Marble Canyon Uranium, Inc., which was executed by the Operator and the Executive Officer, Region III.

/s/ Irene Z. Mainster

Irene Z. Mainster

Date February 27, 1956

To: Mr. Ching

Docket No. DMEA- 3612

Commodity) Uranium

Contract No. Idm-E 816

Attached is Amendment No. 1, dated Jan. 30, 1956

to be reviewed.

Approved Michael Ching

Other action —

Please return this slip to me for my records.

Grace Ault

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

RECEIVED
FEB 27 1956

224 New Customhouse
Denver 2, Colorado

February 24, 1956

Pro. encl
MAR 5 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., Coconino County, Arizona

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E816, which has been executed to extend the period for completion of the project work from February 1, 1956, to November 1, 1956, and increase the maximum period for royalty payments from ten years to eleven years.

Also enclosed are four sets of data relative to the Amendment.

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1300 EAST FIRST SOUTH STREET
SALT LAKE CITY 12, UTAH

February 1, 1956

DMEA
Data Rec'd.
FEB 2 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: W. H. Trover, Executive Officer, DMEA Field Team, Region III

From: Stephen R. Wilson

RECEIVED
FEB 27 1956

Subject: Docket No. DMEA-3612 (Uranium), Contract Ion-2516, Marble Canyon Uranium, Inc., Coconino County, Arizona

Attached are nine copies of a memorandum prepared by M. M. Hewes relative to a request submitted by the subject contractor to extend the contract period. Also attached are eight copies of the operator's letter dated January 20, 1956, the original of which is in your office.

The inspecting engineer has assumed that Stages II, III and IV will be accomplished on the project. He has therefore estimated a greater period than requested in the contractor's letter. It is recommended that the contract completion date be extended to November 1, 1956. I concur in this recommendation.

Stephen R. Wilson

Stephen R. Wilson

Enclosures

cc: J. B. Clemmer

S. R. Wilson February 1, 1956

M. H Howes

RECEIVED FEB 2 5 1956

Docket No. DMEA-3612 (Uranium), Contract Ldm-3816, Marble Canyon Uranium, Inc., Coconino County, Arizona. Recommendation to change contract completion date from February 1, 1956 to November 1, 1956

A letter, dated January 20, 1956, from J. B. Ranson of Marble Canyon Uranium, Inc., requests that the contract completion date be changed from February 1, 1956 to April 1, 1956, for the following reasons:

1. Drilling objectives were deeper than estimated, requiring much more time to complete drilling.

2. A standby period is necessary to complete geological study, analysis, and mapping to determine further drilling.

In Stage I of the contract, holes drilled during November and December averaged over 200 feet in depth to reach through the lower potential ore-bearing sandstone of the Chinle formation. Subsequent Stage I holes will be deeper because of the rise of the surface to the north and the regional dip of the beds to the northwest. Since the start of the project, drilling speed has increased to 100 feet or more per day. It is estimated that Stage I drill holes will be finished within a short time after February 1, 1956, the contract completion date. Total drilling for Stages II, III, and IV is 10,600 feet. At the rate of 100 feet per day, it will require 106 working days or about 4½ months to complete the drilling. Allowing a time factor of double the actual drilling time because of anticipated delays, the project should be completed in an additional 9 months, or by November 1, 1956.

It is recommended that the contract completion date be changed from February 1, 1956, to November 1, 1956.

M. H. Howes

M. H. Howes

MARBLE CANYON URANIUM, INC.

319 Newhouse Building

Salt Lake City 1, Utah

Q
Q
E
Y

Field Office
Marble Canyon, Ariz.
Jan. 20, 1956

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

Re: Docket DMEA-3612
Contract Ida-3616
Red Wing Claims, et al.,
Coconino County, Arizona

Dear Mr. Traver:

According to our contract, the completion date was set on February 1, 1956. We hereby request that the completion date be extended to April 1, 1956, for the following reasons:

1. Drilling objectives were deeper than estimated, requiring much more time to complete drilling.

2. A standby period is necessary to complete geological study, analysis and mapping to determine further drilling.

Yours truly

Marble Canyon Uranium
J. D. Herman
General Manager

/s/ J. D. Herman

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

RECEIVED
JAN 27 1956

224 New Customhouse
Denver 2, Colorado

January 25, 1956

Mr. J. D. Herman, General Manager
Marble Canyon Uranium, Inc.
319 Newhouse Building
Salt Lake City 1, Utah

Re: Docket DMEA -3612 (Uranium)
Contract Idm-E816
Red Wing et al. claims
Coconino County, Arizona

Dear Mr. Herman:

We are processing your voucher for work performed under the above contract during September and October, 1955. We have allowed the maximum amounts stipulated in the contract for Core Drilling, Field Assistant, and Supervising Consultant. As the actual costs of these items are in excess of the maximum allowable costs, we are suspending the excess amount as follows:

SUSPENSIONS

Core Drilling

Amount claimed, 20 ft. @ $3.00/ft.	$60.00
Maximum allowable, 20 ft. @ $2.50/ft.	50.00
Amount suspended	$10.00

Field Assistant

Amount claimed, 1 1/2 months @ $700.00/mo.	$1,050.00
Maximum allowable, 1 1/2 months @ $450.00/mo.	675.00
Amount suspended	$ 375.00

Technical (Supervising Consultant)

Amount claimed, 15 1/2 days @ $109.407/day	$2,188.14
Maximum allowable, 15 1/2 days @ $50.00/day	775.00
Amount suspended	$1,413.14
Total of suspensions	$1,798.14

These suspensions are subject to reinstatement at a later date if the cost for the particular item is less than the contract maximum during the reporting period. Reinstatements are limited to the maximum allowable costs on a unit basis or by the amount in suspension for the particular item. Suspensions and reinstatements cannot be transferred between stages of work or from one item to another.

A summary of all suspensions and reinstatements will be kept and the appropriate suspensions or reinstatements will be made automatically without requirement of action by your company.

If there is any question regarding the above items, please feel free to contact this office or Mr. Wilson's office.

Very truly yours,

W. M. TRAVER

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

JDC:jy
cc: Corresp. E816
Sec. Op. Comm. (2)
Wilson
Townsend
Chron.

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

224 New Customhouse
Denver 2, Colorado

January 12, 1956

Mr. J. D. Herman, General Manager
Marble Canyon Uranium, Inc.
319 Newhouse Building
Salt Lake City 1, Utah

Re: Docket DMEA-3612
Contract Idm-E816
Red Wing et al. Claims
Coconino County, Arizona

Dear Mr. Herman:

Completion date for the above contract is February 1, 1956. As we have received only one voucher for work performed (October 1955) and as only one hole had been completed at that time, we are in doubt as to the present status of the work.

Please advise this office as to the present status of the project, and also as to when we will receive progress reports and vouchers for work performed during November and December, 1955.

If all authorized exploration will not be completed by the stipulated date, you should forward for the Government's consideration a request for an amendment to the contract to extend the completion date for such specific additional time as will be necessary to complete the work.

Your prompt attention should be given to these matters.

Very truly yours,

W. M. TRAVER

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

JDC:jy
cc: Corresp. E816
Sec. Op. Comm. (2)
Harshman
Wilson
Townsend
Chron.

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

RECEIVED
JAN 1 0 1956

224 New Customhouse
Denver 2, Colorado

January 12, 1956

Mr. J. D. Herman, General Manager
Marble Canyon Uranium, Inc.
319 Newhouse Building
Salt Lake City 1, Utah

Re: Docket DMEA -3612
Contract Idm-E816
Red Wing et al. Claims
Coconino County, Arizona

Dear Mr. Herman:

We have not as yet received a reply to our letter dated December 15, 1955 in which we requested that you submit the probing record for Hole No. 2. As we cannot process your October 1955 voucher for payment until we have the probing record, we request that it be submitted to this office at your earliest convenience.

Yours very truly,

W. M. TRAVER

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

JDC:jy
cc: Corresp. E816
Sec. Op. Comm. (2)
Harshman
Wilson
Townsend
Cooper
Chron.

5-7-53

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

Administrative Audit Difference Statement

Marble Canyon Uranium, Inc.
587 - 11th Avenue
Salt Lake City 3, Utah

Date: April 30, 1956
Payee's Reference: November - December 1956

Gentlemen:

FINAL DISTRIBUTION MADE MAY 1 1956

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$ 7,513.48	
Difference	$ 3,673.23	
Amount Approved	$ 3,840.25	

RECEIVED MAY 3 - 1956

The reason for the difference was due to:

Suspend:

Core Drilling - Claimed 339 ft at a total cost of	1,017.00	
Maximum allowable cost, 339 ft @ $2.50/ft	847.50	
suspended		169.50
Newcore Drilling - Claimed 1316 ft at a total cost	2,079.50	
Maximum allowable cost 1316 ft @ 1.50/ft	1,974.00	
		105.50

Disallow:

Field Assistant	600.00	
Supervising Consultant	2,285.73	
Bulldozing	512.50	
	3,398.23	Total suspensions & disallowances. 3,398.23
		3,673.23

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

maps are enclosed in envelope

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

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

224 New Customhouse
Denver 2, Colorado

April 26, 1956

Memorandum

To: T. A. Christensen

RECEIVED
MAY 3 - 1956

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3612 (Uranium) Contract Idm-E816, Marble Canyon Uranium, Inc. (Red Wing claims et al.) Coconino County, Arizona - Operator's Monthly Progress Report for the period November-December, 1955

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report, and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work completed is acceptable to the Government. We recommend that payment be made to the Operator on the following basis, subject to your verification of the correctness of applicable rates and arithmetical accuracy of computations.

Category (1) Independent Contracts

Core drilling

Amount reported this period, 339 feet at a total cost of	$1,017.00
Maximum allowable cost, 339 feet at $2.50/ft.	847.50
Amount to be suspended	$ 169.50

Noncore drilling

Amount reported this period, 1316 feet at a total cost of	$2,079.50
Maximum allowable cost, 1316 feet at $1.50/ft.	1,974.00
Amount to be suspended	$ 105.50

maps are enclosed in envelope

Amounts suspended to date, Category (1)

Core drilling:

Amount previously suspended	$ 10.00
Amount suspended this period	169.50
Amount suspended to date	$179.50

Noncore drilling:

Amount previously suspended	$ 0.00
Amount suspended this period	105.50
Amount suspended to date	$105.50

We were instructed by the Chairman, Operating Committee, DMEA by teletype dated April 6, 1956 to prorate the costs of the Supervising Consultant and Field Assistant as well as the Fixed Unit Costs in proportion to the total amount of work authorized in the contract. Therefore, the costs of the Supervising Consultant and Field Assistant as well as the Fixed Unit Costs are apportioned to all four stages as shown in the following schedules which are used as the basis of the amounts recommended for reimbursement to the Operator.

Category (2) Labor and Supervision

Field Assistant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Percent for preliminary work on roads, etc.	Percent for Supervision of Drilling Operations and related work	Percent apportioned to each stage	Prorated units of work (Months)	Allowable Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	18	14	32	1.9	$855.00	25	$675.00	$180.00
II	2	30	32	1.9	855.00	0	0.00	855.00
III	0	18	18	1.1	495.00	0	0.00	495.00
IV	0	18	18	1.1	495.00	0	0.00	495.00
Totals	20	80	100	6.0	$2700.00	25	$675.00	$2025.00

Total amount reported to date, 3 1/2 months at a totatal cost of----------$1,650.00

Suspensions and Disallowances

Amount previously suspended but now disallowed----------$375.00

Amount to be disallowed this report- 600.00

Total disallowances 975.00

Accepted cost to date---------- $ 675.00

Previous accepted cost---------- $ 675.00

Accepted cost this report---------- $ 0.00

Supervising Consultant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Prelim. Geology & Location of Stage I Holes	Location of Holes Stages II-IV	Probing & Logging of Holes	Percent apportioned to each Stage	Prorated units of work (Days)	Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	50%	0	4%	54	16	$800.00	52	$775.00	$25.00
II	0	11%	11%	22	7	350.00	0	0.00	350.00
III	0	6%	6%	12	3 1/2	175.00	0	0.00	175.00
IV	0	6%	6%	12	3 1/2	175.00	0	0.00	175.00
Totals	50%	23%	27%	100	30	$1,500.00	52	$775.00	$725.00

Total amount reported to date, 56 1/2 days at a total cost of----------$4,473.87

Suspensions and Disallowances

Amount previously suspended but now disallowed----------$1,413.14

Amount to be disallowed this report- 2,285.73

Total disallowances 3,698.87

Accepted cost to date---------- $ 775.00

Previous accepted cost---------- $ 775.00

Accepted cost this report---------- $ 0.00

Fixed Unit Costs

Bulldozing

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Percent Bulldozing in Road Work	Percent Bulldozing in preparation of Drill Sites	Percent apportioned to each stage	Prorated units of work (Hours)	Cost of Bulldozing	Estimated apportioned percent completed	Allowable costs to date	Balance of funds available
I	81	2	83	166	$2,075.00	83	$2,075.00	$ 0.00
II	9	4	13	26	325.00	0	0.00	325.00
III	0	2	2	4	50.00	0	0.00	50.00
IV	0	2	2	4	50.00	0	0.00	50.00
Totals	90	10	100	200	$2,500.00	83	$2,075.00	$425.00

Total amount reported to date, 207 hours at $12.50 per hour ---------- $2,587.50

Disallowances

Amount previously disallowed ----- $ 0.00

Amount disallowed this report ---- 512.50

Total disallowances 512.50

Accepted costs to date ---------- $2,075.00

Previous accepted cost ---------- $ 1,056.25

Accepted cost this report ---------- $1,018.75

Reconciliation with Amount Reported by the Operator on Form MF-104 for the Period November-December, 1955

Amount Reported this period ---------- $7,513.48

Amounts to be suspended

Core drilling ---------- $169.50

Noncore drilling ---------- 105.50

Total to be suspended $275.00

Amounts to be disallowed

Field Assistant ---------- $600.00

Supervising Consultant ----- 2,285.73

Bulldozing ---------- 512.50

Total to be disallowed 3,398.23

Total of suspensions and disallowances ---------- 3,673.23

Total accepted cost for Nov-Dec, 1955----------$3,840.25

Government participation at 75 percent----------$2,880.19

Recommended payment to the Operator----------$2,880.19

Remarks

Date of Report----------January 16, 1956
Date Received in Field Office---------- January 30, 1956
Date Received in Region Office---------- March 5, 1956

W. M. TRAVER

W. M. Traver

Enclosures

JDC:jy
cc: MF-104 File E816
Sec. Op. Comm. (2)
S. R. Wilson
J. W. Townsend w/copy engr's. report
J. D. Cooper
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

DMEA
Date Rec'd.
APR 19 1956
BUREAU OF MINES
Denver, Colorado

April 17, 1956

Memorandum

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

From: Stephen R. Wilson

Subject: Docket No. DMEA-3612 (Uranium), Contract Idm-2816, Marble Canyon Uranium Corp., Coconino County, Arizona. MF-104 forms for November and December 1955

Enclosed are the required copies of the subject operator's report covering exploration during the two months, November and December 1955. An inspection of the project site was made by M. M. Mowes February 7, 1956. The inspecting engineer verified by measurement and examination of core that the operator completed seven diamond drill holes during the period. The work consisted of 1,316 feet of noncore and 339 feet of core drilling, plus 122-1/2 hours of bulldozer drill-site preparation. The work is in conformance with contract terms, with the exception that the maximum allowable bulldozer hours have been exceeded.

No uranium mineralization of significance has been encountered in the drilling to date. The favorable Chinle sandstone horizons, the Upper and Lower Martley beds, were cut at variable depths to 280 feet. The inspecting engineer's progress report includes a log of holes completed during the period, together with a notation of mineralization encountered in the holes.

A tabulation of cost items in the inspecting engineer's report includes reported costs, maximum allowable cost, and cost differences, with amounts of excess costs which are suspendable. The inspecting engineer has apportioned the costs of the supervising consultant and the bulldozing in accordance with your memorandum dated April 9, 1956.

It is recommended that the contractor be reimbursed by 75 percent of the costs as outlined in the inspecting engineer's memorandum.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

cc: J. B. Clemmer

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

April 16, 1956

Memorandum

To: Stephen R. Wilson

From: M. M. Mowes

Subject: Docket No. DMEA-3612 (Uranium), Contract Idm-M816, Marble Canyon Uranium, Inc., Coconino County, Arizona. Revised Progress report for November and December 1955.

The Marble Canyon Uranium, Inc. property was inspected February 7, 1956, accompanied by N. F. Albee, Geological Survey, and J. D. Herman. It is verified that 7 holes consisting of 1,316 feet of noncore and 339 feet of core drilling, for a total of 1,655 feet, and 122½ hours of bulldozer road and drill site construction, as reported on form MF-104a, is correct, and that the work was performed in accordance with the contract, except that the bulldozer time exceeded the maximum allowable total by 7 hours.

Holes No. 3 through 9 were completed during the period November and December 1955. These holes encountered traces of eU_3O_8. The favorable Chinle sandstone horizons, called the Upper and Lower Hartley beds, were cut at variable depths to 280 feet. The holes were all logged geologically and probed radiometrically. Drill cuttings and cores were properly stored for Government use. Tabulation of drill hole data follows:

Hole No.	Alluvium Interval	Upper Hartley Interval	Lower Hartley Interval	Noncore Drilling (feet)	Core Drilling (feet)	Depth of Hole	Remarks
3	0'-60'	60'-96'	132'-158'	105	55	160'	Tr. eU_3O_8 at 152'
4	0'-70'	70'-116'	170'-183'	149	51	200'	Tr. " " 180'-181'
5	0'-40'	40'-80'	133'-155'	113	47	160'	Tr. " " 8'-122'
6	0'-70'	124'-160'	214'-240'	215	45	260'	Tr. " " 190'
7	0'-80'	150'-178'	230'-251'	194	61	255'	Tr. " " 239'
8	0'-100'	190'-196'	236'-261'	260	60	320'	.02 " " 255'-256'
9	0'-120	194'-224'	252'-287'	280	20	300'	Tr. " " 202'-204'
	Total			1,316	339	1,655'	

After passing through the contract objective Chinle sandstones, the operator continued most of the above-listed holes down through the Shinarump conglomerate at company expense. Radiometric probing below the Chinle gave negative results.

The accounts were checked and certain costs were found to exceed the contract maximum allowable costs. The following table shows items of cost, reported costs, maximum allowable costs, and cost difference with amounts of excess costs, which are suspendable.

NOVEMBER AND DECEMBER 1955

Items of Cost	Reported Cost	Maximum Allowable Cost	Cost difference for Nov. & Dec.	Cost difference to Nov. 1	Cost difference to Jan. 1
Independent Contracts					
Core drilling	339'	339'	339'	20'	359'
	$1,017.00	$ 847.50	$ 169.50*	$ 10.00*	$ 179.50*
Noncore drilling	1316'	1316'	1316'	141'	1457'
	2,079.50	1,974.00	105.50*	0.00	105.50*
Reaming and casing	—	—	—	—	—
Personal Services					
Supervising consultant	41 days	14½ days	14½ days	15½ days	30 days
	$2,285.73	$ 725.00	$1,560.73*	$1,413.14*	$2,973.87*
Field assistant	2 mo.	2 mo.	2 mo.	1½ mo.	3½ mo.
	600.00	900.00	300.00**	375.00*	75.00*
Bulldozer Work	122½ hrs.	115½ hrs.	115½ hrs.	84½ hrs.	200 hrs.
	$1,531.25	$1,443.75	$ 87.50*	$ 0.00	$ 87.50*
Radiometric Probing & Standby Time	—	—	—	—	—
Chemical Analyses	—	—	—	—	—
Total	$7,513.48	$5,890.25	$1,623.23*	$1,796.14*	$3,421.37*

* Suspense balance (Amount over maximum allowable cost)
** Credit balance (Amount under maximum allowable cost)

Although the contract does not stipulate or imply that it will be necessary to apportion the costs of the supervising consultant and the bulldozing to the monthly operation on the basis of the over-all estimate of work to be performed under the contract, the Chairman, Operating Committee, in his teletype of April 6, 1956, instructed the

Executive Officer to have the allowable costs prorated on the basis of currently completed work.

In order to reach a fair apportionment of costs, based on four stages of the project, certain facts and estimations regarding the work must be understood. The access road construction takes approximately 90 percent of the bulldozer work. Most of the drill sites are located on or adjacent to the road. Therefore, drill site preparation is estimated to require about 10 percent of the bulldozer work. Stage I holes occupy about 90 percent of the road building distance of the entire drilling grid. It is believed that the following table lists a reasonable and fair apportionment of the bulldozing costs for each stage of the contract work.

Stage	Percent Bulldozing in Road Work	Percent Bulldozing in Preparation of Drill Sites	Total Percent Bulldozing	Bulldozing Hours	Cost of Bulldozing
Stage I	81	2	83	166	$2,075.00
Stage II	9	4	13	26	325.00
Stage III	0	2	2	4	50.00
Stage IV	0	2	2	4	50.00
Total	90	10	100	200	$2,500.00

The duties of the supervising consultant and the field assistant are not defined in the contract. Allowance is made for the supervising consultant for 30 days at $50 per day for a maximum total of $1,500, and for the field assistant for 6 months at $450 per month for a maximum total of $2,700. The contract states that the drill holes for Stages I and II shall be located as indicated by the map (fig. 2), which is attached to the contract, and that all holes shall be probed radiometrically and logged geologically. It appears reasonable that the location and geological logging of the holes, as well as radiometric probing of the holes or supervision thereof, should be done by the supervising consultant, because of his technical training as a geologist. It also seems logical that he should map the surface geology in the area of the Government-approved drill grid, so that the target horizon can be intelligently projected to the locations of the various drill holes, and that maps showing geology and work progress be prepared by him. The field assistant, who is employed full time should logically assume the job of direct supervision of the contract work, which includes location and construction of access roads, preparation of drill sites, drilling of holes, determination of favorable horizons in the holes (under direction of the geologist), and storage of drill hole cuttings and cores.

It is estimated that the supervising consultant's work related to the contract is divided in percentages as follows: preliminary geological mapping of the surface and surveying locations of Stage I holes, 50 percent; radiometric probing and geological logging of holes, preparing maps, location of holes for remaining stages, and consulting, 50 percent. It is believed that a reasonable and fair apportionment of the cost of the supervising consultant for each stage of the contract work is as follows:

Stage	Preliminary Geology and Location of Stage I Holes	Location of Holes Stages II-IV	Probing & Logging of Holes	Total Percent	Days	Cost
Stage I	50%	0	4%	54	16	$ 800.00
Stage II	0	11%	11%	22	7	350.00
Stage III	0	6%	6%	12	3½	175.00
Stage IV	0	6%	6%	12	3½	175.00
Total	50%	23%	27%	100	30	$1,500.00

The operator's narrative report and map are considered to be adequate.

It is recommended that the operator be reimbursed $3,555.19 for November and December 1955, as shown in the following tabulation:

Independent Contracts

Core drilling, 339 feet at $2.50 per foot	$ 847.50
Noncore drilling, 1,316 feet at $1.50 per foot	1,974.00

Personal Services

Supervising consultant	0.00*
Field assistant, 2 months at $450 per month	900.00
Bulldozing, 81½ hours at $12.50 per hour	1,018.75
Total allowable cost for November and December	$4,740.25
Government participation at 75 percent	$3,555.19

* Supervising consultant already paid $775 for 15½ days of the apportioned 16 days for all of Stage I.

M. H. Howes

M. H. Howes

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Nov. and Dec., 1955 Docket No. DMEA 3612 Contract No. IDM-E816
Operator's Name Marble Canyon Uranium, Inc. Minerals Uranium
Address 200 Newhouse Bldg., Salt Lake City 11, Utah
Contract Amount, $ 32,440.00 Government Participation: 75 % Amount, $ 24,330.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contracts:						
Drilling	3,096.50	271.50	3,368.00			
Bulldozing	1,531.25	1,056.25	2,587.50			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	600.00	1,050.00	1,650.00			
Technical Services	2,285.73	2,188.14	4,473.87			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$7,513.48	$4,565.89	$12,079.37	3,840.25	4,565.89	8,406.14
				1,798.14		1,798.14
				2,767.75		6,608.00
				$2880.19		

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 16, 1956 *Payee Marble Canyon Uranium, Inc.

Per [signature] Title Business Manager

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

RECEIVED MAY 3 - 1956

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

Signature [signature] (Authorized Certifying Officer)

Date 4/30/56 Vou. No. DMA 56-103

(See other side)

1 Previous Deduction

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E816 in accordance with the terms of the contract.

Signature M. H. Howes Title Mining Engineer Date Mar. 1, 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Irwin Title Executive Officer Date APR 26 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Nov. & Dec. 1955 Docket No. DMEA 3612 Contract No. IDM-F816
Operator's Name Marble Canyon Uranium, Inc. Minerals Uranium
Address 200 Newhouse Bldg., Salt Lake City 11, Utah

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	1 Ft.	1,017.00	339	1,077.00	359	3.00	2,520	2.50
~~Churn~~ Non-core	1 Ft.	2,079.50	1316	2,291.00	1457	1.572	10,080	1.50
Auger								
~~Stripping~~ Field Ass't.	Mo.	600.00	2	1,650.00	3½		6	450.00
~~Trenching~~ Technical	Day	2,285.73	41	4,473.87	56½		30	50.00
Test Pits								
Roads and Trails	1 Hr.	1,531.25	122½	2,587.50	207	12.50	200	12.50
TOTAL DISTRIBUTED COSTS		7,513.48						TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$7,513.48		$12,079.37				$ 32,440.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Jan. 16, 1956 Operator Marble Canyon Uranium, Inc.

Per J. E. Lohnherr Title Business Manager
J. E. Lohnherr

NOTE.—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.

REMARKS:

(Instructions on reverse)

(For Government use only)

M. H. Hoover, Mining Engineer, Mar. 1, 1956
JRW

RECEIVED
MAY 3 - 1956

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

January 16, 1956

Mr. S. R. Wilson
U. S. Bureau of Mines
1600 East First South
Salt Lake City 1, Utah

Re: DMEA 3612 (Uranium)
Marble Canyon Uranium, Inc.
(Red Wing Claims, et al)
Coconino County, Arizona

NARRATIVE REPORT

November and December, 1955

Work on our drilling project progressed very rapidly during the period. Our geologist, Phillip McCary, and associates worked out a complete set of maps.

Map No. 1 - A structure contour map of the Upper Hartley Sandstone formation.

Map No. 2 - A structure contour map of the Lower Hartley Sandstone formation.

Map No. 3 - A structure contour map of the Shinarump Conglomerate formation.

We wish to emphasize that our contract calls for drilling to the base of the Hartley formation, which objective is from 160 to 320 feet, and the Company at its own expense carried each hole down to the Shinarump objective, or from 300 to 472 foot depths. We have enclosed complete maps and logs on the total drilling although the Government is concerned only with the costs to the Hartley objective.

All holes have been logged geologically and probed radiometrically. Probing was done by the driller and also by the A.E.C. We have taken the A.E.C. probing as official. All holes were drilled to the Hartley and Shinarump objectives. Cuttings and cores have been saved according to Government specification, and our geologist considers it unnecessary to make chemical assays at present. As assays are made, the certificates will be mailed with subsequent reports.

It was necessary to maintain the bulldozer as standby, and as the area was very sandy most of the roads had to be surfaced with clay to accommodate the movement of the heavy drilling machinery.

In our first report we enclosed the logs and description of hole No. 2. This report covers the logs and descriptions of holes No. 3 to No. 9 inclusive.

Drill Hole No. 3, completed Nov. 7, 1955, had 60 ft. of overburden and was drilled to a depth of 432 ft. The base of the Upper Hartley was found at 96 ft. The base of the Lower Hartley was found at 158 ft., and the Shinarump-Moenkopi contact was found at 368 ft. A trace of mineralization was found at 152 ft., which is in the lower portion of the Lower Hartley sand lens. Cuttings were retrieved from 60 to 105 ft. Core was taken from 105 to 160 ft., then cuttings were again retrieved down to 355 ft. Core was taken from 355 to 360 ft., then cuttings were again taken to the bottom, which is 432 ft. No water was encountered in the hole.

Drill Hole No. 4, completed Nov. 10, 1955, had 70 ft. of overburden and was drilled to a depth of 380 ft. The base of the Upper Hartley was found at 116 ft., and the base of the Lower Hartley was found at 183 ft. The Shinarump-Moenkopi contact was not reached since water was encountered at 340 ft. A trace of count was found at 110 ft., which is just above the base of the Upper Hartley, and about 1 ft. of a trace of count was found at 181 ft., which is just above the base of the Lower Hartley. Cuttings were retrieved from 70 to 138 ft., then core was taken down to 200 ft. Cuttings were again retrieved down to 340 ft. There was no recovery after 340 ft. since water was encountered at this point.

Drill Hole No. 5, completed Nov. 12, 1955, had 40 ft. of overburden and was drilled to a depth of 360 ft. The base of the Upper Hartley was encountered at 80 ft., and the base of the Lower Hartley was encountered at 155 ft. The Shinarump-Moenkopi contact was found at 352 ft. A trace of count was found from 8 to 122 ft., most of which is probably contamination. Cuttings were saved from 40 to 88 ft., then core was taken down to 100 ft. Cuttings were again saved down to 125 ft. Core was taken from 125 to 160 ft., then cuttings were saved down to 360 ft. No water was encountered in the hole.

Drill Hole No. 6, completed Nov. 15, 1955, had 70 ft. of overburden and was drilled to a depth of 472 ft. The base of the Upper Hartley was found at 160 ft., and the base of the Lower Hartley was found at 240 ft. The Shinarump-Moenkopi contact was found at 456 ft. This hole was probed only once and the results are probably inaccurate. The hole caved in at 38 ft. when the probing was attempted the second time. The best indication of any count was found at 190 ft. which is probably only a trace. It occurred in a red and grey varigated mudstone between the base of the Upper Hartley and the top of the Lower Hartley. Cuttings were retrieved from 70 to 215 ft., at which time core was taken down to 260 ft. From 260 ft. to the bottom of the hole cuttings were retrieved. No water was encountered in this hole.

Drill Hole No. 7, completed Nov. 22, 1955, had 80 ft. of overburden and was drilled to a depth of 255 ft. The base of the Upper Hartley was found at 178 ft., and the base of the Lower Hartley was found at 251 ft. A trace of count was found at 239 ft., which is in the lower portion of the Lower Hartley sandstone. Cuttings were saved from 80 to 190 ft. at which time core was taken to the bottom of the hole or 255 ft. No water was encountered in this hole.

Drill Hole No. 8, completed Nov. 27, 1955, had 100 ft. of overburden and was drilled to a depth of 300 ft. The base of the Upper Hartley was found at 196 ft., and the base of the Lower Hartley was found at 261 ft. A trace of count was found at 183 ft., which is probably the middle portion of the Upper Hartley. One foot of .02 U_3O_8 equivalent was found at 255 ft. This is the lower portion of the Lower Hartley sandstone. Cuttings were saved from 100 to 240 ft., at which time core was taken to 300 ft., which is the bottom of the hole. No water was encountered in this hole.

Drill Hole No. 9, completed Nov. 27, 1955, had 120 ft. of overburden and was drilled to a depth of 300 ft. The base of the Upper Hartley was found at 224 ft., and the base of the Lower Hartley was found at 287 ft. A trace of count 2 ft. thick was found at 202 ft. This is in the upper portion of the Upper Hartley. Cuttings were saved from 120 to 280 ft., at which time core was taken to 300 ft. or the bottom of the hole. No. water was encountered in this hole.

Our geologist reports that drilling so far has not indicated any control of the Chinle formation, although channel effects are beginning to show in the Shinarump formation. It is hoped that further drilling at this stage will give us more definite information as to the geology. The Hartley objective on the Government grid pattern will require 300-foot depths in the future holes.

Yours very truly,

MARBLE CANYON URANIUM, INC.

By: W. E. Lehnherr

W. E. Lehnherr
Business Manager

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

AIR MAIL

May 2, 1956

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
1502 South 5th Street
Suite 17 and 19
Levitt Building
Las Vegas, Nevada

Re: Docket DMEA-3612 (Uranium)
Contract Idm-E816
Red Wing claims, et al.
Coconino County, Arizona

Dear Mr. Ingalls:

Your Monthly Progress Report and Voucher for the period November-December, 1955 has been processed for payment. A number of deductions were made from the amounts reported on Form MF-104. These deductions are explained in detail below.

We have been instructed by the Washington Office to prorate the costs of the Field Assistant and Supervising Consultant, as well as the "Fixed Unit Costs" on the basis of the total work authorized in the contract. Schedules have been prepared showing the allowable costs to be apportioned to each of the four stages of work. These schedules are the basis for reimbursement on the November-December, 1955 voucher and will be the basis for reimbursement on all future vouchers.

The November-December, 1955 voucher has been processed as indicated below, subject to verification by the Finance Office of arithmetical accuracy within the report, and also subject to subsequent review of contract expenditures by the Contract Administration and Audit Division, DMEA.

Category (1) Independent Contracts

Core drilling

Amount reported this period, 339 feet at a total cost of	$1,017.00
Maximum allowable cost, 339 feet at $2.50/ft.	847.50
Amount suspended	$ 169.50

Noncore drilling

Amount reported this period, 1316 feet at a total cost of	$2,079.50
Maximum allowable cost, 1316 feet at $1.50/ft.	1,974.00
Amount suspended	$ 105.50

Amounts suspended to date, Category (1)

Core drilling:

Amount previously suspended	$ 10.00
Amount suspended this period	169.50
Amount suspended to date	$ 179.50

Noncore drilling:

Amount previously suspended	$ 0.00
Amount suspended this period	105.50
Amount suspended to date	$ 105.50

Category (2) Labor and Supervision

Field Assistant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Percent for preliminary work on roads, etc.	Percent for Supervision of Drilling Operations and related work	Percent apportioned to each stage	Prorated units of work (Months)	Allowable Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	18	14	32	1.9	$855.00	25	$675.00	$180.00
II	2	30	32	1.9	855.00	0	0.00	855.00
III	0	18	18	1.1	495.00	0	0.00	495.00
IV	0	18	18	1.1	495.00	0	0.00	495.00
Totals	20	80	100	6.0	$2700.00	25	$675.00	$2025.00

Total amount reported to date, 3 1/2 months at a total cost of---------- $1,650.00

Suspensions and Disallowances

Amount previously suspended but now disallowed---------- $375.00

Amount disallowed this report-------- 600.00

Total disallowances 975.00

Allowable cost to date (See Schedule)---------- $ 675.00

Previous accepted cost---------- $ 675.00

Accepted cost this report---------- $ 0.00

Supervising Consultant

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Prelim. Geology & Location of Stage I Holes	Location of Holes Stages II-IV	Probing & Logging of Holes	Percent apportioned to each Stage	Prorated units of work (Days)	Cost	Estimated apportioned percent completed	Allowable cost to date	Balance of funds available
I	50	0	4	54	16	$800.00	52	$775.00	$ 25.00
II	0	11	11	22	7	350.00	0	0.00	350.00
III	0	6	6	12	3 1/2	175.00	0	0.00	175.00
IV	0	6	6	12	3 1/2	175.00	0	0.00	175.00
Totals	50	23	27	100	30	$1,500.00	52	$775.00	$725.00

Total amount reported to date, 56 1/2 days at a total cost of---------- $4,473.87

Suspensions and Disallowances

Amount previously suspended but now disallowed---------- $1,413.14

Amount disallowed this report-------- 2,285.73

Total disallowances 3,698.87

Allowable cost to date (See Schedule)---------- $ 775.00

Previous accepted cost---------- $ 775.00

Accepted cost this report---------- $ 0.00

Fixed Unit Costs

Bulldozing

SCHEDULE USED AS BASIS FOR PRORATING COSTS

Stage	Percent Bull-dozing in Road Work	Percent Bull-dozing in pre-paration of Drill Sites	Percent appor-tioned to each stage	Prorated units of work (Hours)	Cost of Bull-dozing	Estimated apportion-ed percent completed	Allow-able costs to date	Balance of funds available
I	81	2	83	166	$2,075.00	83	$2,075.00	$ 0.00
II	9	4	13	26	325.00	0	0.00	325.00
III	0	2	2	4	50.00	0	0.00	50.00
IV	0	2	2	4	50.00	0	0.00	50.00
Totals	90	10	100	200	$2,500.00	83	$2,075.00	$425.00

Total amount reported to date, 207 hours at $12.50 per hour		$2,587.50
Disallowances		
Amount previously disallowed	$ 0.00	
Amount disallowed this report	512.50	
Total disallowances		512.50
Allowable costs to date (See Schedule)		$2,075.00
Previous accepted cost		$1,056.25
Accepted cost this report		$1,018.75

Should the reported costs on any future Monthly Reports fall below the prorated costs as set forth in the above schedules, the applicable portions of the amounts disallowed can be reclaimed insofar as they do not exceed the maximum allowable unit cost or the maximum total cost for the item.

Reconciliation with Amount Reported by the Operator on Form MF-104 for the Period November-December, 1955

Amount Reported this period ---------- $7,513.48

Amounts suspended		
Core drilling	$169.50	
Noncore drilling	105.50	
Total suspended		$275.00
Amounts disallowed		
Field Assistant	$600.00	
Supervising Consultant	2,285.73	
Bulldozing	512.50	
Total disallowed		3,398.23
Total of suspensions and disallowances		3,673.23

Total accepted cost for Nov.-Dec., 1955 ---------- $3,840.25
Government participation at 75 percent ---------- $2,880.19

In conjunction with the foregoing, it has been administratively determined that costs in excess of the maximum allowable costs under Category (2) Labor and Supervision are not subject to subsequent reinstatement. Therefore, the excess costs of $375.00 for "Field Assistant" and $1,413.14 for "Supervising Consultant" which amounts were erroneously suspended from the September-October, 1955 voucher are to be considered as actual disallowances.

It will be necessary that your future MF-104 and MF-104A reports reflect all disallowances explained herein and by the Administrative Audit Difference Statements supplied by the Finance Office. For your use in preparing future reports on Form MF-104 and Form MF-104A, we are enclosing corrected forms for the period November-December, 1955, which include only the accepted costs plus the amounts suspended under Category (1) Independent Contracts.

If you have any question regarding the above, please feel free to contact this office.

Very truly yours,

W. M. TRAVER

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

Enclosures
JDC:jy
cc: CorresE816)
Sec. Op. Comm. (2))
Wilson)
Townsend)
Chron.

w/copy of sample
MF-104 and MF-104A

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAY 7 - 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Nov.-Dec. 1955 Docket No. DMEA 3612 Contract No. Idm-E816
Operator's Name Marble Canyon Uranium, Inc. Minerals Uranium
Address 319 Newhouse Building, Salt Lake City 11, Utah

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	ft.	1017.00	339	1077.00	359	3.00	2520	2.50
~~Churn~~ Noncore	ft.	2079.50	1316	2291.00	1457	1.57	10080	1.50
Auger								
~~Stripping~~ Field Asst.	Mo.	0.00	0.0	675.00	1.5	450.00	6	450.00
~~Trenching~~ Technical	Day	0.00	0.0	775.00	15.5	50.00	30	50.00
Test Pits								
Roads and Trails	Hr.	1018.75	81.5	2075.00	166	12.50	200	12.50
TOTAL DISTRIBUTED COSTS		4115.25		6893.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4115.25		6893.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date ..... Operator .....

Per ..... Title .....

NOTE.—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.

(Instructions on reverse)

REMARKS:

(For Government use only)

Corrected (sample) form showing accepted costs, plus amounts suspended under Category (1) Independent Contracts

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAY 7 - 1956

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Nov.-Dec., 1955 Docket No. DMEA 3612 Contract No. Idm-E816
Operator's Name Marble Canyon Uranium, Inc. Minerals Uranium
Address 319 Newhouse Building, Salt Lake City 11, Utah
Contract Amount, $ 32,440.00 Government Participation: 75 % Amount, $ 24,330.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	3096.50	271.50	3368.00			
Bulldozing	1018.75	1056.25	2075.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	0.00	675.00	675.00			
Technical Services	0.00	775.00	775.00			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase				Corrected (sample) form showing accepted costs plus amounts suspended under Category (1)		
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4115.25	2777.75	6893.00			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date ..... *Payee .....

Per ..... Title .....

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$.....

Signature .....
(Authorized Certifying Officer)

Date ..... Vou. No. .....
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 872893

CLAIM [illegible]	PROJECT [illegible]	DRILLER [illegible]	COUNTY [illegible]
# 3	[illegible] Inc.		STATE Arizona
HOLE NO. 3	LOCATION [illegible]	COORDINATES	COLLAR ELEV. [illegible]
	[illegible]		
STARTED [illegible]	OVERBURDEN DEPTH. 61'	TOTAL DEPTH 432'	ANGLE FROM HORIZ. [illegible]
FINISHED 11-7-55	DEPTH TO WATER dry	LOGGED BY [illegible]	BEARING
		[illegible]	

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
10					10	
20		[illegible]	[illegible]		20	
30		[illegible]			30	
40					40	
50					50	
60		[illegible]	Top of O.H. about 60' [illegible] cuttings [illegible] to [illegible] [illegible] gypsum [illegible] bedded [illegible]		60	
70					70	
80			[illegible]		80	
90			[illegible] jarosite [illegible]		90	
100			[illegible]			

ASSAYS

MISC. REMARKS

DH #3

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
100			no core from 100–105' cutting		100	
			105' core			
110		tr c	[illegible] mudstone [illegible] small fractures, limonite stain. mostly red.		110	
	25%					
120					120	
	[illegible]	tr c	grey tr c mudstone, many small fractures, limonite + jarosite stains, mostly grey. [illegible] from 130–13[illegible] [illegible] grey [illegible] g. ss, mica, [illegible]			
130	100	[illegible]	Top of L.H. about 1321		130	
140					140	
	100	[illegible]	grey [illegible] ss some [illegible] [illegible]			
150		tr c	grey wt. c. g. ss. some mud		150	Trace of count on AEC probe at 152'
		tr	grey green [illegible] ss mudballs grey red m. g. ss. mica [illegible]			152' Trace of count
160		tr c	grey [illegible] & wellbedded v. g. ss. [illegible] cotting ss Contact L.H. 158'?		160	160–161' Trace count no count on AEC probe
		tr	[illegible] mica			
170			LOWER HARTLEY – 160 FT.		170	
180					80	
190			[illegible]		90	
200					00	
210			[illegible] v.f. gr. ss & hole, mudstone [illegible] blue		10	
220					20	
230					30	
240					40	
250					50	
260					60	
270					70	
280			[illegible]		80	
290					90	
300					00	

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV	RADIOMETRIC LOG MR / HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
300					00	
310					10	
320			[illegible]		20	
330		Trc	[illegible] ss. somewhat [illegible]		30	
340		Trs?	[illegible] top of [illegible] at 335'?		40	
350					50	
360	90	Trs Trs TRS TRS TRM	[illegible] cuttings from 3[illegible] [illegible] Trs-Trm 368' Fine gr. S.S. TAN & grey		60 70	
370		TRM	MASS Bedding [illegible] TRM Fine gr. SS. LT. TAN & [illegible] Altered massive Moenkopi?			
380					80	
390		TRM TRM	Fine gr. SS. LT. TAN & grey Fine gr. [illegible]		90	
400		TRM	Fine gr SS Red		00	
410					10	
420					20	
430		TRM	Fine gr. S Red TS/TRM [illegible] 432'		30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	
00					00	

CLAIM Red Wing #2 PROJECT Marble Canyon Uranium Inc DRILLER McClung COUNTY Coconino STATE Arizona

HOLE NO. 4 LOCATION T40N, R7E Sec 2, SW¼ COORDINATES COLLAR ELEV. 3873.5'

STARTED 11-7-55 OVERBURDEN DEPTH 70' TOTAL DEPTH 380' ANGLE FROM HORIZ. 90°

FINISHED 11-10-55 DEPTH TO WATER 340' LOGGED BY McCarty-Beacom Co. BEARING

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
10, 20, 30, 40, 50, 60		Jn Trc	overburden + slump.		10, 20, 30, 40, 50, 60	
70			cuttings Top of G.H. 70' p red Tan To Tan med. + f. gr. ss. fairly well bedded, mica.	65-70' 5'f. 0.7 MR	70	Radiation at 4 to 5 times
80		Trc	grey + tan med. to f gr ss. with some mudstone, mica		80	
90		Trc	grey to tan med + f gr. ss. and mudstone, mica		90	
100		Trc				

ASSAYS

MISC. REMARKS

DH #4

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
100		Trc	red + grey med. + f. gr. ss. mica		100	
		Trc	Tan to grey med. + f. gr. ss. some mudstone. mica. some carbon and gypsum	112-112.5' .15 MR		
110			contact of U.H. 116'		110	Trace of count on AEC probe at 110'
120		Trc	red f. gr. ss. + mudstone. somewhat bedded. mica.		120	
130		Trc	red f. gr. ss. + mudstone. mica		130	
140		Trc	red f. gr. ss. + mudstone		140	
150	100	Trc	core red f. gr. ss + mudstone, mica		150	
	100	Trc	red + grey banded f. + med. gr. ss.			
160	100	Trc	lite red to grey med. gr. ss. some c. gr. ss. mica		160	
170	100	Trc	grey green med. gr. ss. some red mudstone galls. Top of L.H. about 170'?		170	
180			grey white c. gr. ss. some v. c. gr. ss. contact L.H. 183'		180	L'of Trace at 181' on AEC probe
	170	Trc	grey green med gr. ss. mch mica.			
190	100	Trc	red to red grey med gr. ss. contact L.H. 183'	192-192.5' .18 MR	190	no count on AEC probe
	100	Trc	red f. gr. ss. well bedded			
	95	Trc	grey black f. gr. ss. well bedded. cuttings			
200		Trc	red + blue f. gr. ss + mudstone mica. some caving present.		200	
210		↓	LOWER HARTLEY - 200 ft.		210	
220					220	
230		Trc	blue grey f. gr. ss. + mudstone mica.		230	
240		↓	lite blue grey color red + blue f. gr. ss + mudstone mostly red with some blue mudstone. This is varigated section between L.H. and The Shinarump		240	
250			some grey tan f. gr. ss. + mudstone at 250'		250	
260			more caving present at 260'		60	
270					70	
280					80	
290					90	
300		Trc	red f. gr. ss + mudstone. mica		00	

P.4 #4

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
300		Trc	some grey mudstone veriga ted red to blue gy. mostly red mudstone + v.f.gr. ss.		00	
310					10	
320					20	
330					30	
340			hit water, no recovery.		40	
350					50	
360		?			60	
370					70	
380			bottom 390'		80	
390					90	
400					00	
410					10	
420					20	
430					30	
440					40	
450					50	
60					60	
70					70	
80					80	
90					90	
00					00	

CLAIM [illegible]	PROJECT [illegible]	DRILLER [illegible]	COUNTY [illegible]
	[illegible]		STATE [illegible]
HOLE NO. 5	LOCATION [illegible]	COORDINATES	COLLAR ELEV.
	[illegible] SW		
STARTED [illegible]	OVERBURDEN DEPTH. [illegible]	TOTAL DEPTH	ANGLE FROM HORIZ.
FINISHED [illegible]	DEPTH TO WATER [illegible]	LOGGED BY [illegible]	BEARING

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
10		Trc	[illegible]		10	
20					20	
30					30	
40			[illegible] 40'		40	
50			[illegible]		50	
60			[illegible] carbon		60	
70			[illegible] carbon [illegible]		70	
80		Trc	[illegible] contact 34.80' [illegible] stone		80	
90	50%	Trc	red & blue & gray [illegible] mudstone		90	

ASSAYS

MISC. REMARKS

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.
00		Trc	[illegible] red v.f. [illegible]		00
10		Trc	red, grey v.f.g. ss & shale [illegible] mudstone [illegible]		110
20		Trc	[illegible]		120
		Trc	[illegible] Coal 125' [illegible] Hartley top at 130'?		
30	90	Trc	red, grey & t. med. g. ss. [illegible] mudstone pills [illegible] massive		130
140			[illegible]		140
150	85	Trc	red, grey white [illegible] some red mudstone lens. contact L.H. 155' [illegible]	150-162' .05 MR	150
			[illegible] contact L.H. 155'		
160		Trc	[illegible]		160
170		Trc	red v.f.g. ss. & mudstone [illegible] grades to a [illegible] f.g. [illegible]	LOWER HARTLEY - 165'±	170
180					180
190		Trc	[illegible]		190
200		Trc	red v.f.g. [illegible] grades to red [illegible] very [illegible] [illegible] some [illegible]	.071R	200
210					210
220					220
230					230
240					40
250					50
260					60
270		Trc	red [illegible] v.f.g. [illegible] To red grey.		70
280					80
290					90
300		Trc	[illegible]		00

RADIOMETRIC LOG MR / HR
0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

Trace of count on AEC probe from 8' to 122' possibly contamination

no count on AEC probe

no count on AEC probe

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DH #5

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.
300		Trc	wt. med. gr. ss, some [illegible] gr. ss	
310		Trs ?	wt. med & c. gr. ss. carbon Top of Shinarump 309'? 310-310.5 .05 MR	
320		Trs	blue gray [illegible] gr. ss shinarump carbon, pyrite. medium [illegible]	
330				
340			top of Trs 344'	
350		Trs	wt. tan v. c. gr. ss & congl. carbon, pyrite phosphatic pebbles bottom 352'	
		Tam	gray micaceous ss. [illegible] 353-355 .03 MR [illegible]	
360		Tam	tan f. gr. ss. massive [illegible] bottom 360'	
370				
380				
390				
400				
10				
20				
30				
40				
50				
60				
70				
80				
90				
00				

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

ELEV. 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 00, 10, 20, 30, 40, 50, 60, 70, 80, 90, 00

no count on AEC probe

no count on AEC probe

CLAIM Red Wing #2 PROJECT Marble Canyon Uranium Inc. DRILLER McClung COUNTY Coconino STATE Arizona

HOLE NO. 6 LOCATION T40N, R7E Sec. 2 SW¼ COORDINATES COLLAR ELEV. 3925.9'

STARTED 11-15-55 OVERBURDEN DEPTH. 70' TOTAL DEPTH 472' ANGLE FROM HORIZ. 90°

FINISHED 11-21-55 DEPTH TO WATER dry LOGGED BY McCarty-Beacom Co. BEARING

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
0			overburden + slump,			
10					10	
20					20	
30		Tn	unable to probe with AEC probe (hole fallen in at 38')		30	
40		Tc	probed once with probe owned by drillers.		40	
50					50	
60					60	
70		Trc	cuttings red + red grey f. gr. ss + shale mica.		70	
80		Trc	grey brown f. gr. ss some mudstone mica. [illegible]		80	
90					90	
100						

ASSAYS

MISC. REMARKS

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV	RADIOMETRIC LOG MR / HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
100		Tic	[illegible]		100	
110			[illegible] present from 110-120' [illegible]		110	
120					120	
130			[illegible] Top of upper Hartley about 124'		130	
140		Tic	[illegible]		140	
150			[illegible] carbon some. [illegible] at 156'	150-158' 8' of	150	Trace of count
160		Tic	contact at 160' [illegible] bedded [illegible]		160	
170			[illegible]		170	
180					180	
190			carbon	190-193.5' 3.5' of 0.5 MR	190	
200		Tr	[illegible]		200	
210			[illegible] Core 215' Top of L.H. 219'?		210	
220			[illegible] med. c. gneiss. [illegible] mica, carbon [illegible] white [illegible] c. gneiss with [illegible]		220	
230			c. gneiss is [illegible] contact.		230	
240		Tic	contact L.H. 240' red. fgr. ss. & shale, mica some white streaks. [illegible] from 250-260'		240	
250				250-254' 4' of .03 MR	250	
260		Tic	LOWER HARTLEY - 260' cuttings red. fgr. ss. & [illegible]		260	
270			[illegible] mudstones		270	
280					280	
290					290	
300					300	

DH 6

TYPE-B SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
300		Trr	[illegible] gr. ss. limestone, mica.		00	
310		↓			10	
320			some red-brown gr. ss.		20	
330			[illegible] gr. ss. gyms. limestone & less [illegible] sandstone		30	
340					40	
350					350	
360					360	
370					370	
380			some [illegible] ss. some greyish c. gr. ss.		380	
390		Trc	[illegible] some limestone, mica.	397-406.' 9' of Trace of coal?	390	
400		↓	carbon. c. to v. c. gr. ss. grey wt. [illegible] limestone [illegible] well bedded		400	
410		Trc	top of [illegible] about 416'?		410	
420		Trs?	[illegible] to tan med to c. gr. ss mica, some carbon. siliceous		420	
430			[illegible] pebbles		430	
440			[illegible] c. gr. wt. siliceous ss		440	
450					50	
460		Trm	contact Trs - Trm 456' wt. v. f. gr. ss. massive Trm [illegible] pink. Altered Mendoci		60	
470		Trm	[illegible]		70	
480			[illegible] 470'		80	
490					90	
500					00	

CLAIM Happy #1	PROJECT Marble Canyon Uranium Inc.	DRILLER McClung	COUNTY Coconino STATE Arizona
HOLE NO. 7	LOCATION T40N R7 E. Sec 3 SE¼	COORDINATES	COLLAR ELEV. 3928.7'
STARTED 11-21-55	OVERBURDEN DEPTH. 80'	TOTAL DEPTH 255'	ANGLE FROM HORIZ. 90°
FINISHED 11-22-55	DEPTH TO WATER dry	LOGGED BY McCary-Beacom Co.	BEARING

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
		Jn	overburden + slump			
10		Trc			10	
20					20	
30					30	
40					40	
50					50	
60					60	
70					70	
80		Trc	cuttings grey to grey brown fragments with some mudstone, misc.		80	
90		↓			90	
100						

ASSAYS

MISC. REMARKS

DH#7

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
100		Trc	lt. to brown + grey f. gr. ss. + mudstone		00	
110			grey f. gr. ss. + mudstone, mica carbon		10	
120			lite grey f. gr. ss + mudstone. fairly well bedded, mica, carbon		20	
130					30	
140					40	
150			top of upper Hartley poorly defined but probably around 150'		150	
160		Trc	grey white f. + med gr. ss. micaceous siliceous grey brown med + f. gr. ss. mica, carbon		160	
170					170	
			Contact U.H. 178'			
180		Trc	red f. gr. ss. + mudstone, irregular red to red purple mica	185-191' 6' of .10-.12 MR	180	
						no count on AEC probe
190			core		190	
		Trc	red to gray to grey variegated f. gr. ss. + mudstone, mica			
200	50				200	
210		Trc	red f. gr. ss. mica		210	
			Cut 6			
220	100	Trc	red to grey mottled f. gr. ss. mechanical sand, mica, massive		220	
230		Trc	[illegible] Top of L.H. 230'?		230	
240	100		light grey to grey to less siliceous ss. mudstone peels, massive, [illegible] some red mudstone [illegible] also greyish. [illegible]	250-253' 3' of .50 MR	.02 MR? 240	Trace of count at 239' on AEC probe. Unable to probe below 242' on AEC probe
250			Contact L.H. 251'		250	
	75	Trc	[illegible] grey + grey red mudstone some green streaks	255' .08 MR		
			Bo Hom 255'			
260			LOWER HARTLEY – 255 ft.		260	
270					270	
280					280	
290					290	
300					00	

CLAIM Ida Wray #5	PROJECT Marble Canyon Limestone Inc.	DRILLER McClung	COUNTY Coconino STATE Arizona
HOLE NO. 8	LOCATION T40N, R7E Sec 3, SE ¼	COORDINATES	COLLAR ELEV. 3964.9'
STARTED 11-26-55	OVERBURDEN DEPTH 100'	TOTAL DEPTH 300'	ANGLE FROM HORIZ. 90°
FINISHED 11-27-55	DEPTH TO WATER dry	LOGGED BY McGary-Beacum Co.	BEARING

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
10		Jn	Overburden and slump		10	
20		Tre	↓		20	
30					30	
40					40	
50					50	
60					60	
70					70	
80		Tre	meetings sived contaminated		80	
90					90	
100						

ASSAYS

MISC. REMARKS

DH # 8

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR/HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
100		Trc	cuttings blue grey f.gr.ss. & mudstone much Jn fill in		00	
110			some red in re bedded f.gr.ss. & mudstone but mostly blue to blue grey. Carbonation is very bad. some bio carbon present		10	
120					20	
130					30	
140					40	
150		Trc	starting at 150' the blue and red verigated f.gr.ss & mudstones are about equally divided		150	
160				162-164.5 2.5' Trace	160	no count on AEC probe
170		Trc	at 170' the f.gr.ss & mudstones are mostly blue to blue grey in color [illegible] carbon is present especially from 190-194'. [illegible] possible upper Hartley but is poorly defined. Possible C.H. contact is 196'. The C.H. calcareous [illegible]		170	
180					180	Trace of count at 183' on AEC probe
190					90	
200		Trc	red with some grey f.gr.ss. & mudstones. [illegible]	208-215 7'-.05-.19MR	200	
210					210	no count on AEC probe
220					220	
230					230	
240		Trc	Top of L.H. 236'? [illegible] f.gr.ss. [illegible] core		240	
250	100	Trc	[illegible] lower Hartley [illegible] at 255' [illegible]		250	1' of .02 MR at 255' on AEC probe
260		Trc	[illegible] 261' [illegible] verigated .269-267' grey U.f.gr.ss mica. verigated [illegible] at 269' [illegible] grey white f.gr.ss. & mudstone. verigated. [illegible]	265-268 Trace 268-269 .20MR 269-272 Trace	260	no count on AEC probe
270					270	
280					280	
290					90	
300					00	

LOWER HARTLEY — 300 ft.
Bottom 3201

CLAIM Happy #1	PROJECT Marble Canyon Uranium Inc	DRILLER McClung	COUNTY Coconino STATE Arizona
HOLE NO. 9	LOCATION T40N, R7E	COORDINATES	COLLAR ELEV. 3971.6'
STARTED 11-28-55	OVERBURDEN DEPTH. 120'	TOTAL DEPTH 300'	ANGLE FROM HORIZ. 90°
FINISHED 11-30-55	DEPTH TO WATER dry	LOGGED BY McCary-Beacom Co.	BEARING

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
		Jn Trc	overburden and slump			
10					10	
20					20	
30					30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	

ASSAYS

MISC. REMARKS

DH # 9

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.
100		Tn	Overburden and Slump		00
110		Trc			10
120		Trc	cuttings blue grey with some red f. gr. ss and mudstone. some mica. This section is Chinle mudstone above upper Hartley		20
130					30
140					40
150					50
160					60
170					70
180					80
190		Trc	blue grey grading to lite red and grey white f. gr. ss. + mudstone. f. gr. ss. is more abundant. more mica is present. Top of upper Hartley about 194'. is not typical U.H., but is more sandy and shows some sign of bedding		190
200			f. gr. ss. is quite [illegible] near 220' Although not typical upper Hartley it is [illegible] 202-206' 4' .05-.13 MR		200
210					210
220			U.H. contact 224'?		220
		Trc	red f. gr. ss + mudstone.		
230		Trc	lite red with some grey white f. + med gr. ss. Probably middle Hartley lens. some mica		230
240		Trc	red f. gr. ss + mudstone. mostly mudstone with some mica Trace at 240'		240
250		Trc	lite red to grey white f. + med. gr. ss top of L.H. 252'. some c. gr. ss near 260'. some mica. The lower Hartley is more red than usual		250
260					260
270			v. c. gr. white ss. at 278' grades to red med. + f. gr. ss at 280'.		270
280			core		280
	90	Trc	grey brown to lite red v. c. gr. ss. some hat banded near contact		
			Contact L.H. 287'		
290	90	Trc	Lite red. med. + f. gr. ss. Trace at 290' fairly well banded. grades to a green, white micaceous f. gr. ss near 300', some red mudstone present.	Trace at 290'	290
300					300

RADIOMETRIC LOG MR / HR

0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0

202-209' Trace on AEC probe

no count on AEC probe

Bottom on AEC probe 283'

Bottom 300' LOWER HARTLEY · 300 ft.

C

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

RECEIVED
DEC 19 1955

224 New Customhouse
Denver 2, Colorado

December 15, 1955

Mr. J. D. Herman, General Manager
Marble Canyon Uranium, Inc.
319 Newhouse Building
Salt Lake City 1, Utah

Re: Docket DMEA-3612
Contract Idm-E816
Red Wing Claims et al.
Coconino County, Arizona

Dear Mr. Herman:

We have received your Monthly Report and Voucher for work performed under Contract Idm-E816 during September and October, 1955. We can find no record of the radiometric probing of Hole No. 2, and the voucher cannot be processed for payment until the probing data is received.

For your information we quote the fifth paragraph of EXHIBIT "A" to the contract

> "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."

and the fifth paragraph of the Executive Officer's letter to your company dated August 31, 1955

> "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 as are completed."

It is not considered that a drill hole has been completed to its objective until all required data pertaining to the hole has been received by the Government, except that assay laboratory reports may be submitted with a subsequent monthly voucher if they have not been received from the laboratory at the end of a reporting period.

Incidentally, the contract allows a small charge for each completed hole, to cover the cost of standby time and radiometric probing. You may claim the allowance for Hole No. 2 on any subsequent voucher, making an explanatory note in your narrative report and also in the "Remarks" block on the Form MF-194A.

We request that you mail the probing record for Hole No. 2 to this office as soon as possible so that we may process the September-October voucher for payment.

Very truly yours,

E. N. Harshman

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

JDC:jy
cc: Corresp. File E815
Sec. Op. Comm. (2)
Harshman
Wilson
Townsend
Cooper
Chron.

10

EM
PHONE EL 3-8819

Marble Canyon Uranium, Inc.

319 NEWHOUSE BUILDING
SALT LAKE CITY 1, UTAH

DMEA
Date Rec'd.
JAN 23 1956
BUREAU OF MINES
Denver, Colorado

January 15, 1956

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

RECEIVED
FEB - 9 1956

Re: Docket DMEA-3612
Contract Idm-E816
Red Wing Claims et al.
Coconino County, Ariz.

Dear Mr. Traver:

A reply to your letter of Dec. 15, 1955 was delayed until I returned from an extended trip. We have now consulted with the drillers and geologists and find that all holes have been thoroughly logged geologically and probed radiometrically and that assay certificates will be submitted with subsequent monthly vouchers.

We wish to point out again that the objective under our government contract is the Hartley Formation, which is approximately 150 ft. to 300 ft., but on each drilling we have carried the holes down on our own to the second objective the shinarump formation. In our reports, for geological reasons, we are submitting the data on both objectives, however the vouchers to the government for payment will be concerned only with the Hartley Objective.

Regarding the radiometric probing of Hole No. 2 we find the log of this hole sent to you carried a notation on the bottom "Unable to probe hole". We meant that we were unable to probe the hole at the lower objective because of caving. The hole however was probed to the government contract depth of 161 ft. the Hartley Formation.

Inclosed find a new log sheet with complete information. We hope you can now process our September-October voucher for payment.

Yours truly,

A. D. Herman

A. D. Herman
General Manager
Marble Canyon Uranium Inc.

Sec. Op. Comm

2/10/56 dgm

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

RECEIVED
FEB - 9 1956

Administrative Audit Difference Statement

Date: [illegible]
Payee's
Reference: [illegible]

[illegible]

FINAL DISTRIBUTION
MADE FEB 7 1956

DMEA-3612

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ [illegible]

Difference $ [illegible]

Amount Approved $ [illegible]

The reason for the difference was due to:

[illegible]

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

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

RECEIVED
FEB - 9 1956

224 New Customhouse
Denver 2, Colorado

January 24, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3612 (Uranium) Contract Idm-E816, Marble Canyon Uranium, Inc., Red Wing Claims, et al., Coconino County, Arizona - Operator's Monthly Progress Report, for the period September and October, 1955

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Narrative Report and Engineer's Report for the above period.

It is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. Payment is recommended for 75 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations, except for the following deductions:

Suspensions

Core Drilling

Amount claimed by Operator, 20 ft. @ $3.00/ft. - - -$60.00
Maximum allowed by contract, 20 ft. @ $2.50/ft. - - 50.00

Amount suspended- - - - - - - - - - - - - - - -$10.00

Field Assistant

Amount claimed, 1 1/2 months at $700.00/mo. - - -$1,050.00
Contract allowance, 1 1/2 months at $450.00/mo. - 675.00

Amount suspended- - - - - - - - - - - - - - - -$ 375.00

Technical (Supervising Consultant)

Amount claimed, 15 1/2 days @ $109.407/day- - -$2,188.14
Contract allowance, 15 1/2 days @ $50.00/day- - 775.00

Amount suspended- - - - - - - - - - - - - - -$1,413.14

Total suspensions for September-October, 1955- -$1,798.14

As this is the Operator's first report and voucher, the amounts suspended for this period are also the totals suspended to date.

Reconciliation with amount shown on Form MF-104

Amount claimed by Operator- - - - - - - - - - - $4,565.89
Amount suspended - - - - - - - - - - - - - - - - 1,798.14

Approved costs for September and October, 1955- $2,767.75
Government participation at 75 percent- - - - $2,075.81

Recommended payment to Operator- - - - - - $2,075.81

Remarks

Date of Report- - - - - - - - - - - - - - - November 28, 1955
Date Received in Field Office - - - - - - -December 9, 1955
Date Received in Region Office- - - - - December 14, 1955
Reason For Delay: Held pending receipt of probing record.

W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E816
Sec. Op. Comm. (2)
Wilson
Townsend w/copy engr's. report
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 12, UTAH

DMEA
Data Rec'd
1955
BUREAU OF MINES
Denver, Colorado
RECEIVED
FEB 9 1956

December 12, 1955

Memorandum

To: W. H. Trower, Executive Officer, DMEA Field Team, Region III

From: Stephen R. Wilson

Subject: Docket No. DMEA-3612 (Uranium), Contract Ida-3815, Marble Canyon Uranium, Inc., Coconino County, Arizona. MF-104 forms covering the period September and October 1955

The attached copies of the monthly report submitted by Marble Canyon Uranium, Inc., describe the exploration completed during September and October 1955. The project was started September 14, 1955. An inspection of the project site was made by M. H. Barnes November 8, 1955.

The operator has reported a total of 141 feet of nonsaure drilling and 20 feet of core drilling for the period. Also, a total of 24-1/2 hours of bulldozer operation is reported on the MF-104 forms. The operator experienced difficulty in the initial drilling, and one hole was abandoned. The cost of this abandoned hole is not included on the MF-104 forms.

No mineralization of significance was encountered during the month. Work reported is in conformance with the contract. Recommendation is made that the operator be reimbursed by 75 percent of the maximum allowable costs for September and October 1955.

The inspecting engineer's progress memorandum includes a tabulation of items of cost, units of work, reported cost, maximum allowable cost, cost differences, and amounts of excess costs which are suspendable.

The operator's report was received in this office December 9, 1955.

Stephen R. Wilson
Stephen R. Wilson

Enclosure

cc: J. E. Clemmer

S. R. Wilson

December 7, 1955

M. H. Howes

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DEC - 9 1955

Docket No. DMEA-3612 (Uranium), Contract Idm-8816, Marble Canyon Uranium, Inc., Coconino County, Arizona. Progress report for September and October 1955.

The Marble Canyon Uranium, Inc. property was inspected November 8, 1955, accompanied by J. D. Herman. Work on the project started September 14, 1955, and consisted of surveying drill-hole locations and construction of access roads to drill sites. Drilling started October 17, 1955. It is verified that 141 feet of noncore and 20 feet of core drilling, for a total of 161 feet, and 84½ hours of bulldozer road construction (consisting of approximately 8,800 feet) as reported on form MF-104A, is correct, and that the work was performed in accordance with the contract.

Drill hole No. 1 was started near the center of the end line between Happy No. 2 and Red Wing No. 3 claims. The driller was not able to drill through the overburden and the hole was abandoned. Cost of this hole is not included on the MF-104 forms.

Drill hole No. 2 was started approximately 220 feet from the west end line and 50 feet from the south side line of Red Wing No. 3 claim, and was drilled a total distance of 397 feet. The hole encountered overburden from 0 to approximately 15 feet; the base of the upper Hartley sandstone (uranium-bearing sandstone member of the Chinle formation) at approximately 105 feet; the base of the lower Hartley sandstone (uranium-bearing sandstone member of the Chinle formation) at approximately 156 feet; the base of the Shinarump conglomerate at approximately 354 feet; and bottom in Moenkopi formation at 397 feet. Little or no uranium mineralization was encountered in this hole.

The contract allows drilling through the Hartley or potential ore-bearing sandstone. It is believed that drill hole No. 2 passed through this bed at 161 feet. The operator continued the hole at his own expense to a depth of 397 feet, to explore the underlying beds.

Costs in excess of contract maximum allowable amounts have been entered on forms MF-104 and MF-104A. The following table shows items of cost, units of work, reported costs, maximum allowable costs, and cost differences. It also shows amounts of excess costs, which are suspendable.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

U. S. Bureau of Mines
RECEIVED
DEC 9 1955
Salt Lake City, Utah

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Sept. and Oct., 1955 Docket No. DMEA 2012 Contract No. 14m-2016
Operator's Name Marble Canyon Uranium, Inc. Minerals Uranium
Address 310 Warehouse Building, Salt Lake City 11, Utah
Contract Amount, $ 22,440.00 Government Participation: 75 % Amount, $ 24,320.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Contractors:						
Drilling	271.50	-	271.50			
Bulldozing	1,000.00	-	1,000.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	1,000.00	-	1,000.00			
Technical Services	2,188.14	-	2,188.14			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4,459.64	-	4,459.64	2,767.75	—	2,767.75

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FEB - 9 1956

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Nov. 28, 1955 Payee Marble Canyon Uranium, Inc.

Per J. D. Hermon Title General Manager

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 2075.81

Signature
(Authorized Certifying Officer)

Date 1/31/56 Vou. No. DMA 56-61

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E816 in accordance with the terms of the contract.

Signature M. L. Howes JRW Title Mining Engineer Date Dec. 9, 1955

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Kinney Title Executive Officer Date JAN 24 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
FEB - 9 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Sept.& Oct. 1955 Docket No. DMEA 3612 Contract No. 10m-3510
Operator's Name Marble Canyon Uranium, Inc. Minerals Uranium
Address 318 Newhouse Building, Salt Lake City 11, Utah

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	1 ft.	60.00	20'	60.00	20'	3.00	2,500	2.50
Churn Remcore	1 ft.	211.50	141'	211.50	141'	1.50	10,000	1.50
Auger								
Surfacing-Field Asst.	mo.	1,050.00	1-1/2	1,050.00	1-1/2		6	450.00
Trenching Technical	day	2,188.14	15-1/2	2,188.14	15-1/2		20	20.00
Test Pits								
Roads and Trails	1 hr.	1,066.25	84-1/2	1,066.25	84-1/2	12.50	200	12.50
TOTAL DISTRIBUTED COSTS		4,565.89		4,565.89				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4,565.89		4,565.89				$22,440.00

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Nov. 28, 1955 Operator Marble Canyon Uranium, Inc.

Per J. D. Hemma Title General Manager

NOTE.—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.

(Instructions on reverse)

REMARKS:

(For Government use only)

M. G. Lowe, Mining Engineer.
JRW.

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

November 28, 1955

RECEIVED
FEB - 9 1956

Mr. S. R. Wilson
U. S. Bureau of Mines
1600 East First South
Salt Lake City 1, Utah

Re: DMEA 3612 (Uranium)
Marble Canyon Uranium, Inc.
(Red Wing Claims, et al)
Coconino County, Arizona

NARRATIVE REPORT

Dear Mr. Wilson:

We submit the following report on our progress for the months of September and October.

Time of Starting Work - September 14, 1955. The starting work consisted of surveying the locations of the drill sites and the building of roads to the drill sites.

Bulldozer Contractor - J. Warren Black, c/o Marble Canyon Lodge, via Cameron, Arizona.
After we had completed bulldozing the roads we found that the heavy machinery bogged down in the sand. It was then necessary for us to do extra work and surface the sand with shale. In addition it has been necessary to maintain a bulldozer as standby to pull the rig and heavy equipment to the new drill sites.

Supervising Consultant - Geologist - The staff of McCary-Beacom Co., 2155 East Seventh St., Los Angeles 23, California, headed by Phillip H. McCary, has been employed. The reason for this selection is that Mr. McCary has geologized the area for several years and has drilled many holes on his own ground, which information is very valuable to us in determining the geology on our drilling program.

Either Mr. McCary or one of his geologists has been at the property continuously keeping up the maps, locating the holes and securing the necessary information. (Enclosed see formation map, log of holes and other data). This work has been much more thorough and extensive than anticipated.

Field Assistant - A. L. Updyke, 24 E. McKinley, Phoenix, Arizona, was employed for this work at a cost of $150 a week plus expenses. Money paid to him to date is $1,050.00. We have dispensed with the services of Mr. Updyke. His work will be carried on by the assistant geologist of Phillip McCary.

Drilling Contractor - McClung Mining & Exploration Corporation, 5336 Glenwick Lane, Dallas 9, Texas.

Type Rig - New Model 1000 Mayhew Rotary heavy duty drilling rig, equipped to cut a 2-1/8" core.

COMPARATIVE FIGURES ON DRILLING COSTS

	DMEA Contract Price	Actual Drilling Cost
Non-core - Slump	$ 1.50	$ 1.75
Non-core - Dry	1.50	1.50
Non-core - Wet	1.50	2.00
Core	2.50	3.00

GENERAL REPORT ON HOLES DRILLED

On October 6, 1955 Phillip H. McCary, the geologist, completed a preliminary structural contour map of the Hartley. This map has been revised up to date. Enclosed find copies. This work proved that the Hartley was deeper than anticipated. After discussing this situation with the various government engineers and geologists we decided that we would drill from 5 to 8 deep test holes from the surface through the Shinarump to bottom in the Moenkopi. We have been informed in the field that the Government, according to the contract, will assume the cost to the base of the Hartley formation and our Company will assume the cost from the base of the Hartley down through the Shinarump into the Moenkopi.

Maps, Geology and Logging - done by Phillip H. McCary. See logs and maps enclosed.

Cuttings and Cores - Taken by A. L. Updyke; now available at the main camp, Marble Canyon Uranium, Inc., Paria Canyon, Arizona.

Probing - done with precision radiation instrument Hole Probe #120 owned by driller. Probing supervised by McCary and Updyke.

Drill Hole #1

Red Wing #3 claim
Started 10-17-55
Started hole four times. Couldn't get through slump zones. Pulled off hole 10-19-55.

Surface slump proved very difficult and costly to penetrate. Driller experimenting with ways to handle it.

This hole drilled at no cost to operator or Government because no objective reached.

Drill Hole #2

Red Wing #3 claim.
Started 10-19-55
Finished 10-28-55
Had much trouble with slump and water.
Depth to various zones.

Upper Hartley - unable to define, but around	105'
Lower Hartley - contact of base	156'
Trs - Trm contact - contact at	354'
Bottom -	397'

Plug bit	0' to 120'	
Cored	120' to 140'	Chinle
Cuttings every 2'	140' to 220'	Chinle
Cored	220' to 235'	Chinle
Cored	235' to 270'	Chinle
Cuttings every 2'	270' to 390'	Chinle and Moenkopi
Cored	390' to 397'	Moenkopi

In Drill Hole #2 because of the volume of water encountered the use of mud was necessary. Therefore, the cuttings, cores and probing in the zones of interest were indefinite. No assays have been made as yet.

Future Plans

It is the intention of the operator to drill several more deep holes to test the depth of the entire formation into the Moenkopi. After this determination, the balance of the holes will be drilled to the base of the Hartley as outlined in our exploration project contract.

We hope we have presented to you the necessary facts. We wish to thank the engineers and geologists of the Bureau of Mines, the U. S. Geological Survey and the Atomic Energy Commission for their helpful cooperation. We welcome any advice that will help us make a success out of our drilling program.

Yours truly,

MARBLE CANYON URANIUM, INC.

By: J. D. Herman
J. D. Herman
General Manager

JDH:fl
Encls.

Items of Cost	Units of Work	Reported Cost	Maximum Allowable Cost	Cost Difference
Independent contracts				
Core drilling	20 feet	$ 60.00	$ 50.00	$ 10.00*
Noncore drilling	141 feet	211.50	211.50	0.00
Reaming and casing	—	—	—	—
Personal services				
Supervising consultant	15½ days	2,188.14	775.00	1,413.14*
Field assistant	1½ months	1,050.00	675.00	375.00*
Bulldozer work	84½ hours	1,056.25	1,056.25	0.00
Radiometric probing and standby time	—	—	—	—
Chemical analyses	—	—	—	—
Total		$4,565.89	$2,767.75**	$1,798.14*

* Amount of excess costs, which are suspendable

** Maximum allowable cost for September and October 1955 —— $2,767.75
Government participation at 75 percent —————— 2,075.81

The accounts were checked and it is verified that all charges, as reported on form NF-104, were necessary. Excessive costs appear on the above table. The operator's narrative report and map are considered to be adequate.

It is recommended that the operator be reimbursed by $2,075.81, which is 75 percent of $2,767.75, the maximum allowable cost for September and October 1955.

M. H. Howes

M. H. Howes

CLAIM _____ PROJECT _____ DRILLER _____ COUNTY _____

STATE _____

HOLE NO. _____ LOCATION _____ COORDINATES _____ COLLAR ELEV. 3356.4

STARTED _____ OVERBURDEN DEPTH. _____ TOTAL DEPTH _____ ANGLE FROM HORIZ. _____

FINISHED _____ DEPTH TO WATER _____ LOGGED BY _____ BEARING _____

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
10					10	
20					20	
30					30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	

ASSAYS

MISC. REMARKS

CLAIM [illegible] #3 | PROJECT Marble Canyon Province | DRILLER McClung | COUNTY [illegible] | STATE Arizona

HOLE NO. 2 | LOCATION T40N R7W E, Sec 2 SW¼ | COORDINATES | COLLAR ELEV. 3337.4'

STARTED 11-19-55 | OVERBURDEN DEPTH 15'? | TOTAL DEPTH 397 | ANGLE FROM HORIZ. 90°

FINISHED 11-28-55 | DEPTH TO WATER 235' | LOGGED BY McCann Beacom Co. | BEARING

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV.	RADIOMETRIC LOG MR / HR (0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0)
0		Jn trc	overburden no cuttings saved on 11/120'.			
10					10	
20					20	
30					30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	

ASSAYS

MISC. REMARKS

TYPE & SIZE OF HOLE	CORE RECOVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV	RADIOMETRIC LOG MR/HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
100					00	
110	90	TRC	fractured [illegible] sandstone [illegible]		10	
120		TR	Red [illegible] massive quartzite sandstone		20	
130		TR	[illegible]		30	
140		TR	[illegible] grey white massive quartzite [illegible] massive quartzite		40	
150		TR	[illegible] massive quartzite		50	
160		TRC	[illegible] massive quartzite	L.W. [illegible] 156 ! ?	60	
170		TR	[illegible] grey white [illegible]		70	
180		TRC	[illegible]		80	
190					90	
200					00	
210					10	
220		TRC	[illegible] core [illegible]		20	
230					30	
240					40	
250					50	
260					60	
270		TR	[illegible] cutting [illegible]		70	
280					80	
290					90	
300					00	

TYPE & SIZE OF HOLE	CORE REC-OVERY %	ROCK TYPE	GEOLOGY	SAMPLES NO.	ELEV	RADIOMETRIC LOG MR / HR 0.0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.0
300					00	
310		Ts	[illegible]		10	
320					20	
330					30	
340					40	
350		Ts	[illegible]	Ts, Tm	50	
		Tm	[illegible]		35'	
360					60	
370					70	
380					80	
390			[illegible]		90	
		Tm	[illegible]			
400					00	
410					10	
420					20	
430					30	
40					40	
50					50	
60					60	
70					70	
80					80	
90					90	
00					00	

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

RECEIVED
OCT 12 1955

224 New Customhouse
Denver 2, Colorado

October 7, 1955

Memorandum

To: S. R. Wilson

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA-3612 (Uranium) Contract No. Idm-E816
Marble Canyon Uranium, Inc. (Red Wing Claims, et al.)
Coconino County, Arizona

Attached is a copy of the Chairman's letter regarding cost as shown in the final contract.

We do not have available an extra copy of the Greer (DMEA-3555) report to which the Chairman referred, but if you would like to have one for comparison and will so advise, we will make a photostatic copy for you.

I will be glad to have any comments you care to make regarding this cost analysis.

W. M. Traver

W. M. Traver

Enc.

WMT:bh
cc-Chair. Op. Comm. (2)
Harshman w/copy encl.
Townsend w/copy encl.
Corres. File E-816
Chron.

Surname copy

700

Ching
Ellis
Selfridge
Fleischman

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
22d New Customhouse Building
Denver 2, Colorado

OCT 5 - 1955

Re: Docket No. DMEA-3612 (Uranium)
Contract No. Idm-2816
Marble Canyon Uranium, Inc.
Red Wing Claims, et al
Coconino County, Arizona

Dear Mr. Traver:

Reference is made to our telephone conversation of September 28 regarding modification of the costs recommended in the field reports for the subject project.

Following is a comparison of various costs per foot of drilling as recommended in the field reports and as modified in Washington:

	Field Reports	As Modified
Core drilling (2520 ft.)	$3.00	$2.50
Non-core drilling (10,080 ft.)	2.00	1.50
Reaming and casing	.42	.21
Stand-by time	.12	.10
Bulldozing	.20	.20
Supervision, engineering, etc.	.56	.36

As modified, the cost for core drilling, reaming and casing amounted to $2.71 and for non-core drilling, reaming, and casing, $1.71 per foot, based upon an anticipated average depth of 100 feet.

The basis for the modification lies in the necessity for reasonable consistency in costs among various contracts. Shortly before the subject contract was written a contract was entered into between the Government and W. A. Greer (DMEA-3565) in which comparable figures to above costs amounted to $3.00 for core drilling, reaming, and casing, and $2.10 for non-core drilling, reaming, and casing, based upon an anticipated average depth of 375 feet. With the difference in drilling depth it would have been extremely difficult to justify a higher cost per foot under the Marble Canyon contract, which would have been the case had the costs not been modified. The modified costs also appear to be more in line with comparable costs in a number of other contracts.

R.C.S.

Aside from direct drilling costs, the examiners' provision of $0.20 per foot for surveying did not appear to be justified when ample allowance had been made for supervision and engineering.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

APPROVED:

/s/ Robert W. Geehan (JHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JHB)
Member, Geological Survey

MChing/gla
10-4-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JCHosted, Rm. 3210,GSA
Code 700
Mr. Ching

Selfridge

September 28, 1955

Memorandum

To: The Files

From: George C. Selfridge
Special Assistant

Subject: Docket No. [illegible]-3612 (Uranium)
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona
Contract No. Ida-[illegible]16

During a telephone conversation with Mr. Traver today he asked why some of the estimated drill costs were changed from those recommended in the field reports. Specifically he had in mind the subject contract which he said had lowered the recommended cost 50 cents a foot. The writer informed Mr. Traver that he was not acquainted with the details of the reduction but would investigate the matter and write him.

George C. Selfridge
By ESF

George C. Selfridge

GCSelfridge/esf

cc to: Docket ✓
Admr. R. File
Mr. Ellis
Mr. Selfridge

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

RECEIVED
SEP - 3 1955

224 New Customhouse
Denver 2, Colorado

August 31, 1955

Memorandum

To: Chairman to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 361~~6~~ (Uranium) Marble Canyon Uranium, Inc. (Red Wing Claims, et al) Coconine County, Arizona.

Enclosed are the Government, Division, and Docket copies of Contract Idm-E816 which has been properly executed by the contractor. The contract was received in this office on June 15, 1955 and the delay in signature is the responsibility of the Operator. Copies of the contract have been given to the Operator, the Region III Finance Office, and distributed to the concerned field offices and a copy is being retained in our files.

W. M. Traver

W. M. Traver

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

RECEIVED
SEP - 1 1955

224 New Customhouse
Denver 2, Colorado

August 31, 1955

Mr. Max Ingalls
Marble Canyon Uranium, Inc.
319 Newhouse Bldg.
Salt Lake City, Utah

Re: DMEA 3612 (Uranium)
Marble Canyon Uranium, Inc.
(Red Wing Claims, et al)
Coconino County, Arizona

Dear Mr. Ingalls:

Enclosed herewith is the "Operator's copy" of a long form Exploration Project Contract No. Ide-3816, Docket DMEA 3612.

Also enclosed are six copies of Form DF-104, "Operator's Monthly Report and Voucher" and six copies of Form DF-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 forms to Mr. S. R. Wilson, U. S. Bureau of Mines, 1600 East First South Street, Salt Lake City 1, Utah. 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 the narrative report. Additional copies of forms DF-104 and DF-104A will be forwarded to you as required.

For your information and in reply to many questions that have been asked, after forms DF-104 and DF-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 reports, please call on Mr. Wilson or this office for assistance. Mr. Wilson's telephone number in Salt Lake City is 3-3294.

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 as are completed.

Under the provisions of the long form contract the unit cost established for each item of work under Category (1) for all stages are allowable maximum unit costs which cannot be exceeded. The actual cost of each item of work under Category (1) must be documented in conformance with the instructions in the next to the last paragraph on the reverse side of form MF-104. The actual cost up to the allowable maximum unit cost established, and as supported by the documentation, will be the basis for reimbursement to you under the terms of the contract.

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 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 work performed under Stage I. The same instructions apply to Stages III and IV in case operations continue and are approved through these stages. 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. N. Harshman, U. S. Geological Survey member and W. M. Traver, U. S. Bureau of Mines member.

No oral statement of any person shall modify or otherwise affect the terms or conditions of this contract.

It is a regulation that reimbursement for the cost of the work accomplished prior to the date of the contract will not be allowed. It is also a requirement and imperative that you notify this office in writing the date work actually commences under the contract with a copy of your letter to Mr. Wilson. In this instance September 15, 1955 has been entered as the date on or before which operations shall commence as agreed to by your letter of August 26, 1955.

Enclosures
WMT:jy
cc: Correspondence File E816
Amendment File E816
Sec. Opr. Comm. (2)
Harshman
Wilson
Hasler Townsend
Chron.

Very truly yours,

W. M. TRAVER,

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

DMEA

of Mines, Room 224 New
Custom

56-2A

Max Ingalls, President August 24, 1955
Marble Canyon Uranium, Inc 10:30 a.m.
1502 South 5th Street
Suite 17 and 19
Levitt Building
Las Vegas, Nevada

Copies contract sent your former address and returned by Post

Office today are being forwarded air mail to corrected address.

Confirmation
cc: Harshman
Wilson, Hasler
Sec.-Operating Com (2)
East, Subj, Chron

W. M. Traver
Executive Officer, DMEA

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

224 New Customhouse
Denver 2, Colorado

AIR MAIL

August 19, 1955

RECEIVED
AUG 2 2 1955

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
587 11th Avenue
Salt Lake City 5, Utah

Re: Docket DMEA 3612 (Uranium)
Marble Canyon Uranium, Inc.
(Red Wing Claims, et al)
Coconino County, Arizona

Dear Mr. Ingalls:

On August 2, 1955 we transmitted to you by certified mail for execution the Government, Division, Docket, Finance Office and Field Team copies of Contract Idm-E816 on the captioned DMEA docket.

As of today, the executed contracts have not been received. Please expedite their return signed and sealed in the proper manner or if you are no longer interested or find the contract unsatisfactory, return all copies unsigned in order that we can return them to the Washington DMEA Administrator for Cancellation.

Very truly yours,

W. M. TRAVER,

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

WMT:pw
cc: E816 Corres.
Chron
Harshman
Wilson
Hasler
Sec.Op.Comm. (2)
Townsend

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

RECEIVED
AUG - 5 1955

224 New Customhouse
Denver, Colorado

August 2, 1955

Certified Mail

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
587 11th Avenue
Salt Lake City 3, Utah

Re: Docket DMEA 3612 (Uranium)
Marble Canyon Uranium, Inc.
(Red Wing Claims, et al)
Coconino County, Arizona

Dear Mr. Ingalls:

Enclosed are the Government, Division, Docket, Finance Office and Field Team copies of proposed Long-Form Exploration Project Contract Idm-E816 which have been prepared pursuant to your application.

If the contract is satisfactory to you, the five copies must be signed by an official of the corporation authorized to sign such documents, attested by the secretary, and the corporate seal affixed.

When all copies of the contract have been returned to this office properly executed, the "Operator's" copy will be forwarded to you together with instructions relative to reporting on work performed under the contract. Irrespective of the date of the contract, it is imperative that no work be undertaken under the contract until you receive your copy and the instructions.

When you return the copies of the contract, please advise the date on or before which work is to be started so that we can insert it under Article 3 of the contract form.

Very truly yours,

W. M. Traver

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

WMT:dja
cc: Subject
Harshman
Wilson ~~Shaw~~
Hasler
Sec.Op.Comm.(2)
Townsend
Chron

Enclosures

Surname 700

Ching
Ellis
Hoffman
Martin
Fehrman

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

JUL 28 1955

Re: Docket No. DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona

Dear Mr. Traver:

Enclosed are two copies of a letter of even date to the subject Operator waiving our requirement of an Owner's Consent to Lien, or a performance bond in lieu thereof.

Kindly delete the typewritten words under Article 2 (c) of the contract form and substitute therefor the words "Owner's Consent to Lien on State-owned land on Reducing Nos. 1, 2, 3, and 6 claims is waived," before submission of the contract to the Operator for signature.

For your information we are enclosing two copies of a memorandum dated July 21, 1955, to the Administrator from Ernest Wm. Ellis, justifying the waiving of our usual requirement, in this case.

Sincerely yours,

/s/ W. S. Martin
ACTING Chairman, Operating Committee (245)

Enclosures

MChing:am
7-22-55
cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5222
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching

APPROVED:

/s/ Robert W. Geehan (245)
Member, Bureau of Mines

Thor H. Kiilsgaard (245)
Member, Geological Survey

R.C.L.

700

Surname

Ching
Ellis
Hoffland
Kilgaard
Gehan
Martin
Johnson

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

JUL 2 8 1955

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
587 - 11th Avenue
Salt Lake City 3, Utah

Re: Docket No. DMEA-3612 (Uranium)
Red Wing Claims, et al.
Coconino County, Arizona

Dear Mr. Ingalls:

Reference is made to your letter of July 18, 1955, in which you advised that you were unable to secure an owner's consent to lien from the State of Arizona in connection with land leased from the State. You also indicated that it would be impractical for your corporation to furnish a performance bond in lieu of an owner's consent to lien.

Under these circumstances we withdraw our demand for an owner's consent to lien, or a performance bond in lieu thereof, as requested in your letter.

We shall advise our Field Team in Denver to make the necessary changes in the proposed contract before submission to you for signature.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

MChing:am
7-22-55
cc to: Admr. Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5222
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching
DMEA Field Team, Region III(2)

R.C.G.

Surname
Ching
Ellis

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

July 21, 1955

Memorandum

To: The Administrator

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

Subject: Docket No. DMEA-3612 (Uranium)
Pending Contract No. Idm-E816
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona

In a letter dated July 18, 1955, Max Ingalls, President of the subject Corporation, advised that he was unable to secure an Owner's Consent to Lien from the State of Arizona, covering project land leased from the State. Mr. Ingalls also advised that it would be impractical for his Corporation to furnish a performance bond in lieu of an Owner's Consent to Lien. However, he has furnished a Statement of Financial Position of Marble Canyon Uranium, Inc., as at June 27, 1955, which shows total current assets of $94,524.36 and total current liabilities of $1,351.10, and no long term indebtedness.

In view of these conditions it is recommended that the DMEA's usual requirement of an Owner's Consent to Lien, or a performance bond in lieu thereof, be waived. Such action is justified by the following circumstances:

1. The land covered by the proposed contract consists of 43 mining claims of which only two complete claims and parts of two other claims are held under a State mining lease. All the other claims are held by the Operator through location. While some of the proposed exploration work will be on the four wholly or partially leased claims the greater part of the work will be done on land owned by the Operator.

2. The subject Corporation's financial position appears to be sound.

3. Strict adherence to the requirement of an Owner's Consent to Lien or a performance bond may force the Applicant to abandon the proposed project, a contract for which is now in the hands of the Field Team. It is in the best interest of the Government that this requirement be waived, thus enabling the contract to be signed and the proposed work to proceed.

Ernest Wm. Ellis

Ernest Wm. Ellis

DMEA Field Team, Reg. III(2)
Code 700
Mr. Ching
Chrom

M
MChing:am
cc to: Admr. Reading File
Operating Committee
Docket

7/21/55 gla

PHONE 4-3675

Marble Canyon Uranium, Inc.

587 - 11TH AVENUE
SALT LAKE CITY 3, UTAH

RECEIVED
JUL 1 9 1955

July 18, 1955

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
United States Department of Interior
Washington, D. C.

Re: Docket No.DMEA-3612(Uranium)
Red Wing Claims, et al.
Coconimo County, Arizona

Dear Sir:

With reference to the application of the Marble Canyon Uranium, Inc., for an exploration loan, known as Docket No.DMEA-3612(Uranium) Red Wing Claims et al., Coconimo County, Arizona, please be advised that in order to secure a bond in the amount of $24,330.00 to guarantee the payment of royalty to amortize the DMEA loan, I find that it would be necessary to deposit that amount in cash with any bond company which would issue the bond. Obviously, such a deposit would offset the value of a loan from D.M.E.A. to the amount which would have to be deposited with the bonding company. My company appealed to Mr. Roger Ernst, Arizona Land Commissioner, for a waiver of the rights of the State of Arizona for priority of the payment of the 5% royalty to the State. I am advised by Mr. Ernst that such a waiver cannot be granted under the laws of the State of Arizona.

I am submitting herewith the financial statement of the Marble Canyon Uranium, Inc. to show that this company is responsible and would be capable to amortize any loan extended to it. Inasmuch as only a portion of the loan would be applicable to mineral leases on Arizona State Land, it is quite evident that the government would not be prejuiced if the required bond was waived in this instance.

We respectfully request that the requirement for a bond which would guarantee that portion of the exploration loan applied to the leases on Arizona state land be waived. We have appealed to Senator Barry Goldwater and he informs us that your records do not disclose a request from our company for such a waiver. Should you need additional information with respect to the reasons why this bond should be waived, please advise me.

Yours very truly,
MARBLE CANYON URANIUM, INC.

Max Ingalls

Max Ingalls, President

MI:jg

RECEIVED
JUL 1 0 1955

MARBLE CANYON URANIUM, INC.
STATEMENT OF FINANCIAL POSITION
As at June 27, 1955.

ASSETS

Current Assets:			
Cash in Bank			$ 89,524.36
Advances - Lamar Davis			5,000.00
Total Current Assets			$ 94,524.36
Uranium Properties:			
Acquired for Cash		$ 895.93	
Acquired for stock		185,000.00	185,895.93
Depreciable Assets			6,150.48
Other Assets:			
Organization Expense		1,959.50	
Deferred Charges to Operations:			
Unrecovered Explorations Costs	$54,045.33		
Unrecovered Production Costs	1,726.23		
General and Administrative	42,566.57		
	$98,338.33		
Less incidental Ore Sales	2,312.50	96,025.83	97,985.33
Total Assets			$384,556.10

LIABILITIES AND CAPITAL

Current Liabilities:		
Accounts Payable		$ none
Accrued Payroll Taxes		59.74
Contract Payable - Air Equipment Co		1,291.36
Total Current Liabilities		$ 1,351.10
Capital:		
Capital Stock, Common, Par Value 1¢ per share		
Authorized	50,000,000 shares	
Outstanding	38,320,500 shares	383,205.00
Unissued	11,679,500 shares	
Total Liabilities and Capital		$384,556.10

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

RECEIVED
JUL 18 1955

OFFICE OF
REGIONAL DIRECTOR

REGION III

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

July 15, 1955

Hon. Barry Goldwater
United States Senate
Washington, D. C.

3612

My dear Senator Goldwater:

Reference is made to your letter dated July 11, addressed to Mr. W. M. Traver, Executive Officer, DMEA, in Denver, relative to Marble Canon Uranium, Inc., Docket DMEA-3612.

Mr. Birch of your office telephoned Mr. Traver before the receipt of your letter. Mr. Birch was referred to Mr. C. O. Mittendorf, Administrator, Defense Minerals Exploration Administration, and a copy of your letter was also forwarded to Mr. Mittendorf for consideration.

Mr. Mittendorf has advised Mr. Traver that he explained the necessity of bonds for DMEA loans on State Lands and that Mr. Birch understands the regulations.

I trust this gives you the information desired.

Sincerely yours,

Original signed by
J. H. EAST, Jr.

J. H. East, Jr.
Regional Director

Copy to: Director's Reading File
C. O. Mittendorf
W. M. Traver
DMEA 3612
Chron

JHEast:ftm

7/19/55

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

RECEIVED
JUL 1 0 1955

224 New Customhouse
Denver 2, Colorado

July 14, 1955

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA-3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., (Red Wing claims, Et Al.), Coconino County, Arizona

Attached is a copy of a letter addressed to me from Senator Barry Goldwater of Arizona dated July 11, 1955 regarding bond requirement for the subject contract.

Prior to receipt of this letter Mr. Dean Birch of the Senator's office called by phone on July 12, 1955 from Washington and discussed the subject with me.

I referred him to you and you advised me on the phone this morning you had discussed the operator's problem with him to his satisfaction.

This memorandum is for your information and the Senator is being advised his letter has been referred to you for reply.

W. M. Traver

W. M. Traver

Enclosure

JAMES E. MURRAY, MONT., CHAIRMAN
CLINTON P. ANDERSON, N. MEX.
RUSSELL B. LONG, LA.
HENRY M. JACKSON, WASH.
JOSEPH C. O'MAHONEY, WYO.
W. KERR SCOTT, N. C.
ALAN BIBLE, NEV.
RICHARD L. NEUBERGER, OREG.
EUGENE D. MILLIKIN, COLO.
GEORGE W. MALONE, NEV.
ARTHUR V. WATKINS, UTAH
HENRY DWORSHAK, IDAHO
THOMAS H. KUCHEL, CALIF.
FRANK A. BARRETT, WYO.
BARRY GOLDWATER, ARIZ.
RICHARD L. CALLAGHAN, CHIEF CLERK

United States Senate

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS

DMEA
Date Rec'd
JUL 13 1955
BUREAU OF MINES
Denver

July 11, 1955

RECEIVED
JUL 18 1955

Mr. W. M. Traver
224 Custom House
Denver, Colorado

Dear Mr. Traver:

A constituent of mine, Mr. Max Ingalls, President of Marble Canyon Uranium, Inc., which owns the Red Wing Claims Nos. 1, 2, 3 and 6, on Arizona land in the northern part of the State, has applied to the Defense Minerals Exploration Administration for a loan to develop his mine and has been granted $80,000. His file number is Docket No. CMEA-3612 (Uranium) Red Wing Claims et al. Coconino County, Arizona.

32,000.00

It is my understanding that the U.S. Government has requested a bond in the amount of $24,330.00 to guarantee the payment of royalties to amortize the loan. The bond is requested because the claims are on the state land and under the Arizona law, the state royalty of five percent must be paid before any other indebtedness.

I have been informed by the Arizona Land Council that the Defense Minerals Exploration Administration has agreed to let the said royalty be paid in accordance with the Arizona law before amortization of the Federal loan.

Since the Marble Canyon Uranium bond would have to be made in cash here with the Government or with a bonding company, such a deposit would obviously diminish the $80,000 grant accordingly.

I would appreciate your informing me whether or not such a bonding arrangement would, in this case, be satisfactory with your office.

Mr. Ingalls' contract is known as IDM-E 816 dated June 13, 1955.

Sincerely,

Barry Goldwater

Barry Goldwater

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

224 New Customhouse
Denver 2, Colorado

July 14, 1955

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA-3612 (Uranium), Contract Idm-E816, Marble Canyon Uranium, Inc., (Red Wing claims, Et Al.), Coconino County, Arizona

Attached is a copy of a letter addressed to me from Senator Barry Goldwater of Arizona dated July 11, 1955 regarding bond requirement for the subject contract.

Prior to receipt of this letter Mr. Dean Birch of the Senator's office called by phone on July 12, 1955 from Washington and discussed the subject with me.

I referred him to you and you advised me on the phone this morning you had discussed the operator's problem with him to his satisfaction.

This memorandum is for your information and the Senator is being advised his letter has been referred to you for reply.

W. M. Traver

W. M. Traver

Enclosure

[illegible] WRAY, MONT., CHAIRMAN
CLINTON P. [illegible] N. MEX. EUGENE D. MILLIKIN, COLO.
RUSSELL B. [illegible] A. GEORGE W. MALONE, NEV.
HENRY M. JACKSON, WASH. ARTHUR V. WATKINS, UTAH
JOSEPH C. O'MAHONEY, WYO. HENRY DWORSHAK, IDAHO
W. KERR SCOTT, N. C. THOMAS H. KUCHEL, CALIF.
ALAN BIBLE, NEV. FRANK A. BARRETT, WYO.
RICHARD L. NEUBERGER, OREG. BARRY GOLDWATER, ARIZ.
RICHARD L. CALLAGHAN, CHIEF CLERK

United States Senate

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS

DMEA
Date Rec'd.
JUL 13 1955
BUREAU [illegible] ES
Denv[illegible]

July 11, 1955

Mr. W. M. Traver
224 Custom House
Denver, Colorado

RECEIVED
JUL 13 1955

Dear Mr. Traver:

A constituent of mine, Mr. Max Ingalls, President of Marble Canyon Uranium, Inc., which owns the Red Wing Claims Nos. 1, 2, 3 and 6, on Arizona land in the northern part of the State, has applied to the Defense Minerals Exploration Administration for a loan to develop his mine and has been granted $80,000. His file number is Docket No. CMEA-3612 (Uranium) Red Wing Claims et al. Coconino County, Arizona.
32,440.00

It is my understanding that the U.S. Government has requested a bond in the amount of $24,330.00 to guarantee the payment of royalties to amortize the loan. The bond is requested because the claims are on the state land and under the Arizona law, the state royalty of five percent must be paid before any other indebtedness.

I have been informed by the Arizona Land Council that the Defense Minerals Exploration Administration has agreed to let the said royalty be paid in accordance with the Arizona law before amortization of the Federal loan.

Since the Marble Canyon Uranium bond would have to be made in cash here with the Government or with a bonding company, such a deposit would obviously diminish the $80,000 grant accordingly.

I would appreciate your informing me whether or not such a bonding arrangement would, in this case, be satisfactory with your office.

Mr. Ingalls' contract is known as IDM-E 816 dated June 13, 1955.

Sincerely,

Barry Goldwater

Barry Goldwater

Surname copy 700

Department of the Interior

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

DMEA
(81) Revolving Fund, Defense Production Act, Interior
(Allocated Working Fund to the Office of the Secy.)

Ching
Ellis

MAX INGALLS, PRESIDENT
MARBLE CANYON URANIUM, INC.
587 — 11TH AVENUE
SALT LAKE CITY 3, UTAH

JUN 15 1955

PLEASE FORWARD 4 COPIES PERFORMANCE BOND FOR $24,330.00 to W. M. TRAVER, 224 NEW CUSTOMHOUSE BUILDING, DENVER 2, COLORADO.

CONTRACT NUMBER IS IDM-5816, DATE JUNE 13, 1955

C. O. Mittendorf

C. O. MITTENDORF, ADMINISTRATOR, DMEA

MChing/gla
6-14-55
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)

cc

700

Surname copy

Ching
Ellis
Lachut
Selfridge
Johnson

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

JUN 13 1955

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

Re: Docket No. DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Red Wing Claims, et al.
Coconino County, Arizona

Dear Mr. Traver:

Enclosed are the original and five copies of a long-form contract between the Government and Marble Canyon Uranium, Inc., 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 a Performance Bond in the amount of $24,330.00 in lieu of Owner's Consent to Lien on four claims owned wholly or in part by the State of Arizona. The Administrator's letter of May 19 put the Operator on notice of this requirement and he assured us in a letter dated June 3 that he is prepared to furnish such a Performance Bond. We are wiring him today the date and number of the contract and the amount of the bond required.

Please note that the enclosed contract is of the mixed long-form type referred to in the Operating Committee's letter to you of May 31, 1955. It is important that the Operator understands the purpose of this type of contract and can differentiate between actual cost categories and fixed unit costs.

MChing:am
6-8-55

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm.3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Enclosures Mr. Ching
Code 700

APPROVED:

J. H. Hedges (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

R.C.H.

P.S. For May 31, 1955, letter see Bula Belle Uranium, Inc., docket DMEA-3579.

5/26/55-gla

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1955

May 25, 1955

Re: DMEA-3612
Marble Canyon Uran. Corp.
Marble Canyon District
Red Wing et al. claims
Coconino Co., Ariz.
$44,100 - 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 recommends approval of a three-stage drilling program totalling 12,600 feet in holes averaging 100 feet in depth. Stage 1 would consist of 70 holes spaced 200 feet apart, Stage 2 28 holes, 50-foot offsets around Stage 1, and Stage 3 28 holes continuing both Stages 1 and 2. The holes would explore a sandstone lense within the Chinle formation.

Except as noted below, I concur with the recommendations for exploration.

1) Mr. Harshman's suggestion to subdivide Stage 1 into two substages appears warranted. I suspect, however, that the field examiners believe that 400-foot centers could not only miss minable ore bodies but could also miss sizeable blocks of favorable ground. Therefore, and if I am correct in this suspicion, I suggest that you allow the Field Team complete latitude to use as many or as few of the 200-foot centers in Stage 1 as they deem necessary to test the ground. Because of the remoteness of the area, however, some fairly definite plan of operations should be agreed to by the operator and the Field Team. Perhaps, and this is purely a suggestion, all the 400-foot centers should be drilled first and simultaneously a portion of the area on 200-foot centers. This might give enough data to suggest that 400-foot centers could be used to evaluate the ground sufficiently. Or it might not! In essence, I am suggesting 2 substages, substage (a) consisting of the 400-foot centers and some of the 200-foot centers and substage (b) the rest of the 200-foot centers, if deemed necessary by the Field Team. If footage is left, I suggest you use it in Stage 2.

2) I do not feel that Stage 3 is warranted. Stages 1 and 2 will test a considerable part of the property. The Government has to stop somewhere. If the footage in Stage 1 and 2 were not all used in those Stages, possibly some of it could be used as a Stage 3, if the Field Team so desired.

RDTrace

R. D. Trace

Surname 700

Ching
Ellis

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

May 24, 1955

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Michael Ching, Mining Engineer
Rare and Miscellaneous Metals Division

Subject: Docket No. DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Red Wing claims, et al.
Coconino County, Arizona

Will you kindly prepare a long form contract between the Government and Marble Canyon Uranium, Inc., in accordance with the attached draft.

A Performance Bond in the amount of $24,330.00 will be requested of the Operator in lieu of Owner's Consent to Lien on four claims owned wholly or in part by the State of Arizona. The Operator has been put on notice as to the requirement of a Performance Bond and he will be advised of the amount when the contract has been approved by the Administrator. Execution of the contract by the Operator will be subject to submission of the bond to the Executive Officer.

Michael Ching

Attachment

MChing:ma
cc to: Docket
Code 700
Mr. Ching

Draft
M hing:am
5-24-55

MF-200
(Revised June 1954)

Docket No. DMEA 3612

Commodity Uranium

Contract No. Idm-E

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

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] .....

Marble Canyon Uranium, Inc.

whose mailing address is 587 - 11th Avenue
Salt Lake City 3, Utah
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-200), 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 Arizona, County of Coconino, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] ..... 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

[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."

of the land (lessor, seller, optionor, etc.), are attached, as follows: Performance Bond furnished in lieu of Owner's Consent to Lien on State owned land on Redwing Nos. 1, 2, 3, and 6 claims.

(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 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(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 ..... shall commence the work, and on or before February 1, 1956 (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."

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) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *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.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $ 32,440.00. The Government shall contribute 75 percent of the allowable costs as they are incurred in a total sum not in excess of $ 24,330.00: *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 or not in excess of the amount of the Government's contribution to the cost of property which is or may become subject to disposal as provided in Article 9(c), whichever is greater. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 7(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. "Costs incurred" mean costs that have been paid or have become due and payable, or that in the opinion of the Government have become an obligation. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Estimated costs.*—(a) *Categories of costs.*—The allowable costs of the work to which the Government shall contribute are limited to those that are direct, reasonable, necessary, and that are estimated in Exhibit "A" by categories as specified in this article. If any category or subcategory is omitted from the estimate of costs, or if the word "none" is annexed to the listing thereof, costs under such category or subcategory are not allowable. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost, and any excess over the estimated total allowable cost of the work, shall not be allowable. Any excess over the estimate of any category, subcategory, or item, either as to requirement or related cost, not indicated as a maximum shall be allowable within the limit of the estimated total allowable cost of the work. To the extent that excesses over maximums other than the estimated total allowable cost of the work may be necessary for the performance of the work, the Operator shall incur such excesses for his own account without contribution by the Government; but except for any such necessary excesses in categories, subcategories, or items thereunder the Operator is not obligated to incur more than his agreed percentage of the estimated, total allowable cost of the work.

To the extent specified in this article or in Exhibit "A" the following categories, subcategories, and elements thereof are maximums; but if not so specified either here or in Exhibit "A" they are not maximums, and may be exceeded within the limit of the estimated total allowable cost of the work:

CATEGORY (1)—INDEPENDENT CONTRACTS.—Work to be performed under independent contracts (see Article 4(b)). The estimated total amount of this category and the estimated cost of each unit of work for performance under an independent contract are maximums.

CATEGORY (2)—PERSONAL SERVICES.

Subcategory (a)—Supervision.—All elements of this subcategory (number of supervisors, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)—Technical services.—All elements of this subcategory (number of technicians, periods of employment, rates of pay, and total) are maximums.

Subcategory (c)—Labor.

CATEGORY (3)—OPERATING MATERIALS AND SUPPLIES.—Includes such items as drill bits and steel, explosives, fuel, pipe, power, small tools costing less than $50 each, timber, track.

CATEGORY (4)—OPERATING EQUIPMENT.

Subcategory (a)—Rental.—The number of each object to be rented [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)—Purchases.—The estimated total of this subcategory is a maximum.

Subcategory (c)—Depreciation.—All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)—INITIAL REHABILITATION AND REPAIRS.—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

Subcategory (a)—Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).—The estimated total of this subcategory is a maximum.

Subcategory (b)—Initial rehabilitation and repairs of operating equipment.—The estimated total of this subcategory is a maximum.

CATEGORY (6)—NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

CATEGORY (7)—MISCELLANEOUS.—Repairs and maintenance (other than initial) of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, communications, and any other items of requirement or cost that do not fall within any of the first 6 categories.

THE ESTIMATED TOTAL ALLOWABLE COST of the work is a maximum.

(b) *Nonallowable costs.*—The following costs are not allowable for contribution by the Government:

(1) *Costs of the land,* such as rental, depreciation, depletion, or other cost of acquiring, owning, or holding possession;

(2) *Indirect costs,* such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) *Previous work* performed or costs incurred before the date of this contract; and

(4) *Deferred payments.*—Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods; unless the purchase agreement is approved by the Government in writing.

(c) *Reductions in costs.*—The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original estimated total cost. This provision does not apply to receipts from production which are subject to the Government's percentage royalty under the provisions of Article 9.

ARTICLE 7. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the 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. If the Government elects to audit said records and accounts relating to the exploration work by certified public accountant, it may do so as a cost of the work to which the Operator shall contribute. 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. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved 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 detailed costs incurred during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and 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 related costs incurred.

(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 8. *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 7) 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 therof 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 9. *Interests in purchased property.*—(a) *Title and ownership.*—All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions, although title thereto shall be taken in the name of the Operator.

(b) *Preservation of property.*—Until the final disposal of any property in which the Government has an interest the Operator shall preserve and protect same for the best interest of the Government, any reasonable and necessary costs thereof to be treated as an allowable cost of the project. After the completion of the work or termination of the Government's obligation to contribute, or when such property is not in use for or needed for the work, the Operator shall neither use it without the written consent of the Government nor without paying a reasonable rental to be fixed by the Government for its interest.

(c) *Disposal of property.*—Upon the completion of the work or termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator or the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government the Operator shall not sell at any price any item of property the cost of which was more than $500, and shall not sell at less than 25 percent of the purchase price any item of property which cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or himself cares to give. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, or explosives, or pipe, or rails), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the project.

(d) *Default of the Operator re disposal.*—If within 90 days after the completion of the work or termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, or after such further time as the Government may in writing allow, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may pursue one of the following two courses: (1) the Government, by written notice to the Operator, may place upon such property what in its opinion is a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *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: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) 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.

(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: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) 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 10 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 11. *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 12. *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 13. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By .....

.....
(Operator)

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—70617-1

Draft
MChing:am
5-24-55

ANNEX I

The land referred to in Article 2 of the contract consists of 43 unpatented lode mining claims situated in Sections 2 and 3, T. 40 N., R. 7 E., and Sections 34 and 35, T. 41 N., R. 7 E., Coconino County, Arizona. The claims are recorded at the office of the County Recorder as follows:

(See Application or Field Team Report for name of claims, book, and page numbers).

Red Wing No. 1 and No. 2 claims are held under a state lease and Red Wing No. 3 and No. 6 claims are partially held under state lease and partially held through location. All other claims are held through location.

The claims are shown on a map, Figure 2, 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.

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MChing:am
5-24-55

EXHIBIT "A"

Description of the Work

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

The drill holes shall test a potential ore-bearing sandstone unit which occurs about 150 feet above the base of the Chinle formation. It is anticipated that the average depth of the holes will be approximately 100 feet, of which an average of 20 feet is likely to be cored. The coring shall begin just above the potential ore-bearing sandstone unit and the holes shall be bottomed as soon as it is recognized that the drill has passed through this unit. All holes shall be B X in size except where maintenance of this size is impractical, in which case a minimum size of A X is allowable.

All drill core and all 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 uranium and copper.

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 four stages. If, in the opinion of the Government, the results of each preceding stage warrant further work the Operator shall perform that work outlined in each succeeding stage which the Government approves in writing in advance.

The location, 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 20 holes aggregating approximately 2,000 feet (ib a 400-foot grid pattern). The locations of Stage I holes are indicated by circled X's on the attached map, Figure 2. If the 20 holes require more than 2,000 feet of drilling to reach the desired horizon, the excess footage shall be deducted from Stage II.

STAGE II

Stage II work consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 50 holes aggregating not more than 5,000 feet, on a 200 foot grid pattern as indicated by X's on the attached map, Figure 2. Those Stage II holes which are in areas determined as unfavorable by Stage I work shall be eliminated.

STAGE III

Stage III work consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 28 holes aggregating not more than 2,800 feet as offsets to Stages I and II holes which show encouraging mineralization. The offset holes shall not be drilled closer than 50 feet to any previously drilled hole.

STAGE IV

Stage IV work consists of the preparation of drill sites by bulldozer and the drilling of a maximum of 28 holes aggregating not more than 2,800 feet. These holes may be extensions of the 200-foot grid outlined under Stages I and II or 50-foot offsets around ore holes. The purpose of Stage IV drilling is to follow up or extend definite ore trends, or further explore mineralized ground found under this or previous stages.

Estimated Cost of the Project

Actual Costs

Category (1) - Independent Contracts

2,520 ft. core drilling @ $2.50/ft.	$6,300.00	
10,080 ft. non-core drilling @ $1.50/ft.	15,120.00	
1,500 ft. reaming and casing @ $1.75/ft.	2,625.00	
		$24,045.00

Category (2) - Personal Services

Supervising consultant - 30 days @ $50 per day	$1,500.00	
Field Assistant - 6 mos. @ $450/mo.	2,700.00	
		$4,200.00

Categories (3) through (7) are waived --

Estimated total actual costs $28,245.00

Fixed Unit Costs

The Government will contribute to the costs of the following items of work on the basis of the fixed unit costs, as they accrue, for units of work actually performed, in lieu of actual costs:

200 hrs. bulldozer work @ $12.50/hr. (Includes moving in and moving out time)	$2,500.00
126 holes @ $10.00/hole for radiometric probing and standby costs	1,260.00
87 Chemical sample analyses @ $5.00/sample	435.00
Estimated total fixed unit costs	$4,195.00

Summary

Estimated total actual costs	$28,245.00
Estimated total fixed unit costs	4,195.00
Estimated total cost of the project	$32,440.00
Government participation @ 75 percent	$24,330.--

5/24/55 gla

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

May 23, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Report of Examination, DMEA Docket 3612 (Uranium), Marble Canyon Uranium Corp., Coconino County, Arizona

I have reviewed the Field Team report of examination, Marble Canyon Uranium Corp., DMEA Docket 3612 and have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission, who also studied the report.

Mr. Hosted is in agreement with the Field Team's recommendation that a three-stage drilling program be allowed, with 70 holes drilled on a 200-foot grid pattern in Stage I, no more than 2,800 feet of offset holes in Stage II, and no more than 2,800 feet of 200-foot spaced holes in Stage III.

I am in favor of Mr. Traver's report to the Washington office of the DMEA. Mr. Traver concurred with the proposed program submitted by the Field Team, but suggested dividing Stage I drilling into two substages, the first to consist of 20 holes on 400-foot centers, the second to consist of the remaining 50 holes on 200-foot centers. I believe this would allow for a better exploration program on the Marble Canyon Uranium Corp. property.

The report has been forwarded to the Chief, Division of Minerals, in accord with the routing slip attached thereto.

John E Crawford
John E. Crawford

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

Surname copy Ching Ellis

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
587 --11th Avenue
Salt Lake City 3, Utah

MAY 19 1955

Re: Docket No. DMEA-3612 (Uranium)
Red Wing claims, et al.
Coconino County, Arizona

Dear Mr. Ingalls:

Thank you for your letter of May 12, 1955, advising us that you have made a complete settlement with George L. Dockstader regarding his claim on the subject property. We note that you have sent a photostatic copy of a Quitclaim Mining Deed to our Denver office for its files. It would be appreciated if you would also send this office a copy of this deed.

The Field Team's report on your property was received recently in Washington and is now being processed. In this connection, we note that Red Wing claims numbered 1, 2, 3, and 6 are on State-leased land. We are advised that the State of Arizona would be unwilling to execute the Owner's Consent to Lien usually required in such cases. In lieu of such consent to lien we usually require a Performance Bond in the amount of the Government's participation in the exploration project. The exact amount of such participation has not yet been determined as a contract is yet to be approved, but it is tentatively fixed at $33,000.00. In order to expedite the processing of your application we are enclosing a copy of Standard Form 25 to enable you to appraise our requirements in this respect. In the event a contract is approved we shall advise you promptly the date of the contract and the amount of the Government's participation.

In the meantime, we shall continue to process your application as expeditiously as possible.

Sincerely yours,

C. O. Mittendorf
Administrator

MChing/gla
5-18-55

R.C.K.

cc to: Admr.'s Reading File
Docket
Messrs. J. E. Crawford, 3641
T.H.Kiilsgaard, 5224
J.O.Hosted, 3210,GSA
Code 700
Mr. Ching
DMEA Field Team, Reg.III(2)

Enclosure

5/20/55 gla

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

224 New Customhouse
Denver 2, Colorado

May 16, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3612 (Uranium), Marble Canyon Uranium, Inc., Coconino County, Arizona

Attached is a letter from Max Ingalls, president of Marble Canyon Uranium, Inc., together with a photostat copy of a Quit Claim Deed between George L. Dockstader and Neta Dockstader, his wife, and Allied Underwriters, a partnership, parties of the first part, and Marble Canyon Uranium, Inc., the party of the second part.

This will probably have a direct bearing on the Report of Examination transmitted May 6, 1955 in which a contract for exploration assistance was recommended.

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

May 16, 1955

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
587 - 11th Avenue
Salt Lake City, Utah

Re: Docket DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Coconino County, Arizona

Dear Mr. Ingalls:

This will acknowledge receipt of your letter dated May 12, 1955 in which you enclosed a Quit Claim Deed from George L. Dockstader, Neta Dockstader and Allied Underwriters to Marble Canyon Uranium, Inc.

This information has been forwarded to the Washington office.

The Report of Examination on the subject docket has also recently been forwarded to the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., for their final action.

Very truly yours,

W. M. TRAVER,

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

HMC:sr

cc Chairman Op. Comm. (2)
Subject
Chron

PHONE 4-3675

Marble Canyon Uranium, Inc.

587 - 11TH AVENUE
SALT LAKE CITY 3, UTAH

May 12th, 1955.

Mr. W. N. Traber
Executive Officer
U. S. Bureau of Mines
224 New Customs Bldg.
Denver, Colorado

DMEA-3612

Dear Mr. Traber:

Re: Red Wing Claims, etal of the Marble Canyon Uranium, Inc.

In view of the fact that a Mr. George L. Dockstader had filed an affadivit with the county recorder of Coconina County at Flagstaff, Arizona, stating that he had an interest in the above mentioned claims, we wish to advise as follows: We have made a complete settlement with him and have secured a release and a quit claim deed, a photo static copy is enclosed herewith for your files. The original deed has been forwarded to the county recorder for recording at Flagstaff, Arizona.

We would appreciate it very much if you would advise us of the Status of our DMEA Loan.

Yours very truly,

MARBLE CANYON URANIUM, INC.

BY M. Engalls
Pres.

Enclosure: QCD

This Deed, Made this 27 day of April in the year of our Lord one thousand nine hundred and fifty five, between George L. Dockstader and Neta Dockstader, his wife and Allied Underwriters, a partnership

part ies of the first part, and Marble Canyon Uranium Inc.

the part y of the second part,

WITNESSETH, that the said part ies of the first part, for and in consideration of the sum of One Thousand Dollars - - - - - - ($1,000.00) - - - - - - DOLLARS, and other good and valuable consideration lawful money, to ~~parties of first part~~ paid by the part y of the second part, the receipt whereof is hereby acknowledged, by these presents do grant, bargain, sell, remise, release and forever quit-claim unto the said part y of the second part, their successors and assigns, forever their right title and interest, in and to all their certain right s to land Mining claim s situate in Marble Canyon Mining District Mining District, Coconina County, State of Arizona, viz.:

Red Wing Claims Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10;
Souvall Claims Nos. 1, 2, 3, 4, 5, 6, 7;
Happy Claims Nos. 1, 2;
Leone Claims Nos. 1, 2, 3;
Lehnberr Claims Nos. 1, 2, 3, 4;
Marion Claims Nos. 1, 2, 3, 4, 5;
~~Ingalls Claims Nos. 1, 2, 3, 4;~~
Jeannie Claims Nos. 1, 2, 3, 4, 5;
Mary Y Claims Nos. 1, 2, 3.

TOGETHER with all dips and spurs, rights, privileges and franchises, tenements, hereditaments and appurtenances thereto incident or belonging, or therewith used and enjoyed, and all the estate, right, title, interest, property, claim and demand whatsoever, legal and equitable, as well in possession as in expectancy, of the part ies of the first part, of, in or to said premises, and every part thereof.

TO HAVE AND TO HOLD the same unto the part y of the second part, their successors and assigns forever.

IN WITNESS WHEREOF the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in Presence of

Leonard Lewis

George L. Dockstader
George L. Dockstader

Neta Dockstader
Neta Dockstader

Allied Underwriters, a partnership
By. Rulon T. Jeffs
Rulon T. Jeffs

STATE OF Utah
County of Salt Lake } ss.

On the 27 day of April, A. D. 1955 personally appeared before me George L. Dockstader and Neta Dockstader his wife, and Rulon T. Jeffs one of the partners of Allied Underwriters, a partnership.
the signers of the above instrument, who duly acknowledged to me that they executed the same.

Notary Public.
Residing at Salt Lake City, Utah

My commission expires

No.

Warranty Deed
(QUIT CLAIM)

TO

Dated , 19

Recorded at the Request of

, A. D. 19 at min. past o'clock M., in Book of Page

Records County

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

224 New Customhouse
Denver 2, Colorado

May 16, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3612 (Uranium), Marble Canyon Uranium, Inc., Coconino County, Arizona

Attached is a letter from Max Ingalls, president of Marble Canyon Uranium, Inc., together with a photostat copy of a Quit Claim Deed between George L. Dockstader and Neta Dockstader, his wife, and Allied Underwriters, a partnership, parties of the first part, and Marble Canyon Uranium, Inc., the party of the second part.

This will probably have a direct bearing on the Report of Examination transmitted May 6, 1955 in which a contract for exploration assistance was recommended.

W. M. Traver

Enclosures

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

224 New Customhouse
Denver 2, Colorado

May 16, 1955

Mr. Max Ingalls, President
Marble Canyon Uranium, Inc.
587 - 11th Avenue
Salt Lake City, Utah

Re: Docket DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Coconino County, Arizona

Dear Mr. Ingalls:

This will acknowledge receipt of your letter dated May 12, 1955 in which you enclosed a Quit Claim Deed from George L. Dockstader, Neta Dockstader and Allied Underwriters to Marble Canyon Uranium, Inc.,

This information has been forwarded to the Washington office.

The Report of Examination on the subject docket has also recently been forwarded to the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., for their final action.

Very truly yours,

W. M. TRAVER,

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

HMC:sr

cc Chairman Op. Comm. (2)
Subject
Chron

5/17/55-gla

PHONE 4-3675

Marble Canyon Uranium, Inc.

587 - 11TH AVENUE
SALT LAKE CITY 3, UTAH

Bureau Mines
RECEIVED
MAY 16 1955

May 12th, 1955.

Mr. C. O. Mittandorf
U. S. Bureau of Mines
New Interior Building
Washington 25, D. C.

DMEA-3612

Re: Red Wing Claims ~~etal~~, of
Marble Canyon Uranium, Inc.

Dear Mr. Mittandorf:

In view of the fact that a Mr. George L. Dockstader had filed an affidavit with the county recorder of Coconina County at Flagstaff, Arizona, where the above mentioned claims are located, stating that he had an interest in them, we wish to advise your office as follows:

We have made a complete settlement with him and have secured a written release and a Quit Claim Mining Deed from him in favor of Marble Canyon Uranium, Inc. A Photo-static Copy of this deed has been sent to your Denver, Colo. office for their files. The original deed has been recorded at Flagstaff, Arizona clearing title to these properties from his claim to them.

We would appreciate it very much if your would advise us of the status of our DMEA Loan with your office.

Thanking you in advance, we remain,

Yours very truly,

MARBLE CANYON URANIUM, INC.

By [signature]
Pres.

5/17/55 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

224 New Customhouse
Denver 2, Colorado

May 6, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Report of Examination, DMEA Docket 3612 (Uranium), Marble Canyon Uranium Corp., Coconino County, Arizona

Enclosed are the original and three copies of the report pertaining to the above application.

We concur with the proposed program, but suggest that consideration be given to dividing Stage I drilling into two sub-stages, the first to consist of 20 holes on 400-foot centers, the second to consist of the remaining 50 holes of the 70 holes recommended by the field examiners. Based on data secured from the wide-spaced holes (400-foot centers) certain areas might be determined as unfavorable, and in such areas the closer spaced holes (200-foot centers) could be eliminated from the program.

Six extra copies of Figure 1 and Figure 2 are attached for possible use in the contract.

We are advised that the Commissioner of Lands for the State of Arizona is not empowered to place a lien on State-owned land. Drilling is recommended on Red Wing claims numbers 1, 2, 3 and 6 which are on State-leased land, and therefore you may require a Performance Bond.

When you advise this office of the amount of Government participation, we will advise the Applicant to furnish a Performance Bond or other suitable guarantee for the protection of the Government, as mentioned in your letter dated January 13, 1955.

W. M. Traver

W. M. Traver

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

E. N. Harshman

E. N. Harshman

Enclosures

5/11/55 gla

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

224 New Customhouse
Denver 2, Colorado

May 4, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3612 (Uranium), Marble Canyon Uranium, Inc.
Coconino County, Arizona

For your information, enclosed is a copy of a letter dated April 27, 1955 from Max Ingalls, President, Marble Canyon Uranium, Inc.

W. M. Traver

Enclosure

W. M. Traver

Marble Canyon Uranium, Inc.

457 - 11TH AVENUE
SALT LAKE CITY 2, UTAH

BUREAU OF MINES
Denver, Colorado

(5)

April 27, 1955.

Berk

United States Bureau of Mines,
Denver, Colo.

Gentlemen: Re: DMEA APPLICATION #3612 Marble Canyon Uranium, Inc.

This is to advise you that Martin Gould, Ira Abelow or Edwards Mining and Exploration Company, Inc. do not represent us any more and any further information you might desire in regard to the above application I would appreciate it if you would confer direct with the writer. Thank you.

Yours very sincerely,

MARBLE CANYON URANIUM, Inc.

By Max Ingalls
Max Ingalls, President

MRI:ib

DMEA
Date Rec'd.
MAY 2 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Defense Minerals
RECEIVED
MAY 12 1955

TRANSMITTED
MAY 6 1955

April 28, 1955

Memorandum

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

From: Stephen R. Wilson

Subject: Docket No. DMEA-3612 (Uranium), Marble Canyon Uranium, Inc., Coconino County, Arizona

Enclosed are the original and 10 copies of an engineering report covering examination of property of Marble Canyon Uranium, Inc., Coconino County, Arizona. The property was examined January 26 and 27, 1955, by H. S. Johnson and T. E. Mullins of the Survey and M. N. Howes of this office. The required copies of a separate section, Summary, Conclusions and Recommendations, are also attached.

The applicant has requested a loan of $93,987 to explore favorable horizons of the Chinle and Shinarump formations. The proposal consists of 74 diamond drill holes ranging in depth from 260 to 340 feet. The examiners believe the applicant's drill grid pattern is too widely spaced. They recommend an alternate program in three stages, allowing a total of 12,680 feet of drilling at an estimated cost of $44,100. I concur in the recommendations of the examining team.

The application of Marble Canyon Uranium, Inc., has been discussed with members of the Atomic Energy Commission. Harlen Nolen of this agency accompanied the examiners to the property.

Stephen R. Wilson
Stephen R. Wilson

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By H. S. Johnson, T. E. Mullins and M. H. Howes

An application for Government aid, under docket No. DMEA-3612, to conduct an exploratory project, was submitted December 15, 1954, by Marble Canyon Uranium, Inc. The project, estimated to cost $93,987, consists of 74 drill holes laid out on a 420-foot grid pattern to explore for uranium ores in the Chinle formation and Shinarump conglomerate. The property was examined January 26 and 27, 1955, by H. S. Johnson and T. E. Mullins, Geological Survey, and M. H. Howes, Bureau of Mines.

The applicant has acquired 43 lode mining claims in the Marble Canyon mining district on the Paria River about 8 miles north of the Navajo Bridge on U. S. Highway 89, in Coconino County, Arizona.

Rocks in the vicinity of the property consist of Moenkopi shales capped by a gray bed of Shinarump conglomerate 10 to 20 feet thick, which is overlain by approximately 650 feet of Chinle formation, all occurring at the base of the great vertical walls of the Glen Canyon series called the "Vermilion Cliffs." A sandstone bed near the middle of the lower half of the Chinle formation appears to be a favorable horizon for uranium mineralization, as indicated by several high-grade spots of ore observed in its outcrops on the property.

Drill holes laid out on a 420-foot grid pattern by the applicant are considered by the field examiners to be too widely scattered.

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

ON-SITE EXHIB.

Therefore, an alternate plan of exploration is offered. It is proposed to conduct the program in three stages, the succeeding stages dependent on results of the prior stages.

Stage I consists of 70 holes drilled on a 200-foot grid pattern with holes bottoming after they have passed through the potential ore-bearing zone in the Chinle formation, and with total footage drilled not to exceed 7,000 feet.

Stage II will allow not more than 2,800 feet of offset holes to be drilled around Stage I drill holes which contain at least a 1-foot thickness of ore-grade mineralization.

Stage III will allow drilling, not to exceed 2,800 feet, to continue the 200-foot grid pattern with suitable offsets where mineralized ground or definite ore trends have been discovered in Stages I and II.

It is estimated that 12,600 feet of drilling will cost $44,100, at $3.50 per foot. The Government's share of the total cost, at 75 percent participation, will be $33,075.

Geologists of the Salt Lake City office of the Atomic Energy Commission believe the above-described alternate proposals to be worthy.

It is recommended that the alternate proposals be approved.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

MARBLE CANYON URANIUM, INC.
COCONINO COUNTY, ARIZONA
DMEA-3612
Uranium

Engineering Report

By M. H. Howes
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

MARBLE CANYON URANIUM, INC.
COCONINO COUNTY, ARIZONA

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ILLUSTRATIONS

Fig. 1 Location map, Marble Canyon Uranium, Inc., Coconino County, Arizona

Fig. 2 Claim map showing proposed exploration

INTRODUCTION

Marble Canyon Uranium, Inc., applied for Government aid December 15, 1954, for an exploratory project under docket No. DMEA-3612. The proposed program consists of 74 drill holes ranging in depth from 260 to 340 feet, at locations indicated on figure 2, to explore for uranium ores in favorable horizons in the Chinle formation and Shinarump conglomerate, at a total estimated cost of $93,987.

A field examination of the property was made January 26 and 27, 1955, by H. S. Johnson and T. E. Mullins, Geological Survey, and M. H. Howes, Bureau of Mines, to determine the feasibility of the proposed exploratory work and to appraise the estimated costs and the engineering aspects of the job. The field examiners were accompanied to the property by Harlan Holen of the AEC and Max Ingalls, representing Marble Canyon Uranium, Inc.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The property is located on the Paria River in the Marble Canyon mining district, Coconino County, Arizona, about 8 miles north of the Navajo Bridge on U. S. Highway 89. The specific location is Secs. 2 and 3, T. 40 N., R. 7 E., and Secs. 35 and 36, T. 41 N., R. 7 E., G. and S.R.P.M. (fig. 1). The claims are situated along the narrow Paria River valley, about 2 miles above Lees Ferry, on benches or terraces which rise abruptly above the river bottom and lie at the base

of the great "Vermilion Cliffs." Elevations range from 3,170 feet at Lees Ferry to 4,200 feet at the foot of the "Vermilion Cliffs."

In this area the summers are hot and dry and the winters are mild, with snow rarely accumulating. Vegetation is scarce and consists, for the most part, of desert plants.

HISTORY AND PRODUCTION

This is a new mining property, without previous background or history. The initial discovery was made by P. W. Johnson and J. W. Black in May 1954. Since that time, Marble Canyon Uranium, Inc., has acquired several groups of claims in the area from Johnson and Black and others to form the present company's property.

A "split-check" contract has been executed with the Allred Company to mine a sporadic deposit of uranium ore from a landslide block of Chinle in the vicinity of Cut No. 1 (fig. 2) on the Red Wing No. 4 claim. On January 27, 1955, Max Ingalls reported the following shipments as having been made to the receiving station at Marysvale, Utah:

Lot	Wet Weight (Pounds)	Dry Weight (Pounds)	Percent U_3O_8	Percent Ca
1971	10,600	10,457	0.58	2.54
1992	33,840	33,434	0.70	1.07
2022	30,810	30,325	0.41	>1.00 (no pay)
2068	15,020	14,742	0.21	>1.00 (no pay)

It has been reported that, during February 1955, further prospecting of the favorable Chinle sandstone horizon was conducted up the river from the discoveries made on the Red Wing claims and that several high-grade spots of uranium ore have been found on the Lehnheer group of claims.

OWNERSHIP AND EXTENT

Marble Canyon Uranium, Inc., is a Utah corporation, with the following officers:

Max Ingalls, President
587 - 11th Avenue
Salt Lake City, Utah

Andrew W. Souvall, Vice President
1559 Cherokee Circle
Salt Lake City, Utah

Parker Campbell, Secretary
130 - 2nd Avenue
Salt Lake City, Utah

Louis E. Holley, Treasurer
1515 Stratford Avenue
Salt Lake City, Utah

Request is made in the application to address all correspondence:

Attention: Mr. Gould
725 Denver National Building
Denver, Colorado

Phone - AC 2-2765

Company lode mining claims are as follows:

Name of Claim	Book	Page	Location		
Red Wing No. 1 (State Lease)	57	494	T. 40 N.,	R. 7 E.,	Sec. 2
" " " 2 (" ")	"	495	"	"	"
" " " 3 (Partially State lease)	"	496	"	"	"
" " " 4	"	497	"	"	"
" " " 5	"	498	"	"	Sec. 3
" " " 6 (Partially State lease)	"	499	"	"	Sec. 2
" " " 7	"	458	"	"	"
" " " 8	"	459	"	"	"
" " " 9	"	460	"	"	"
" " " 10	"	461	"	"	"
Souvall No. 1	"	462	"	"	"
" " 2	"	463	"	"	"
" " 3	"	464	"	"	"
" " 4	"	465	"	"	"
" " 5	"	466	"	"	"
" " 6	58	92	"	"	Sec. 3
" " 7	"	93	"	"	"
Happy No. 1	57	456	"	"	"
" " 2	"	457	"	"	"
Leone No. 1	"	467	"	"	"
" " 2	"	468	"	"	"
" " 3	"	469	"	"	"

Name of Claim	Book	Page	Location		
Lehnheer No. 1	58	86	T. 40 N.,	R. 7 E.,	Sec. 3
" " 2	"	87	" "	"	"
" " 3	57	477	"	"	"
" " 4	"	478	"	"	"
Marion No. 1	"	486	"	"	"
" " 2	"	487	"	"	"
" " 3	"	488	"	"	"
" " 4	"	489	"	"	"
" " 5	"	490	"	"	"
Ingalls No. 1	52	497 597	T. 41 N.,	"	Sec. 34
" " 2	"	498 598	"	"	(34 & (35
" " 3	"	499 599	"	"	35
" " 4	"	600	"	"	"
Jeannie No. 1	53	2	"	"	34
" " 2	"	3	"	"	"
" " 3	"	4	"	"	"
" " 4	"	5	"	"	"
" " 5	"	6	"	"	"
Mary Y No. 1	"	14	"	"	"
" " " 2	"	15	"	"	"
" " " 3	"	16	"	"	"

The above 43 claims are recorded in the office of the County Recorder of Coconino County, Flagstaff, Arizona.

Part of the property, owned by the State of Arizona and leased to the company, is described as follows: "76.36 acres of land lying in the west half of the southwest quarter of section 2, T. 40 N., R. 7 E., G. & S. R. P. M., includes Red Wing No. 1 (entire claim), Red Wing No. 2 (entire claim), Red Wing No. 3 (partial claim), and Red Wing No. 6 (partial claim)." This land is limited by vertical boundary lines. The lease is dated August 2, 1954, and will expire August 1, 1974. It is made out to P. W. Johnson and J. W. Black and was assigned to Marble Canyon Uranium, Inc. October 19, 1954.

All other lode mining claims listed above have been assigned to Marble Canyon Uranium, Inc.

DESCRIPTION OF THE DEPOSITS

Near the southeast corner of the property, almost vertical walls of Moenkopi shale rise about 300 feet abruptly from the narrow valley of the Paria River. A gray bed of Shinarump conglomerate 10 to 20 feet thick caps the Moenkopi. This bed, being resistant to erosion, generally forms a bench 100 to 500 feet wide from which steep slopes of Chinle formation rise. The Chinle is approximately 650 feet thick and is composed largely of shale. Sandstone occurrence near the middle of the lower half of the formation appears to be a favorable horizon for uranium mineralization, as indicated by several high-grade spots of ore found in its outcrops. The Chinle is capped by the Glen Canyon series, which towers for more than 1,000 feet in great, vertical walls called the "Vermilion Cliffs." In this area, the beds strike northeasterly and dip about 3 degrees to the northwest.

Numerous spots in the favorable sandstone horizon of the Chinle show from weak to strong radiometric readings. In all cases observed, the mineralization occurs in conjunction with carbonized wood and green copper stains and disseminations of copper carbonate.

The best ore showing examined is in Cut No. 1 on the Red Wing No. 4 claim. Here, a 5-foot bed of sandstone carries scattered spots of green, copper-stained ore. By careful selective mining and sorting, approximately 45 tons of ore assaying from 0.21 to 0.58 percent U_3O_8 is reported to have been produced on a "split-check" contract by the Allred Company. This sandstone bed appears to be the favorable member in the Chinle, in a landslide block which has brought the bed down to within 15 feet of the top of the Shinarump.

Cut No. 2 on the Red Wing No. 3 claim has exposed a small lens of good-grade ore about 6 feet long and 1 foot thick. The host rock is sandstone in a landslide block, which probably came from the same formation as exposed in Cut No. 3 on the same claim. Cut No. 3 encountered sandstone boulders which contain uranium mineralization.

At Cut No. 2, a 30-foot adit was driven on the mineralized sandstone bed. It is reported that about 25 tons of ore has been sorted and stockpiled from the rock broken in the adit.

It is believed the mineralized sandstone exposed in the three cuts and in the adit is the same, and that it occurs in the Chinle about 175 feet above the Shinarump formation.

One outcrop of Shinarump, on Souvall No. 1 claim, shows strong radioactivity.

On March 2, 1955, Max Ingalls reported a new strike of good-grade uranium ore in the favorable sandstone horizon in the Chinle on the Lehnheer Nos. 1 and 2 claims, from which ore is presently being produced.

MINABLE ORE RESERVES

The applicant reports a rough estimate of reserves in the area of Cut No. 1 on Red Wing No. 4 claim as being 20,000 tons of ore averaging 0.23 percent U_3O_8. This estimate is considered to be optimistic after observable evidence is scrutinized. The favorable sandstone horizon has been exposed by bulldozer stripping for a distance of some 235 feet along its strike. The average thickness of the bed is about 5 feet. Open-pit mining has uncovered the bed at one place for a distance of approximately 25 feet down-dip. Ore produced from Cut No. 1 was selectively mined and hand sorted from the 5-foot-thick sandstone bed, and averaged 0.5 percent U_3O_8. From the sporadic deposition of the U_3O_8 mineralization in the bed, and from the size of the mine waste dump, it is estimated that the rock in place will assay 0.1 percent U_3O_8. Assuming that the mineralized bed will extend to at least three times the exposed size, inferred reserves are 10,000 tons of ore averaging 0.1 percent U_3O_8.

Other spots of ore mineralization examined are too small to be considered in an ore-reserve estimate.

The recent strike made on Lehnheer Nos. 1 and 2 claims, and reported by Max Ingalls, may indicate a substantial tonnage of ore.

It may be generally stated that the extent of exposed ore mineralization is not great enough to permit accurate estimation of ore reserves.

PRESENT STATUS

From the end of the dirt country road, just above Lees Ferry, a primitive road has been constructed along the Paria River (the road crosses and recrosses the river numerous times) for approximately 4 miles to the company's camp. The camp is situated at a fresh-water spring about 2 miles up the river from the mine workings on the Red Wing claims, and consists of a crude bunkhouse and boarding house, large enough to accommodate 12 men.

An access road has been bulldozed to the top of the canyon rim on the Red Wing claims. Three open cuts have been made by bulldozer stripping on the Red Wing Nos. 3 and 4 claims. A 30-foot adit has been driven on Red Wing No. 3 claim.

A plentiful supply of mine labor may be had from the nearby Navajo Indian Reservation. Kanab, Utah, approximately 80 miles west of the property, and Flagstaff, Arizona, about 125 miles to the south, are reliable sources of supplies.

Sufficient water for mining and milling is available from the adjacent Paria River and also from the Colorado River, some 2 miles distant. Several small, fresh-water springs exist in the area, from which drinking water may be obtained.

A good landing strip has been constructed and is in active use at Marble Canyon.

PROJECT PROPOSALS WITH COSTS

The applicant proposes to drill 74 holes to explore for ore mineralization in the Chinle formation and Shinarump conglomerate. The proposed holes range in depth from 260 to 340 feet on a 420-foot grid pattern, arranged in northwest-southeast and northeast-southwest directions, at locations indicated on figure 2. It is proposed that 5,260 feet of the 21,620 feet of total drilling, or 18 holes, be core drilled to establish geologic and radiometric control.

It will be necessary to construct approximately 34,400 feet of access roads to the various drill-hole sites. The applicant plans to contract the drilling and the supervision and engineering to experienced and qualified exploration companies.

The field examiners believe that the drill holes for the above program have been laid out on a too-widely scattered pattern, and recommend that a smaller area, in the most favorable known location on the property, be explored by drilling on a 200-foot grid pattern. The following is an alternate-proposed program:

Stage I

1. Drill 70 vertical non-cored or cored holes on a 200-foot grid pattern as shown on figure 2, to be bottomed after they have passed

through the potential ore-bearing sandstone horizon in the Chinle formation, at an average depth of 100 feet. Total footage drilled in Stage I shall not exceed 7,000 feet.

2. Cuttings from non-cored drill holes should be carefully collected from each 2-foot drill interval and preserved for use of the DMEA. (Core might provide a little more information in the potential ore zones, but cuttings from non-cored holes should be satisfactory if care is exercised in the collection and logging.)

3. Radioactivity should be measured by probing each hole with suitable gamma-ray detection equipment as soon as possible after drilling.

4. All samples showing visible uranium or copper minerals or anomalous radioactivity should be chemically analyzed for uranium and copper.

Stage II

1. Drill not more than 2,800 feet of offset holes around Stage I drill holes which contain at least a 1-foot thickness of ore-grade mineralization (not less than 0.1 percent U_3O_8 or 1.0 percent copper). Offset holes should be located approximately 50 feet from original ore holes, and should bottom as in Stage I.

2. Samples should be collected and preserved, analyses made, and holes probed as in Stage I.

Stage III

1. Drilling, not to exceed 2,800 feet, should be continued on a 200-foot grid pattern, with 50-foot offsets around ore holes, to explore mineralized ground or definite ore trends discovered in Stages I and II.

Stages II and III should not proceed until after inspection of each preceding stage has been made by DMEA representative and approval given for continuation.

Estimated Costs

Stage I	- 70 holes at average 100-foot depth ----------	7,000 feet
Stage II	- 28 holes at average 100-foot depth ----------	2,800 "
Stage III	- 28 holes at average 100-foot depth ----------	2,800 "
Total	- 126 holes at average 100-foot depth ----------	12,600 feet

Core drilling will be conducted through the potential ore-bearing horizon, which is estimated to average 20 feet thick.

Core drilling footage	- 126 holes at 20 feet ----------	2,520 feet
Non-core drilling footage	- 126 holes at 80 feet ----------	10,080 feet
Core drilling cost	- 2,520 feet at $3.00 per foot -----	$ 7,560.00
Non-core drilling cost	-10,080 feet at $2.00 per foot -----	$20,160.00
Total drilling cost	-- 12,600 feet at $2.20 per foot -----	$27,720.00

It is estimated that 1,500 feet of drill hole will require reaming and casing.

Reaming and casing cost - 1,500 feet at $3.50 per foot------	$ 5,250.00
Reaming and casing cost per foot of total drilling ---------	0.42
Estimated standby time - 1 hour per hole at $12 per hour ---	$ 12.00
Estimated standby time cost - 126 holes at $12 per hole ----	1,512.00
Estimated standby time cost per foot of total drilling -----	0.12

Access roads - 13,800 feet constructed in 200 hours at $12.50 per hour ----	$2,500.00
Access roads cost per foot of road ----------	0.18
Access roads cost per foot of total drilling ----------	0.20
Surveying cost - 126 hole locations at $20 each --------	$2,520.00
Surveying cost per foot of total drilling ----------	0.20
Supervision and engineering cost - 60 days at $75 per day ------	$4,500.00
Supervision and engineering cost per foot of total drilling -----	0.36

COST SUMMARY

Drilling cost per foot ----------	$ 2.20
Reaming and casing cost per foot of drilling ----------	0.42
Standby time cost per foot of drilling ----------	0.12
Access roads cost per foot of drilling ----------	0.20
Surveying cost per foot of drilling ----------	0.20
Supervision and engineering cost per foot of drilling ---	0.36
Total cost per foot of drilling ----------	$ 3.50
Stage I - 70 holes - 7,000 feet at $3.50 per foot ---	$24,500.00
Stage II - 28 holes - 2,800 feet at $3.50 per foot ---	9,800.00
Stage III - 28 holes - 2,800 feet at $3.50 per foot ---	9,800.00
Total 126 holes -12,600 feet at $3.50 per foot ---	$44,100.00
Government participation at 75 percent ----------	$33,075.00

PROPOSED FINANCING

The applicant reports he is prepared to invest $11,025 in the proposed exploratory project, which is 25 percent of the estimated cost of $44,100, in accordance with the regulations on Government participation, as stated in Section 7, DMEA Order 1 Amended.

CONCLUSIONS AND RECOMMENDATIONS

The production of approximately 45 tons of ore, assaying about 0.5 percent U_3O_8, from the favorable sandstone horizon in the Chinle formation, together with several exposed spots of strong uranium and copper mineralization in the same horizon, make a limited program of exploration for the property desirable.

Property leased from the State of Arizona is included in the Red Wing No. 1, Red Wing No. 2, Red Wing No. 3, and Red Wing No. 6 claims, and totals 76.36 acres. The lease will expire August 1, 1974. All remaining company property is composed of lode claims, properly located on public domain and duly recorded. The applicant's title to the property heretofore described appears to be valid.

A discussion of the application was conducted with geologists of the Salt Lake City office of the Atomic Energy Commission. They concur with the alternate proposals.

The applicant has agreed to accept the alternate plan if it is approved.

Recommendation is made that the alternate program of exploration of the Marble Canyon Uranium, Inc., property be approved.

IN REPLY REFER TO:

/DMEA
Date Rec'd.

APR 11 1955

BUREAU OF MINES
Denver, Colorado

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

April 8, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

TRANSMITTED
MAY 6 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3612 (Uranium), Marble Canyon Uranium Corporation, Red Wing claims, Coconino County, Arizona. Examination report.

Enclosed are 10 copies of a geologic report by E. S. Johnson, U. S. Geological Survey, covering his examination of the above subject property, and 10 copies of a letter from E. E. Thurlow to Johnson discussing the proposed exploration program.

Johnson describes the geologic conditions which lead him to believe that exploration of the Chinle ore horizon, considerably modified from that proposed by the applicant, is warranted. His conclusion that exploration of the Shinarump conglomerate is not warranted is certainly justified by the poor results of exploration of that formation in the vicinity of Red Wing claims, by the fact that exposures of Shinarump conglomerate are not lithologically favorable for deposition of uranium ore, and by the fact that no Shinarump channels are known to exist on the claims or to project into them.

Harlan K. Nelson, Salt Lake Branch of the Atomic Energy Commission, concurs with the exploration program proposed by Johnson but in addition to the close spaced drilling would like to see a few wide spaced holes drilled over the entire claim group. From the DMEA point of view such wide spaced drilling must be classified as prospecting. With no definite targets, the possibility of finding ore by such random drilling is remote.

Although the positions of the "slump blocks" referred to in Johnson's report are not shown on his geologic map and section, there is sufficient geologic evidence in the report to support the conclusions that exploration is warranted.

I concur with the proposed program but suggest that consideration be given to dividing Stage I drilling into two sub-stages,

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(Date)

the first to consist of 30 holes on 400-foot centers, the second to consist of the remaining 39 holes of the 79 holes included in Johnson's first stage. Based on data received from the wide spaced holes (400-foot centers) certain areas might be determined as unfavorable, and in such areas the closer spaced holes (200-foot centers) could be eliminated from the program.

Nine extra copies of the figures contained in Johnson's report are included also for possible use in preparation of an exploration contract.

E. N. Harkman

E. N. Harkman
Manager, Field Team

Enclosures (38)

EHarkman:mr:rh

MINERAL DEPOSITS
DMEA
DEPARTMENT OF THE INTERIOR RECEIVED
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MAR 2 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

March 23, 1955

Memorandum

To: E. N. Harshman, DMEA Field Team, Region III

From: W. P. Williams

Subject: DMEA 3612, Marble Canyon Uranium Corporation, Red Wing claims, Coconino County, Arizona

Transmitted herewith are 11 copies of a geologic report by H. S. Johnson covering the subject property, 9 extra copies of Johnson's maps, the brochure, and 11 copies of a letter from E. E. Thurlow, U. S. Atomic Energy Commission, to Johnson concerning the property.

Johnson recommends that DMEA give assistance in exploring the Chinle formation on the property. He believes that exploration has a fair chance of finding uranium deposits as much as 5,000 tons in size. Furthermore, the discovery of a sizeable deposit in this area would greatly stimulate private activity.

Johnson has greatly modified the original exploration submitted by the applicant. Johnson believes that all exploration be confined to a sandstone zone in the Chinle formation, whereas the applicant wished to explore the Shinarump conglomerate as well as the sandstone zone in the Chinle.

I concur both with the recommendation that DMEA assistance be granted and with the recommendation that exploration be limited to the Chinle sandstone zone.

Members of the Salt Lake Exploration Branch of the U. S. Atomic Energy Commission greatly assisted the DMEA field team in making the field examination and evaluating the property.

T. E. Williams
For W. P. Williams
Geologist

TEM/mlr

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

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UNITED STATES DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3612, Marble Canyon Uranium, Inc., Red Wing claims, et al., Coconino County, Arizona

Uranium

Geologic Report

by

H. S. Johnson
U. S. Geological Survey

March 23, 1955

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

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ILLUSTRATIONS

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DMEA 3612

INTRODUCTION AND SUMMARY

On December 15, 1954, Marble Canyon Uranium, Inc., 725 Denver National Building, Denver,Colorado, applied for Government assistance to explore for uranium by drilling on the Redwing claims, et al (hereinafter referred to as the Redwing claims) in Tps. 40 and 41 N., R. 7 E., Coconino County, Arizona (see fig. 1).

The Redwing claims are about 2-1/2 miles up the Paria River from its junction with the Colorado River at the old site of Lee's Ferry. The nearest town is Marble Canyon (permanent population approximately ten people) on U. S. Highway 89 about 4 miles south of Lee's Ferry. An unimproved dirt road leads north from Marble Canyon to Lee's Ferry and from there 2 1/2 miles up the partly dry bed of the Paria River to the claims. The nearest sources of mining supplies are the towns of Kanab, Utah, about 80 miles to the west on Highway 89, and Flagstaff, Arizona, about 120 miles to the south.

Table 1, taken from material presented in the application form MF-103, lists the claims the company wishes to explore. It should be noted that 43 claims are listed here whereas 44 claims and one blank claim are shown on Exhibit 1(a) accompanying the application. The Mary claims Nos. 1-4 as shown on the claim map are probably meant to be the same as the Mary Y claims listed in Table 1 although it is not clear why no Mary Y No. 4 appears on the list. The claim map also shows one blank claim bounded on the north and south by the Jeannie No. 1 and Souvall No. 6 claims. The writer has not investigated the status of

the claims listed on Table 1 or the state mineral lease covering part of the Redwing claims, and as far as he knows there is no reason to question the legality of them. However, it should be noted that the Beeson geologic report, attached to the application, states that six claims are held under an Arizona mineral lease whereas Table 1 shows only four claims covered by such a state lease.

The Redwing claims were visited on January 26, 1955 by the DMEA examining team. Those present during the examination were T. E. Mullens and H. S. Johnson of the Geological Survey, M. H. Howes of the Bureau of Mines, LaMont Twitchell and Harlen Holen of the Salt Lake Exploration Branch of the Atomic Energy Commission, and John Holman, field superintendent of Universal Allied Uranium Corp. No representative of Marble Canyon Uranium, Inc., was present on January 26, but M. H. Howes and Harlen Holen returned to the property the following day to make a further examination in company with a representative of the applicant.

The exploration program planned by Marble Canyon Uranium, Inc., consists of drilling 74 holes totaling 21,620 feet on a 420-foot grid pattern to test the Chinle and Shinarump formations. Total cost of the project is estimated to be $93,987 of which the Government's share would be 75 percent or $70,490.25.

Small amounts of ore-grade uranium and copper mineralization occur at several places in Chinle slump blocks on the Redwing claims, and a small amount of production has come from the mineralized outcrops. It is thought that a limited exploration program is desirable to test for ore in place in the Chinle formation immediately behind these shows.

No Shinarump channels are known to extend under the Redwing claims, and drilling to test this formation would be blind drilling done on a grid and without geologic guides.

It is recommended that the original proposal be sharply revised so as to allow limited exploration of the Chinle formation alone in the immediate vicinity of mineralized outcrops. If this work succeeds in finding ore, more drilling may be desirable to test the ground farther away from the outcrop.

Harlan K. Holen of the Atomic Energy Commission has stated verbally that he agrees with the alternate plan of exploration proposed by the writer. Holen feels that blind pattern drilling to test the Shinarump formation is not justifiable on the Redwing claims in the light of our present knowledge. He does feel, however, that the Chinle formation may have some potential on the Redwing claims, and he thinks a limited drilling program is desirable.

GEOLOGY

The rocks exposed in the vicinity of the Redwing claims are gently dipping conglomerates, sandstones, siltstones, and shales of the Triassic Moenkopi, Shinarump, and Chinle formations. The Moenkopi formation in this area is about 450 feet thick and is composed mainly of thin bedded, evenly-layered, reddish-brown siltstone and fine-grained sandstone. Overlying the Moenkopi is the Shinarump formation.

The Shinarump formation is largely conglomerate and conglomeratic sandstone near Lee's Ferry and fills channels and scours cut into the Moenkopi surface. The Shinarump may be absent or range in thickness up to 150 feet or more, depending on the depth of scour into the top of the Moenkopi. Channel scours with depths of 150 to 200 feet are known in the area, but in some places on the divides between these channels the Shinarump is absent and the Moenkopi is in the direct contact with the overlying Chinle formation. Cross-stratification studies on the Shinarump channel-fill sandstones in the Lee's Ferry area show a resultant flow direction of N. 55° W. The Shinarump formation outcrops in a sharp cliff above the Moenkopi slopes and supports a narrow to medium-sized bench below the steep slopes formed by erosion of the less resistant Chinle formation. Uranium and copper mineralization is found in the Shinarump in the Lee's Ferry area and is largely confined to the bottoms of channel scours.

The Chinle formation is about 650 feet thick in the Lee's Ferry area and consists predominantly of variegated purple and red sandy shale and fine-grained red sandstone in part crossbedded and in part evenly layered. About 150 feet above the base of the formation is a continuous and distincitive grey to yellowish brown bench-forming sandstone unit that in places carries small amounts of uranium and copper mineralization and may reach thicknesses up to 50 feet.

Above the Chinle formation is several hundred feet of cliff-forming red sandstones, largely of eolian origin, of the Triassic Wingate formation and Jurassic (?) Kayenta formation and Jurassic Navajo formation.

The regional dip in the immediate vicinity of the Redwing claims is about 3° northwest. No large faults occur near the claims, but normal faults of a few feet displacement are not uncommon and considerable landslide and slumping has taken place on the Chinle slopes within the boundaries of the claims.

ORE DEPOSITS

In the vicinity of Lee's Ferry and the Redwing claims, uranium and copper mineralization occur in bedded deposits in sandstone and conglomerate in the Shinarump and Chinle formations. Most of the deposits found to date are less than 5 feet thick and are thought to be not over a few hundred or possibly a few thousand tons in size. Grades probably average about 0.25 percent U_3O_8 and about one percent copper. Production from this part of the Colorado Plateau has been limited to a few hundred tons of ore, and there are no important mines in the area at the present time. The Redwing claims had produced through the end of 1954 a total of 21.95 tons of ore averaging 0.67 percent U_3O_8. This has been obtained by highly selective pick and shovel mining in Chinle slump block material. The small production may be due in part to the relative isolation of the area and the long hauls necessary to reach uranium buying stations. Marysvale, probably the nearest buying station, is about 205 miles away. Current AEC plans to construct a buying station and mill near Cameron, 73 miles to the south of Marble Canyon, may have the effect of giving new life to exploration and mining in this area.

Deposits in the Shinarump conglomerate in the Marble Canyon-Lee's Ferry area contain copper and uranium, and the unoxidized ores probably consist of pitchblende and copper and iron sulphides. On weathered outcrops, secondary yellow and green uranium and copper minerals are easily recognized where they are present in appreciable quantities. Most of the mineralization is confined to the lower parts or flanks of channel scours and occurs at or within a few feet of the Shinarump-Moenkopi contact. Carbonized wood fragments in the sediments seem to cause a favorable environment for deposits and are often partially replaced by uranium and copper. A bleanched zone up to 6 or 8 feet thick occurs immediately beneath the Shinarump and is usually thickest under the deeper parts of the channel scours and under the better mineralization. No direct relationship exists between intensity of mineralization and thickness of the bleached zone, but bleached zones greater than 1 to 2 feet in thickness are thought to be a clue to favorable ground in this area.

Channels in the Shinarump formation usually contain coarser, less well-sorted sediments than the surrounding rocks and are thought to have provided passageways for laterally moving uranium-bearing solutions. Where the channel-fill sediments are predominantly clean sandstone and conglomerate, uranium-bearing solutions probably moved readily through the rock with little tendency to form well-defined ore bodies. Where carbonaceous material and/or mud became more abundant, a chemical reaction and/or a permeability trap may have acted to cause precipitation of uranium and copper. Shinarump channel-fill sediments in the Lee's Ferry area appear to be largely clean sandstone and conglomerate and are not considered by

the writer to be really favorable host rocks for uranium deposits. If, however, muddy sands containing carbonaceous material are present somewhere along one or more of these channels, large uranium deposits could exist. So far we have no evidence that they do.

About 2 miles south-southeast of the Redwing claims, Universal Allied Uranium Corporation and McCary-Beacom Company have done considerable drilling to test a well-defined channel at the base of the Shinarump. Results to date show the channel-fill sediments to be predominantly clean sandstone and conglomerate, and no significant quantity of ore-grade mineralization is indicated.

The Shinarump underlies most of the Redwing claims at depths of 200-350 feet, but no channels are known to extend under them. Even if channels are present, there is no reason to expect that they would be lithologically more favorable for uranium deposits than the channel-fill sediments seen on rim exposures and tested by drilling elsewhere in this area.

The Chinle formation in the Marble Canyon-Lee's Ferry area probably has as much potential for uranium deposits as the Shinarump conglomerate. All the significant uranium mineralization found in the Chinle so far in the area is confined to a fairly continuous, bench-forming sandstone unit which may be absent or range up to 50 feet thick and occurs about 150 feet above the base of formation. This unit is composed of poorly sorted medium to coarse-grained grey-white to yellowish brown arkosic sandstone. The quartz and feldspar grains are semi-angular and are embedded in a matrix of grey-green bentonitic (?) mud or clay. The average

thickness of this unit is about 5 to 10 feet, but the more prominent lenses attain a thickness of 30 to 50 feet. Sparse amounts of black carbonaceous or asphaltic (?) material can be seen in the rock, and copper and uranium mineralization is in places associated with the black material in the thicker lenses. Mineralization of this sort is exposed at several places on the Redwing claims. These shows have thicknesses of 1 to 3 feet and outcrop lengths of 10 to 50 feet. The grade may be over 1.0 percent U_3O_8 in small concretion-like masses but usually will average about 0.25 percent U_3O_8 or less. Green secondary copper minerals are a guide to the uranium mineralization here.

None of the two or three deposits seen on the rim exposures on the Redwing claims appear to carry more than about a hundred tons of low grade copper-uranium ore. All mining to date has been highly selective work with pick and shovel in slumped material on the Redwing Nos. 3 and 4 claims. The uranium ore in the slumped material is very nearly in equilibrium and, although it has been re-distributed as secondary minerals along fracture surfaces, does not appear to have migrated more than a few inches or feet before being re-precipitated. The slump block deposit is not thought by the writer to contain more than a few hundred tons of ore, and drilling for deposits of that sort is probably not feasible. However, the mineralized slump material on the Redwing No. 3 and 4 probably came from an ore deposit in place somewhere under the Redwing Nos. 2, 3, and 6, the Happy No. 1 and 2, or the Leone No. 3 claims. A deposit there might possibly be in the

500 to 5,000 tons class with an average grade of about 0.25 percent U_3O_8. Certainly the many miles of Chinle outcrop in the area have not intersected and exposed to view any deposits larger than that, if even that large.

PROPOSED EXPLORATION

Marble Canyon Uranium, Inc. proposes drilling 18 core holes and 56 non-core holes on a 420-foot grid pattern to explore for uranium in the Chinle and Shinarump formations on the Redwing et al claims (see Exhibit 1 (a) accompanying form MF-103). Depths are expected to range from 260 to 340 feet and the total footage is estimated to be 21,620 feet. The 18 core holes are for the purpose of establishing geologic and radiometric control. Provision is also made for bulldozing drill access roads and for the surveying and clearing of drill sites. All holes are to be probed with gamma ray detection equipment after drilling, and the whole exploration project is to be under the supervision of Geophysical Core Drilling Company. The total cost of the progject is estimated by the applicant to be $93,987, of which the Government's share would be 75 percent or $70,490.25. Table 2 shows the itemized cost estimate supplied by the applicant with form MF-103.

An alternate plan of exploration is proposed by the writer as follows:

Stage I

(1) Drill with air rotary rig or diamond drill 70 holes having a maximum total footage of 7,000 feet on a 200-foot grid pattern as shown in figure 2. Holes should average about 100 feet in depth and are to be bottomed as soon as it is recognized that the drill has passed through the grey-white to yellowish brown arkosic sandstones of the potential ore-bearing unit.

(2) Collect cuttings from each 2-foot interval as samples. Core might provide a little more information in the potential ore zone, but the air rotary drill should do a satisfactory job if care is taken in collecting and logging the cuttings. Cuttings should be preserved until a representative of the DMEA has had an opportunity to study and log them if he so desires.

(3) Probe each hole with gamma ray detection equipment as soon as possible after drilling.

(4) Have chemical assays for uranium and copper run on any sample that has visible copper or uranium minerals or shows anomalous radioactivity. Splits of any samples held for assay should be preserved for DMEA use.

Stage II

(1) Drill up to a maximum of 2,800 feet of hole in offsets around any holes containing a thickness of 1 foot or more of ore-grade mineralization (not less than 0.10 percent U_3O_8 or 1.0 percent copper). The offset holes should be 50 feet away from the original ore hole and will probably average 100 feet in depth.

(2) Collect and assay samples and probe holes as in Stage I.

Stage III

(1) Continue drilling on a 200-foot grid pattern, with 50-foot offsets around ore holes, the remainder of any mineralized ground or definite ore trends discovered in Stage I and II. The total footage of Stage III drilling is not to exceed 2,800 feet.

No Stage II or Stage III work shall be allowed until DMEA representatives have had an opportunity to appraise the results of the previous stage and have given their consent for the work to continue. The project may be terminated at any time if, in the opinion of the DMEA, results to that point do not justify further exploration.

CONCLUSIONS AND RECOMMENDATIONS

Marble Canyon Uranium, Inc. has submitted a proposal to explore both the Shinarump and Chinle formations on the Redwing claims in the Marble Canyon-Lee's Ferry area. Uranium is known to occur in both these units in the area, but no large deposits have been found to date.

Uranium deposits in the Shinarump formation are confined to the bottom and flanks of channel scours cut into the top of the Moenkopi formation. Where exposed on the rim or tested by drilling, the lithology of the Shinarump formation in this area is not considered by the writer to be really favorable for uranium. The Shinarump underlies the Redwing claims at depths ranging from 260 to 340 feet but no channels are known to extend under the claims. Blind drilling on a grid pattern in hopes of

delineating a Shinarump channel and then finding a significant uranium deposit somewhere along the channel is not a promising project on the Redwing claims. It would require much drill hole footage just to find a channel, if one exists, and would then require more drilling to search for a deposit. Exploration to date in the Marble Canyon-Lee's Ferry area has not found Shinarump deposits of more than a few hundred tons in size.

The Chinle formation in the Marble Canyon-Lee's Ferry area, on the other hand, is considered by the writer to have as much potential for uranium deposits as the Shinarump formation. Uranium mineralization is known in slump blocks of Chinle sandstone on the Redwing claims and some ore has been produced by highly selective mining. It is the opinion of the writer that the ore in the Chinle slump blocks probably is part of a deposit which was formed in the sandstone prior to the slumping. Some re-distribution of the ore took place after slumping but the uranium probably did not more more than a few inches or feet. The original deposit is expected to be on the order of magnitude of 1,000 tons of low-grade ore and may still be present somewhere under the Redwing claims. A deposit of this size would provide a target with an area of 5,000 to 25,000 square feet. If the mineralization in the slumped material is a direct clue to a deposit in place, the most likely position of this deposit would be under the Redwing Nos. 1, 2, 3, 5, and 6, the Happy Nos. 1 and 2, or the Leone No. 3 claims.

In view of the foregoing conclusions, the writer feels that the plan of exploration proposed by Marble Canyon Uranium, Inc. should be sharply revised to eliminate drilling the Shinarump formation and to permit more thorough testing of the Chinle on a portion of the Redwing claims. The 420-foot spacing of holes proposed by the applicant is considered too wide in view of the probable target size. Closer spacing over the whole block of ground is not justified by the value of the relatively small deposits likely to be found. However, the ore in the slumped material is thought to be a direct clue to a deposit in place, and some drilling is desirable in the area where this deposit is most likely to lie. If no discovery is made after thorough testing of the more likely ground, further exploration is not considered justified.

It is hereby recommended that the applicant's original plan of exploration be modified. The writer is of the opinion that limited exploration of the Chinle formation on the Redwing claims is desirable. Exploration is thought to have a fair chance of finding uranium-copper deposits with an average grade of 0.25 percent U_3O_8 and up to 5,000 tons in size. Discovery of such a deposit could be relied upon to stimulate private activity in a part of the Colorado Plateau which may have a greater potential than is now apparent. Accordingly, an alternate plan of exploration is outlined in the section of this report dealing with exploration. It is recommended that a contract be approved along the lines of the alternate plan. The contract should specify that the DMEA has the right to terminate the work after any stage, if it so desires.

Harlen K. Holen of the S lt Lake Branch of the Atomic Energy Commission has stated verbally to the writer that he agrees that some exploration is desirable on the Redwing claims. He approves the alternate program suggested herein, but he would also like to see a little wide spaced drilling over the whole block of ground the applicant originally proposed to explore. Holen strongly advises that the DMEA require that a competent geologist be placed in charge of the work, if a contract should be approved.

Table 1.--Marble Canyon Uranium, Inc. properties, Tps. 40 and 41 N., R. 7 E., Coconino County, Arizona 1/

Name of claim	Book	Page	Location
Redwing No. 1 (state lease)	57	494)	
Redwing No. 2 (" ")	"	495)	Sec. 2, T. 40 N., R. 7 E.
Redwing No. 3 (partially state lease)	"	496)	
Redwing No. 4	"	497)	
Redwing No. 5	"	498	Sec. 3, T. 40 N., R. 7 E.
Redwing No. 6 (partially state lease)	"	499)	
Redwing No. 7	"	458)	
Redwing No. 8	"	459)	
Redwing No. 9	"	460)	
Redwing No. 10	"	461)	
		)	Sec. 2, T. 40 N., R. 7 E.
Souvall No. 1	"	462)	
Souvall No. 2	"	463)	
Souvall No. 3	"	464)	
Souvall No. 4	"	465)	
Souvall No. 5	"	466)	
Souvall No. 6	58	92)	
Souvall No. 7	"	93)	
		)	
Happy No. 1	57	456)	
Happy No. 2	"	457)	
		)	
Leone No. 1	"	467)	
Leone No. 2	"	468)	
Leone No. 3	"	469)	
		)	
Lehnheer No. 1	58	86)	Sec. 3, T. 40 N., R. 7 E.
Lehnheer No. 2	"	87)	
Lehnheer No. 3	57	477)	
Lehnheer No. 4	"	478)	
		)	
Marion No. 1	"	486)	
Marion No. 2	"	487)	
Marion No. 3	"	488)	
Marion No. 4	"	489)	
Marion No. 5	"	490)	

Ingalls No. 1	52	597	Sec. 34, T. 41 N., R. 7 E
Ingalls No. 2	"	598	" 34-35,
Ingalls No. 3	"	599	" 35,
Ingalls No. 4	"	600	" 35,
Jeannie No. 1	53	2)	
Jeannie No. 2	"	3)	
Jeannie No. 3	"	4)	Sec. 34, T. 41 N., R. 7 E
Jeannie No. 4	"	5)	
Jeannie No. 5	"	6)	
		)	
Mary Y No. 1	"	14)	
Mary Y No. 2	"	15)	
Mary Y No. 3	"	16)	

1/ After information given in application form MF-103.

Table 2

Estimate of Costs (Taken from application form MF-103)

(a) Independent Contracts

(1) Drilling

No. of Holes	Cored Holes	Non-Cored Holes	(Feet) Depth	Price per Foot	Footage: Cored Holes	Footage: Non-Cored Holes	Cost: Cored Holes	Cost: Non-Cored Holes	Total
2		2	340	$3.20		680		$2,176	$2,176
	0		340	3.90	0				
4		2	330	3.20		660		2,112	4,686
	2		330	3.90	660		$2,574		
6		6	320	3.20		1,920		6,144	6,144
	0		320	3.90	0				
8		4	310	3.20		1,240		3,968	8,804
	4		310	3.90	1,240		4,836		
10		10	300	3.20		3,000		9,600	9,600
	0		300	3.90	0				
12		6	290	2.95		1,740		5,133	11,310
	6		290	3.55	1,740		6,177		
14		14	280	2.95		3,920		11,564	11,564
	0		280	3.55	0				
14		8	270	2.95		2,160		6,372	12,123
	6		270	3.55	1,620		5,751		
4		4	260	2.95		1,040		3,068	3,068
	0		260	3.55	0				
74	18	56			5,260	16,360	$19,338	$50,137	$ 69,475

Total Footage: 21,620

Estimated stand-by time: 1 1/2 hours per hole at $12.00 per hour, 1,332. 1,332

Table 2 - Continued

	Unit or Footage	Unit Price	Total
(2) Estimated reaming and casing of holes to prevent cave-ins, poor core recovery and sticking tools	3,000	$3.50	$10,500
Sub-total drilling -			$81,307
(3) Additional access roads Estimated bull-dozing hours	296	12.50	3,700
(4) Additional surveying of drill locations - 74 locations	74	20.00	1,480
(5) Supervision, radiometric probing, geological counseling, evaluation report after drilling, logging and analysis of cores, estimated time required: 100 working days	100	75.00	7,500
Total -			$ 93,987

(b) Labor, supervision, consultants - None other than included above.

(c) Operating materials and supplies _ None other than included above.

(d), (e), (f), (g), (h) - None other than included above.

Summary of estimated costs, including drilling, coring, assays, preparation of additional access roads, surveying in drill sites and hole locations, supervision, radiometric probing, counseling, evaluation reports and all possible contingencies: Total estimate of costs $93,987 divided by 21,620 feet of d;rilling equals $4,35 per foot for completed turn-key operation.

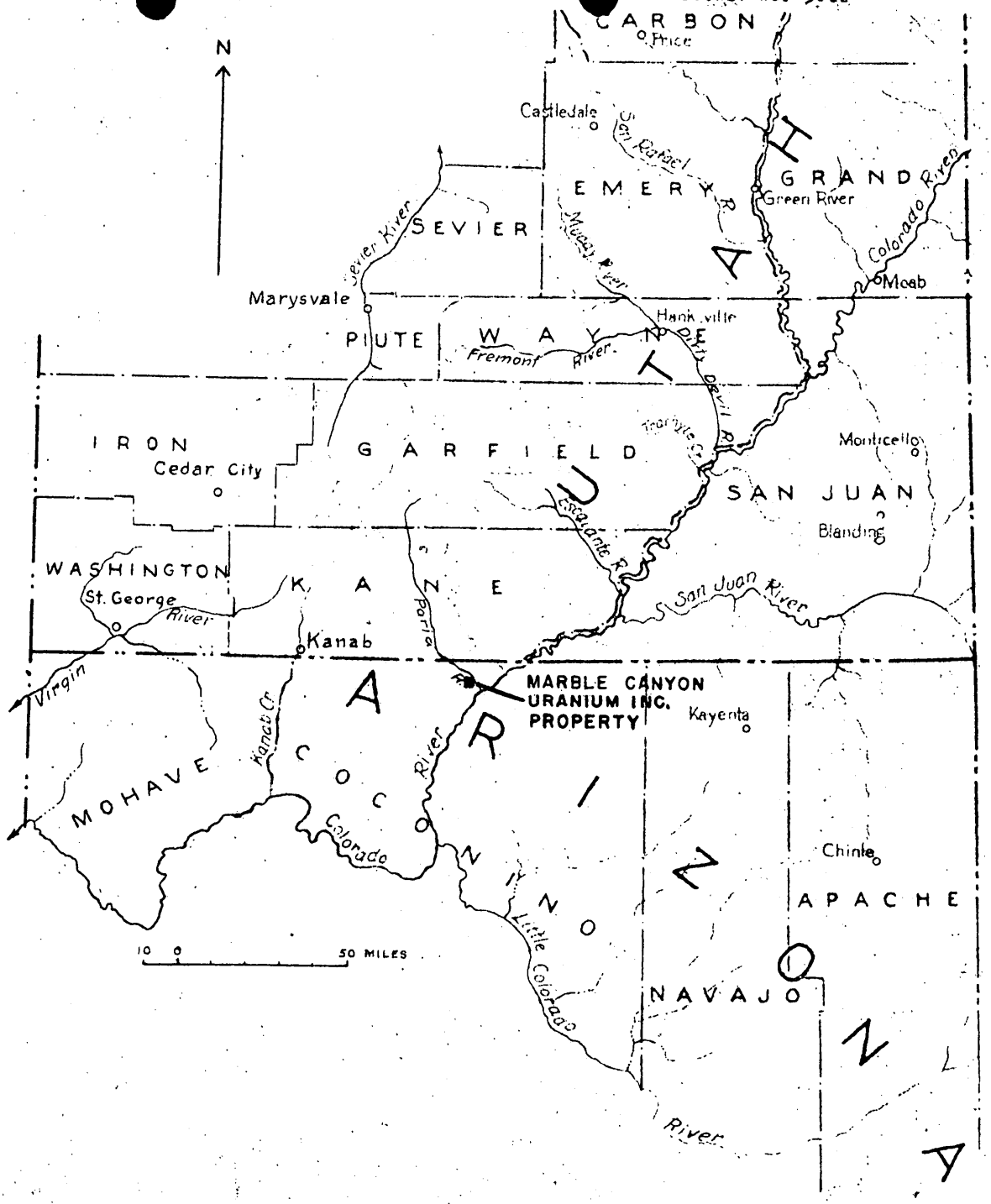


Figure 1. INDEX MAP OF PARTS OF ARIZONA AND URAH SHOWING LOCATION OF MARBLE CANYON URANIUM INC. PROPERTY COCONINO COUNTY, ARIZONA

DMEA -3612

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF RAW MATERIALS
Salt Lake Exploration Branch

ADDRESS REPLY TO
U. S. Atomic Energy Commission
P. O. Box 2196
Salt Lake City, Utah
AND REFER TO

SLEB:DLD:af

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

March 21, 1955

Mr. Henry S. Johnson
U. S. Geological Survey
P. O. Box 360
Grand Junction, Colorado

Dear Mr. Johnson:

Mr. Holen's letter regarding the properties in Marble Canyon under consideration for DMEA loans was sent to this office for our review and comment. This is our established practice in submitting opinions on DMEA proposals. A copy of the actual application and proposal would assist us in making specific recommendations; however, the following general comments may be sufficient to your needs.

Universal Allied Uranium - There is a reasonable possibility of developing commercial ore on the small, most northerly mesa. The results of spot sampling of the mineralization in a channel exposed on both sides of the mesa are shown below.

Sample No.	Location	Width	%cU_3O_8	%eU_3O_8
F1346	South side of mesa	1.8'	0.199	0.224
F1348	"	3.0'	0.171	0.164
F1347	"	1.2'	0.082	0.074
(Sample F1347 represents the bottom 1.2' of sample F1348)				
F1349	North side of mesa	0.5'	0.086	0.069
F1350	"	1.5'	0.086	0.069
F1351	"	0.8'	0.018	0.014

Mike Howes also has these assays. The samples were cut at random over a lateral distance of 125 feet on the north side of the mesa and about 20 feet laterally on the south side and so may not be representative of the deposit.

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

Since we do not have their proposal at hand, we cannot offer concrete suggestions but we feel that some government participation in exploring the area is justified.

Red Wing Claim, Marble Canyon Mining Company - There are numerous mineralized zones in a Chinle sandstone bed which crops out for a distance of five miles along the south side of the Paria River. Several tons of fair-grade ore have been produced by careful hand picking of mineralization in the "lower slump block".

The area visited by Howes, Engles, and Holen is in white-red sandstone of the "lower slump block" but our information is that the better mineralization which they visited is not in the area covered by the DMEA application.

To date, very little drilling has been done to explore back from the outcrop of the Chinle in the Marble Canyon area. We feel that some exploratory drilling is warranted because of the numerous uranium occurrences found where this formation crops out.

Very truly yours,

Ernest E. Thurlow, Chief
Salt Lake Exploration Branch
Division of Raw Materials

cc: Mike Howes, USBM, Salt Lake City
Harlen Holen, Kanab

1/17/55 gla

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

224 New Customhouse
Denver 2, Colorado

January 14, 1955

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3612, Marble Canyon Uranium, Inc., 43 unpatented lode mining claims, Marble Canyon area, Coconino County, Arizona

Enclosed is a copy of a letter from Max Ingalls, President, Marble Canyon Uranium, Inc., relative to their mailing address.

W H King
W. H. King

Enclosure

Marble Canyon Marbles Inc.

[illegible]

[illegible]

[illegible]

[illegible] 1955

BUREAU OF MINES
DENVER, COLORADO

Bureau of Mines,
U. S. Dept. of Interior
New Customs House
Denver, Colo.

[illegible]

Gentlemen:

Re: [illegible]

Mr. [illegible]

It [illegible]

[illegible]

700 Docket Surname

Ellis
Kilgaard
Aldass
Selfridge
Johnson

JAN 13 1955

Marble Canyon Uranium, Inc.
Attention: Mr. Gould
725 Denver National Building
Denver, Colorado

Re: Docket No. DMEA 3612 (Uranium)
Red Wing claims, et al.
Coconino County, Arizona

Gentlemen:

The application for assistance in exploring your property, 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 for a field examination to the Executive Officer of Region IV at the following address:

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

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf

Administrator

EWEllis/foc
1-11-55
cc to: Docket
Adm. Reading File
Mr. Ellis
DMEA FT. Reg. IV
Code 700

R.C.J.

700

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

Ellis
Selfridge
Fryman
Matthews

JAN 13 1955

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

Re: Docket No. DMEA-3612 (Uranium)
Marble Canyon Uranium, Inc.
Red Wing claims, et al
Coconino County, Arizona

Dear Mr. King:

The captioned application is referred to Region IV Field Team for a field examination and recommendation. A copy of the application was retained by your office.

Enclosed are copies of memoranda from E. L. Newcomb, dated December 28, 1954, and John E. Crawford, dated January 6, 1955, members of the Uranium Commodity Committee.

You will note that the Red Wing Nos. 1 and 2 claims are held under lease from the State, and Red Wing Nos. 3 and 6 are "partially state lease" land. The J. J. Beacon report mentions 6 claims are held under Arizona State leases. The number of such claims should be checked. Furthermore, if a project is recommended, since the Applicant may be unable to obtain an Owner's Consent to Lien from the State of Arizona (as is the case in Utah), it will be necessary for the Applicant to furnish a Performance Bond or other suitable guarantee for the protection of the Government.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

J. H. Hedges
Member, Bureau of Mines (JHH)

Thor H. Kiilsgaard
Member, Geological Survey (THK)

EWEllis/foc/gla 1-11-55
cc to: Docket
Adm. Reading File
Operating Comm.
FT. Reg. IV
Code 700
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA

R.C.G.

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

January 6, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 6 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket No. 3612, Marble Canyon Uranium, Inc., 725 Denver National Building, Denver, Colorado

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

It is recommended that the application be referred to the Field Team for investigation and report, and that the Field Team be requested to discuss the application with Ernest A. Gordon, Atomic Energy Commission, Grand Junction, Colorado.

John E. Crawford

John E. Crawford

Attachment

Copy to: J. O. Hosted (2)

1/4/55 gla

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
DEC 29 1954

December 28, 1954

Re: DMEA-3612
Marble Canyon Uranium, Inc.
(Red Wing Claims, Etc.)
Coconino Co., Arizona
$93,987 - Uranium

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The proposed exploration program consists of 74 drill holes which will be located on a 420-foot spacing and drilled to depths ranging from 260 to 340 feet. The objective of the project is to test for possible uranium mineralization in the Chinle and Shinarump formations.

Evidence of uranium mineralization has been found in three "cuts" in rocks of the Chinle formation. However, two of the "cuts," Nos. 1 and 2, are believed to be in slump material from the mineralized Chinle horizon exposed in "cut" No. 3.

Limited sampling from lenses and small channels have indicated local concentrations of ore range in grade from 0.23 to 3.76 percent U_3O_8.

Though the presence of uranium mineralization has been determined, there appears to be a need for further prospecting on the property before an extensive drilling program is undertaken. It is possible that a limited project is warranted in the immediate area near "cut" No. 3 to explore the Chinle formation.

I recommend this application be referred to the Field Team for an examination of the Marble Canyon property.

E. L. Newcomb

E. L. Newcomb

December 22, 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- 3612 Marble Canyon Uranium, Inc.

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

December 22, 1954
Subject: DMEA-3612
Re: Exploration Assistance
Redwing, et al.

Marble Canyon Uranium, Inc.
ATTN: Mr. Gould
725 Denver National Bldg.
Denver, Colorado

Gentlemen:

The receipt of your application dated December 15, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3612 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

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

224 New Customhouse
Denver 2, Colorado

December 16, 1954

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region lV

Subject: (Uranium), Application of Marble Canyon Uranium, Inc.
43 unpatented lode mining claims, Marble Canyon area
Coconino County, Arizona

Enclosed are 3 copies of the subject application in the amount of $93,987.00.

1 copy of the brochure is being retained in this office. The brochure consists of:

(1) Form MF-103 and accompanying answer sheets.

(2) Claim map, Exhibit 1.

(3) Assay results, Exhibit 2.

(4) Geologic report, Exhibit 3.

W. H. King

W. H. King

Enclosures

SPOKANE 2, WASHINGTON

OFFICIAL BUSINESS

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

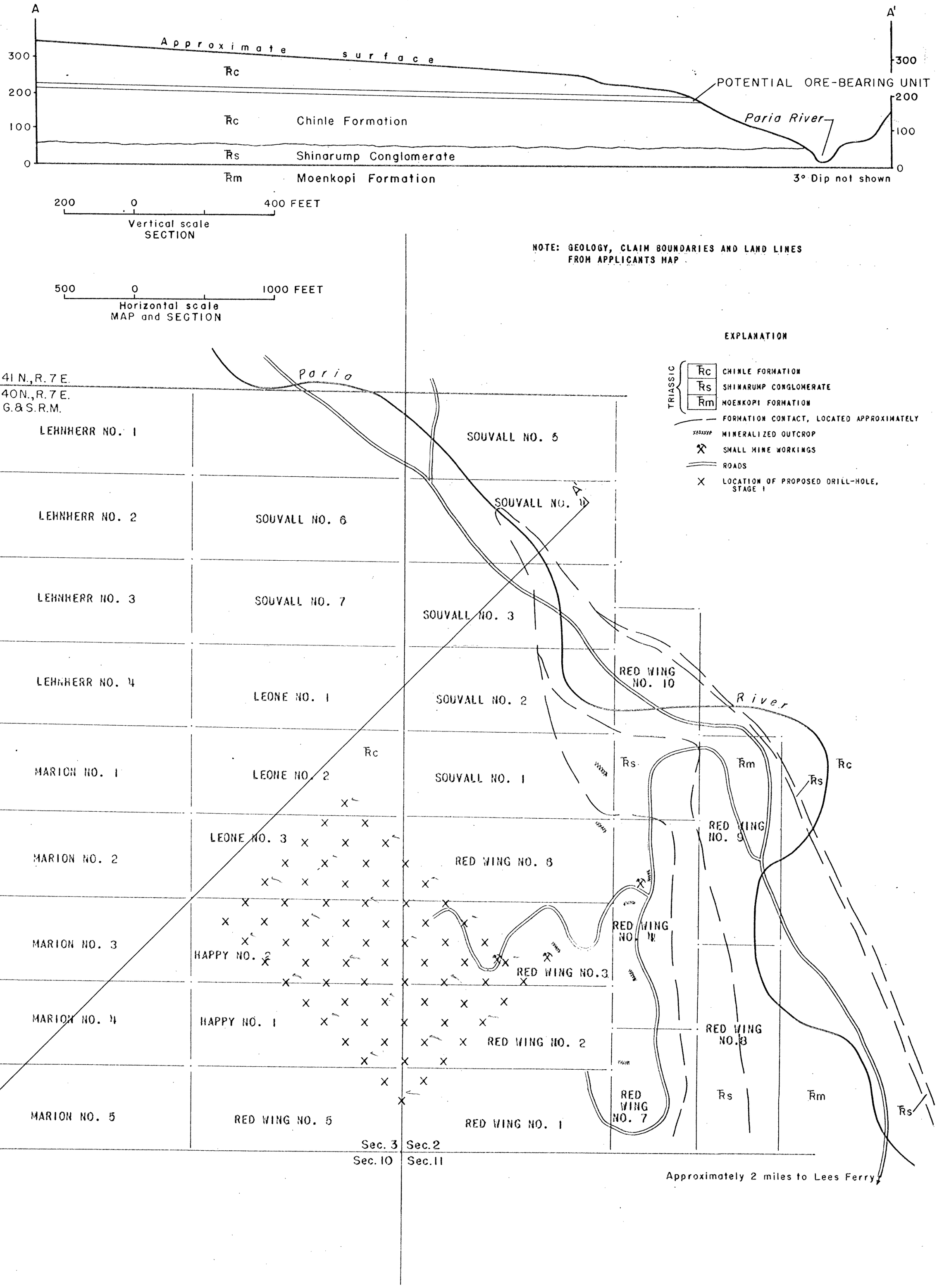
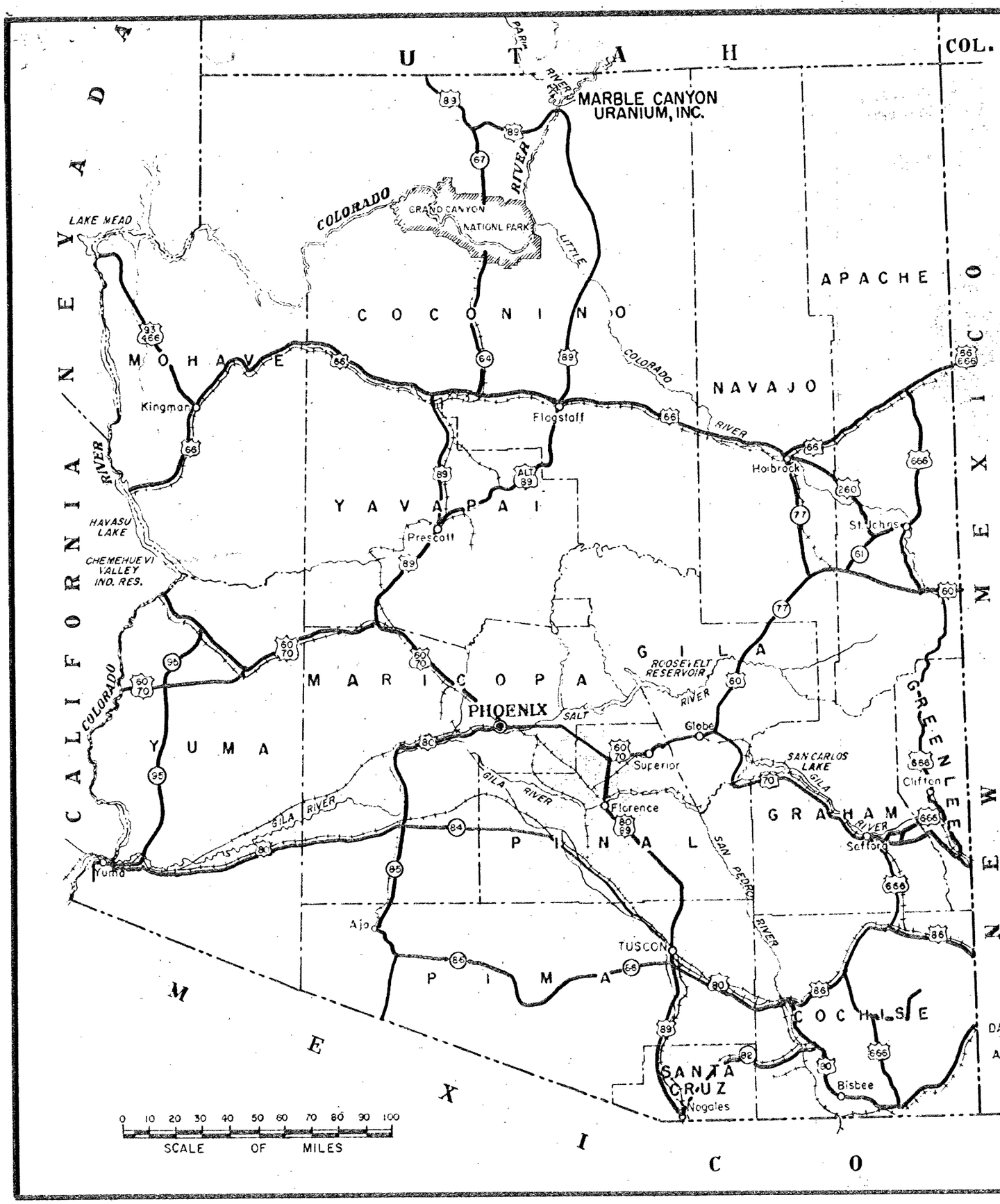


Figure 2. GEOLOGIC MAP SHOWING LOCATION OF PROPOSED DRILL HOLES ON THE RED WING CLAIMS
MARBLE CANYON URANIUM, INC.
COCONINO COUNTY, ARIZONA



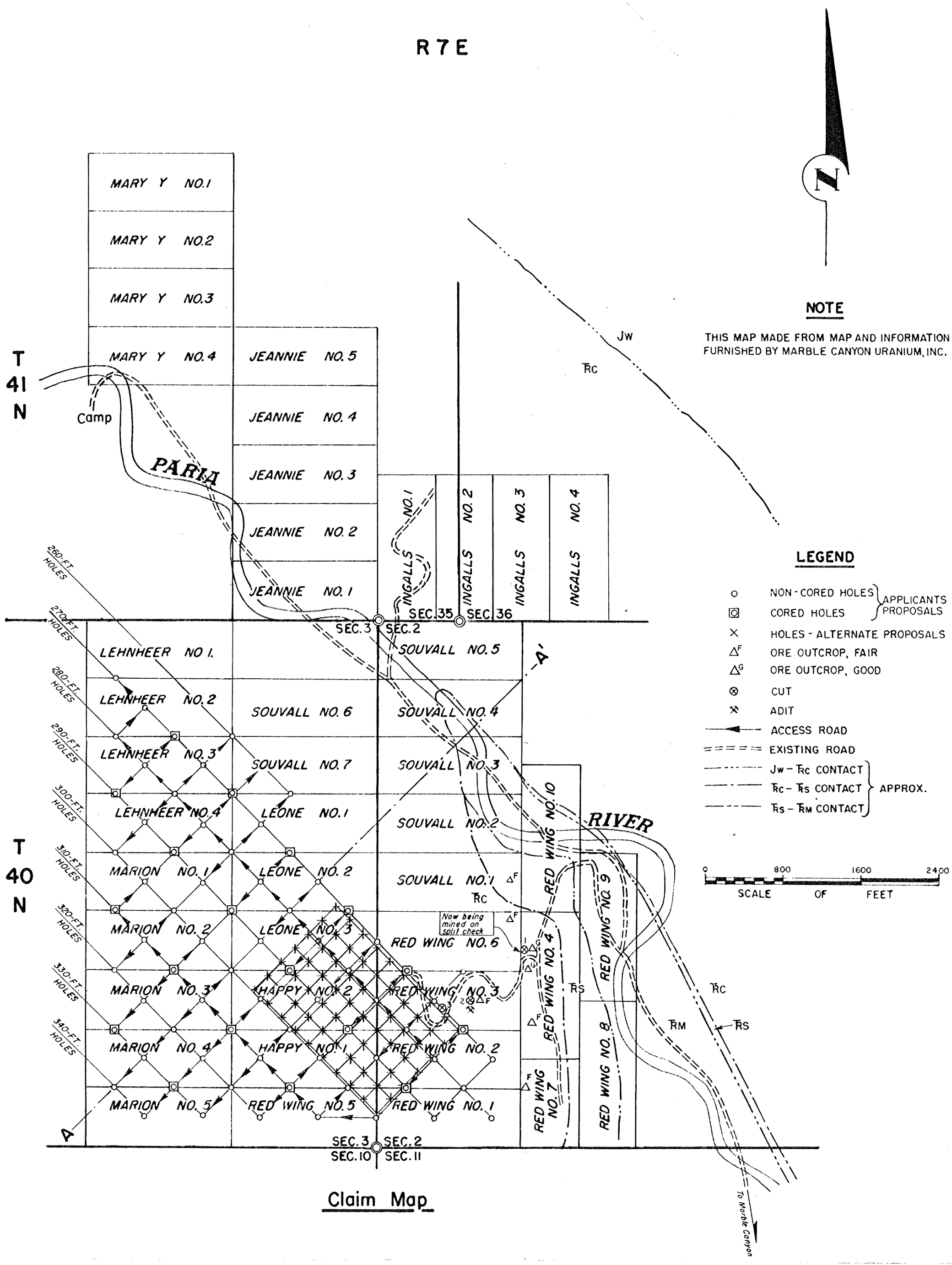
NOTE

DATA TRACED FROM HAMMOND'S LIBRARY WORLD ATLAS. ROADS PLOTTED FROM ARIZONA TOURING MAP OF STANDARD OIL COMPANY OF CALIFORNIA, 1950.

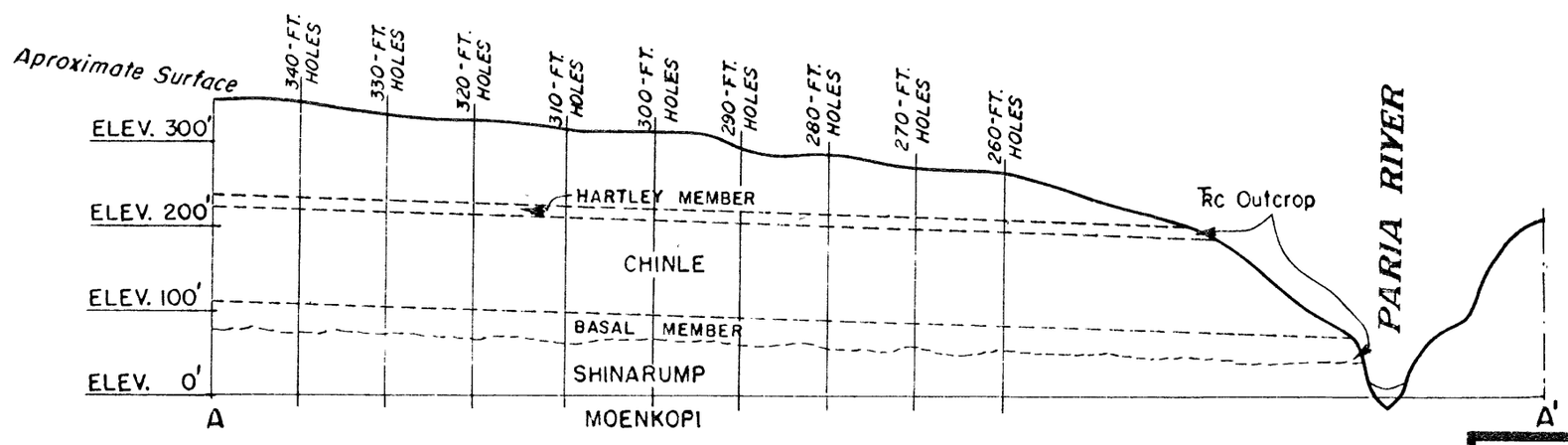
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 3612
Location Map
STATE OF ARIZONA
MARBLE CANYON URANIUM INC.
COCONINO COUNTY

ENGINEER: M. H. Howes	DATE: MARCH 10, 1955
DRAWN: MARCH, 1955; A.P.T.S.	1900 - 319 - F
CHECKED:	



Claim Map



Section A - A'

LOOKING N.W.

SHOWING APPROXIMATE DEPTH OF HOLES

0 100 200 400 600
VERTICAL SCALE OF FEET

0 800 1600 2400
HORIZONTAL SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

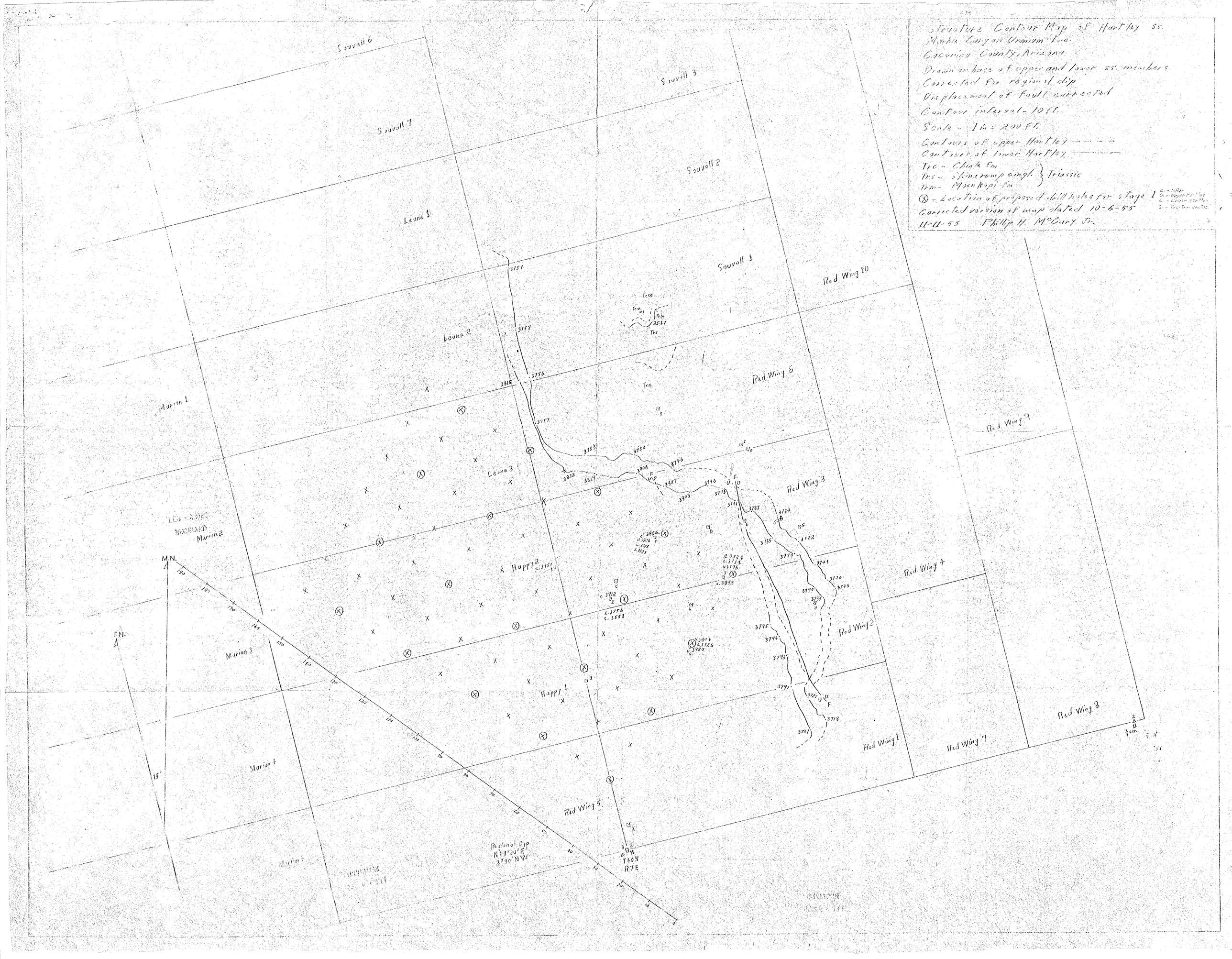
Fig. 2 DMEA Docket No. 3612

Claim Map

MARBLE CANYON URANIUM, INC.

COCONINO COUNTY, ARIZONA

ENGINEER: *M. H. HOWES*	DATE: APRIL 15, 1955
TRACED: APR., 1955; BY: A.P.T.S.	1900 - 323 - D
CHECKED:	


Structure Contour Map of Hartley ss.
Marble Canyon Uranium Inc.
Coconino County, Arizona
Drawn on base of upper and lower ss. members
Corrected for regional dip
Displacement of fault corrected
Contour interval - 10 ft.
Scale - 1 in = 200 ft.
Contours of upper Hartley
Contours of lower Hartley
Trc - Chinle Fm
Trs - Shinarump congl.
Trm - Moenkopi Fm
Triassic
Location of proposed drill holes for stage 1
Corrected version of map dated 10-6-55
11-11-55 Philip H. McCary Jr.
Souvall 6
Souvall 7
Souvall 3
Souvall 2
Souvall 1
Leone 1
Leone 2
Leone 3
Marion 1
Marion 2
Marion 3
Marion 4
Happy 2
Happy 1
Red Wing 10
Red Wing 6
Red Wing 9
Red Wing 3
Red Wing 4
Red Wing 2
Red Wing 1
Red Wing 7
Red Wing 8
Red Wing 5
M.N.
T.N.
Regional Dip
N 11°30' E
2°30' NW
T40V
R7E

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
JANUARY 1957 CONTRACT Idm-E816 DOCKET 3612

NOTE: GEOLOGY, CLAIM BOUNDARIES AND LAND LINES FROM APPLICANTS MAP

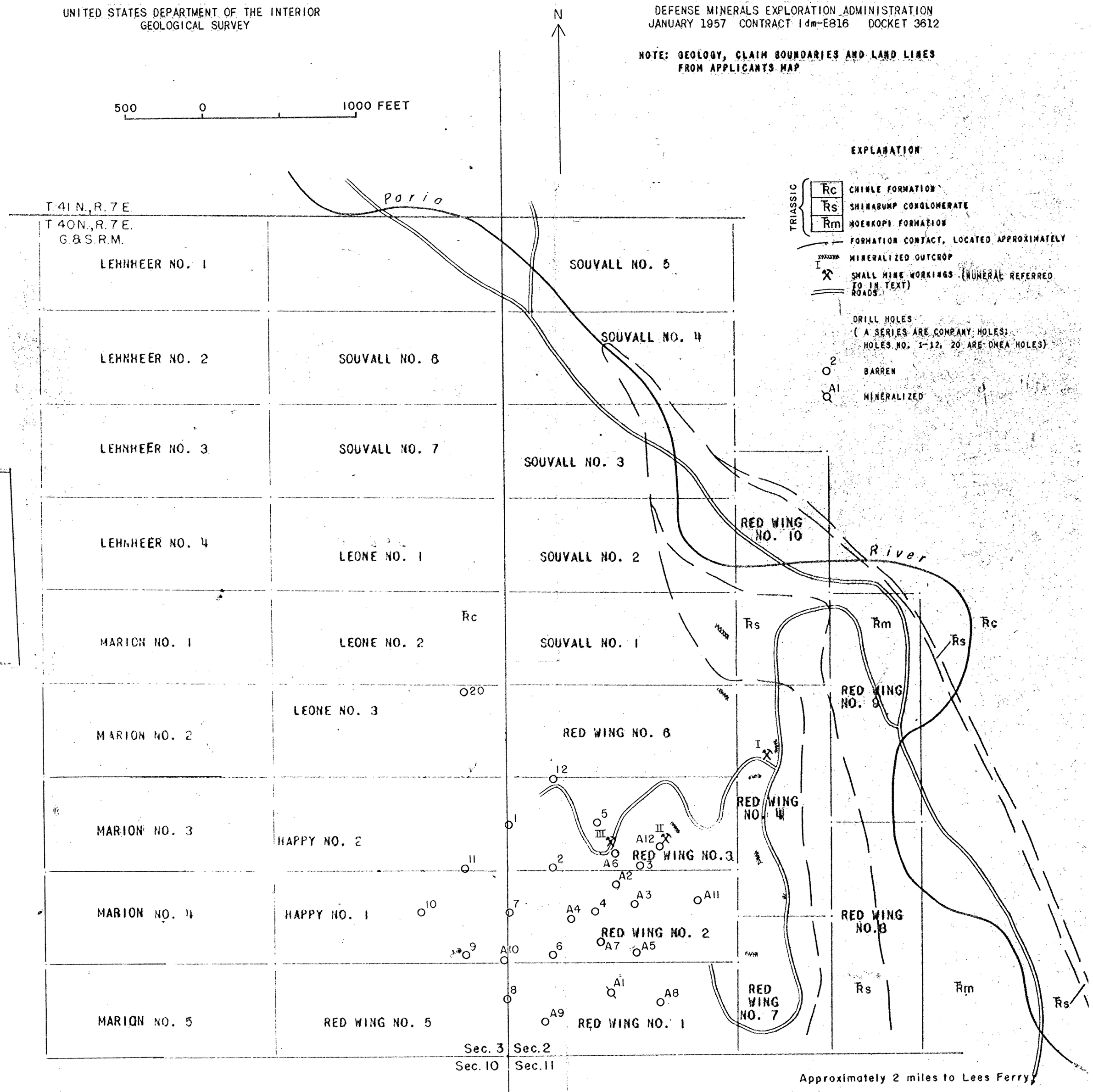
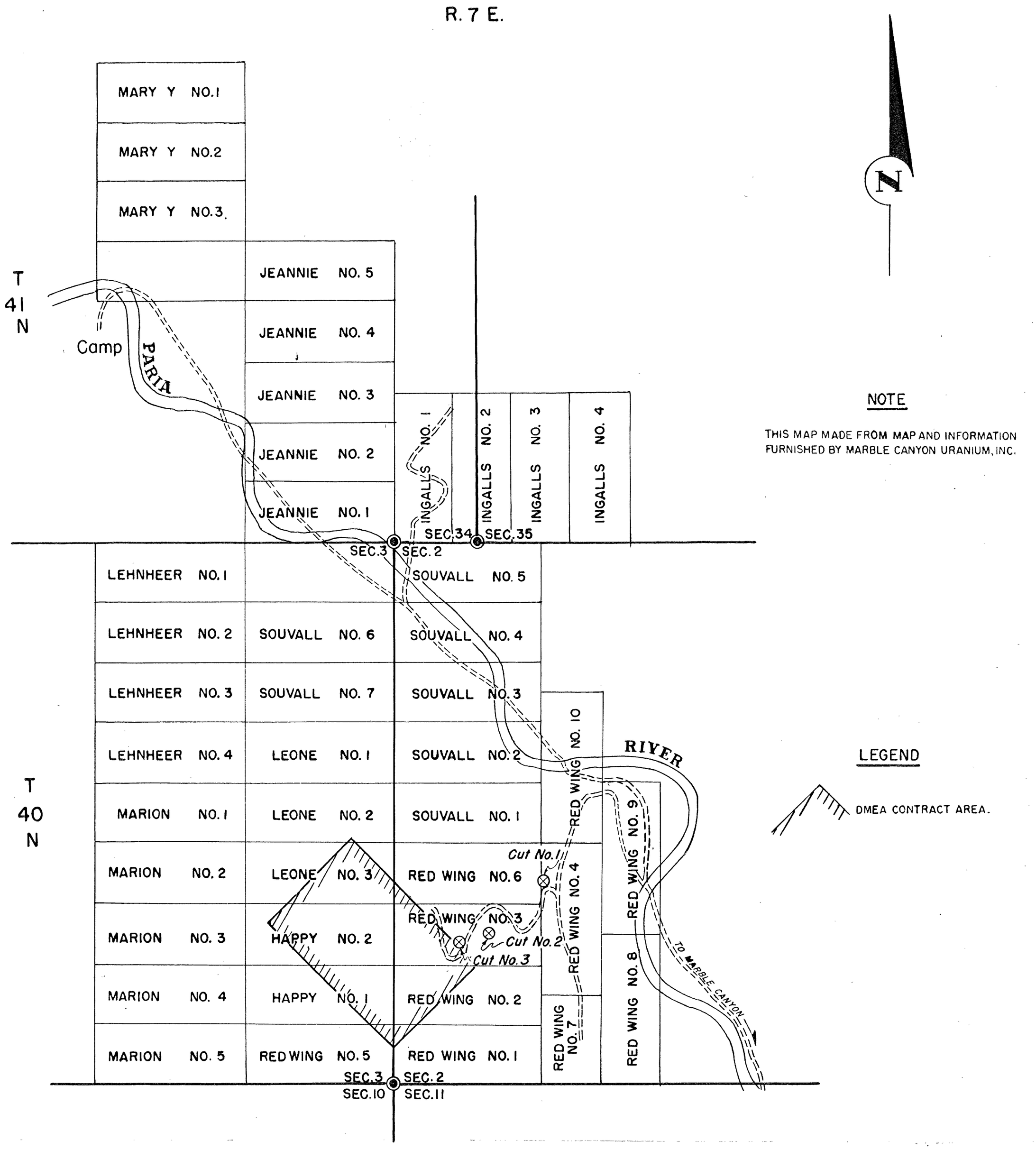


Figure 3.--GEOLOGIC MAP SHOWING GEOLOGY AND LOCATION OF DRILL HOLES ON THE RED WING ET AL. CLAIMS MARBLE CANYON URANIUM, INC. COCONINO COUNTY, ARIZONA.



Claim Map.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 2, DMEA Docket No. 3612, Contr. No. Idm - E 816

Claim Map

MARBLE CANYON URANIUM, INC.

COCONINO COUNTY, ARIZONA

ENGINEER: *Walter BANK*	DATE: DEC. 7, 1956
TRACED: DEC., 1956; BY: A.P.T.S.	1900 - 425 - E
CHECKED:	

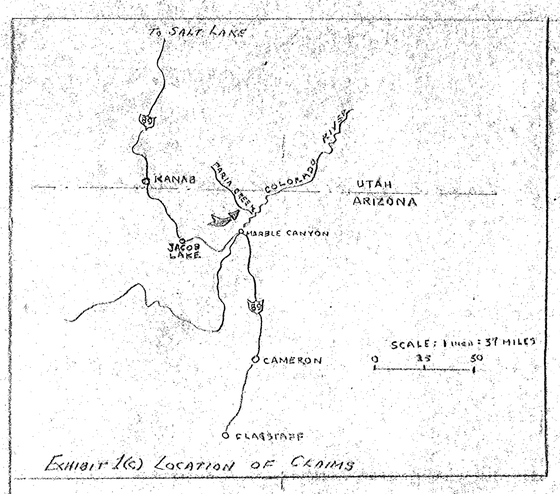


Exhibit 1(c) Location of Claims

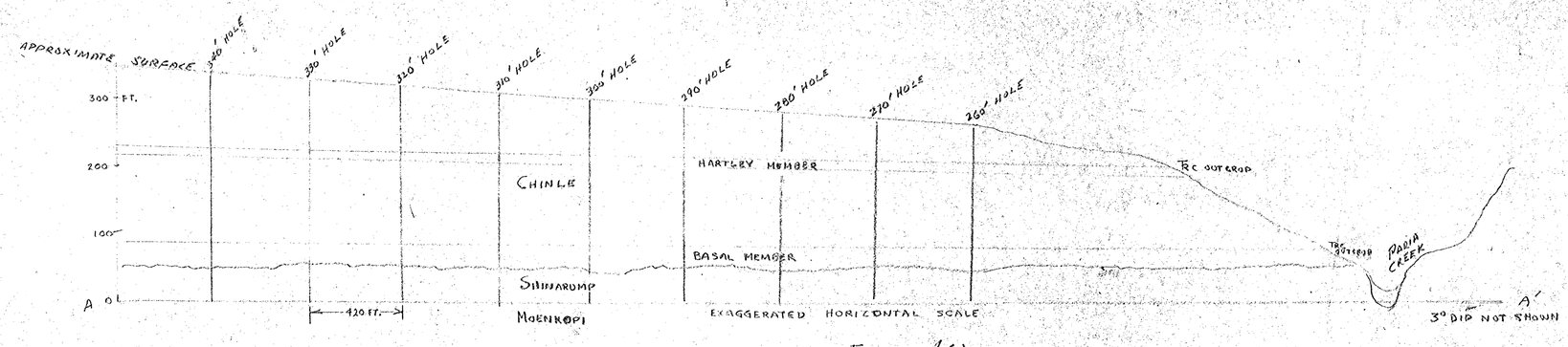


Exhibit 1(B)
Sketch Showing Approximate Penetration of Various Depth Holes Section A-A'

Shinarump Outcrops Further Downstream

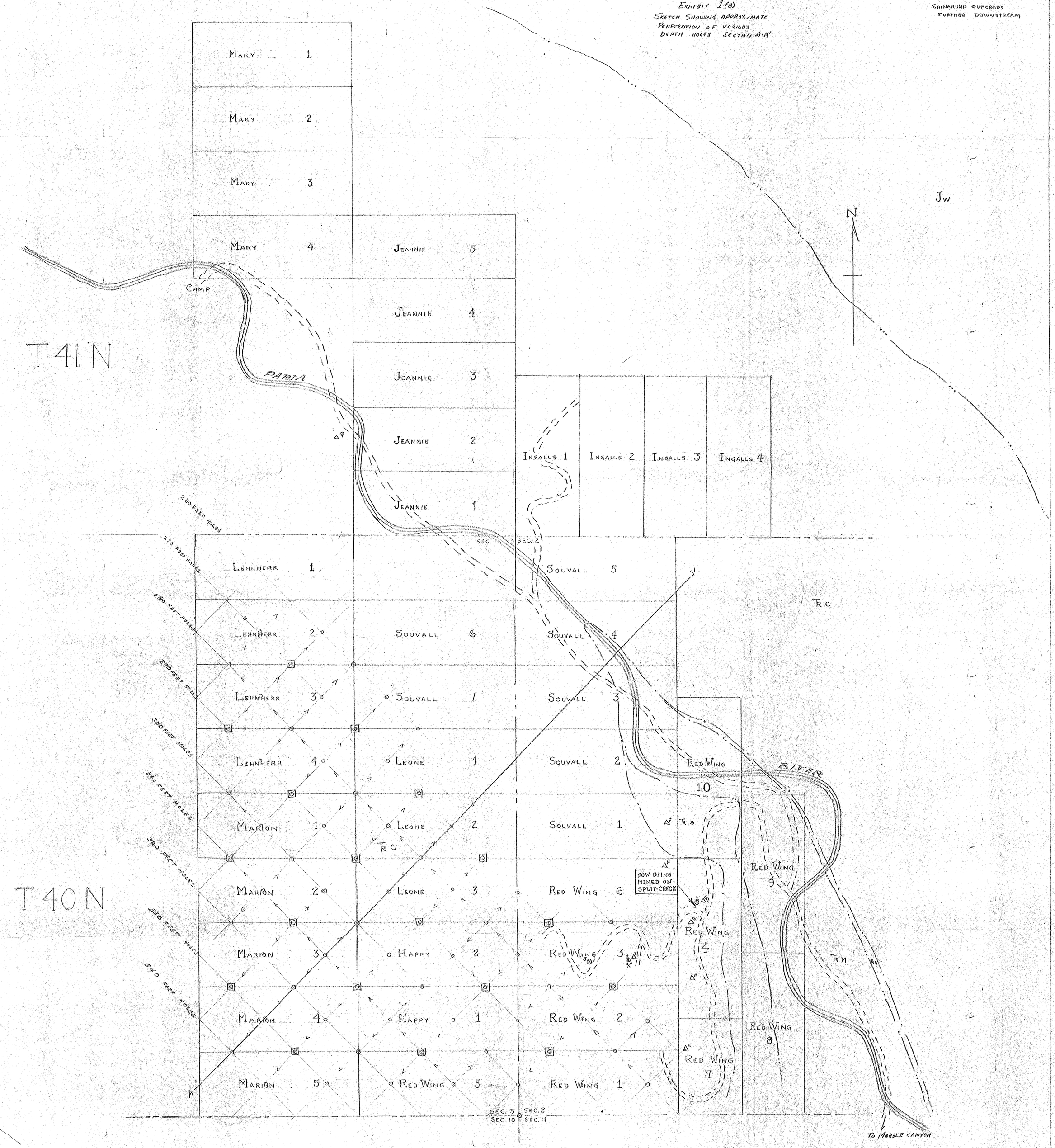


Exhibit 1(A)

Exhibits 1(A), 1(B) & 1(C)

Claims Held By MARBLE CANYON URANIUN, INC.

Townships 40 & 41N, Range 7 E.
Coconino County, Arizona
Scale: 1 inch = 300 feet

- ⊙ = Holes to depth indicated
- ⊡ = Cored holes
- Jw - TRc Contact ; TRc - TRs Contact ; TRs - TRM Contact ; } Approximate
- = Fair ore outcrop
- = Good ore outcrop
- = Cut
- = Drift
- = Access roads
- = Existing roads

Structure Contour Map of Lower Hartley Sandstone

Marble Canyon Uranium Inc.

Coconino County, Arizona

Drawn on base of lower sandstone member

Corrected for regional dip

Displacement of fault corrected

Contour Interval - 10 ft.

Scale - 1 in. = 200 ft.

MAP #2

Chinle fm. - Triassic

Contour lines - ——— 3740 - - -

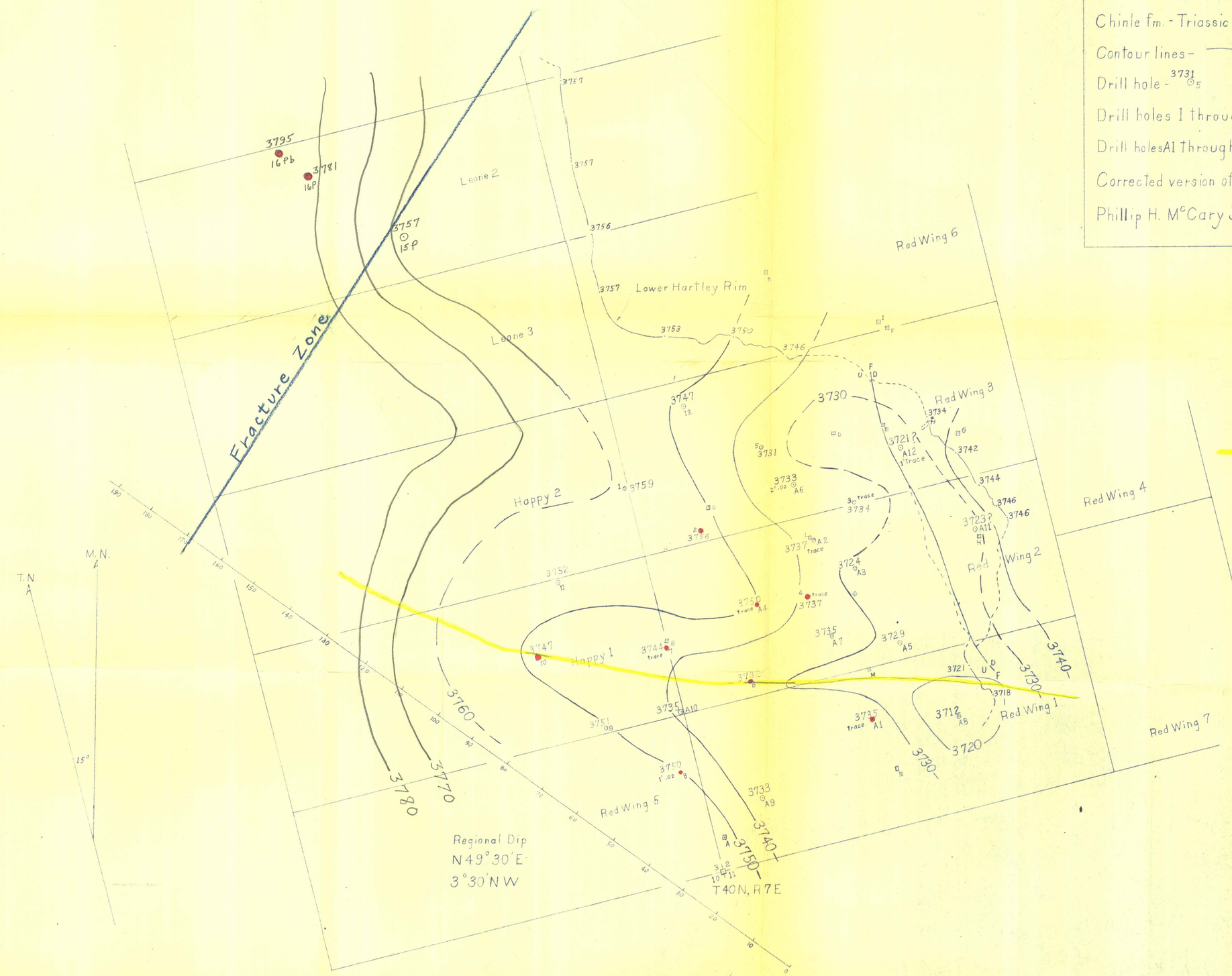
Drill hole - 3731 ⊙5

Drill holes 1 through 12 on Government grid

Drill holes A1 through A15 not on Government grid

Corrected version of map dated 12-9-55

Phillip H. McCary Jr. 2-17-56



All A No. holes were exclusively Marble Canyon expense.
Holes 15 P, 16 P + 16 Pb are also Marble Canyon expense.
Holes 1-12 and Hole 20 are Government holes.

Yellow line is Lower Hartley formation showing channel effect with Hartley lower and thicker with better count.

● Red dots are drill holes with increasing values and favorable geology.

MAP #1

MARBLE CANYON URANIUM CORP.
PARIA URANIUM AND OIL CORP.

PARIA RIVER CLAIMS

PARIA PLATEAU - MARBLE CANYON AREA

T. 40, 41 N., R. 7 E.

GILA AND SALT RIVER MERIDAN

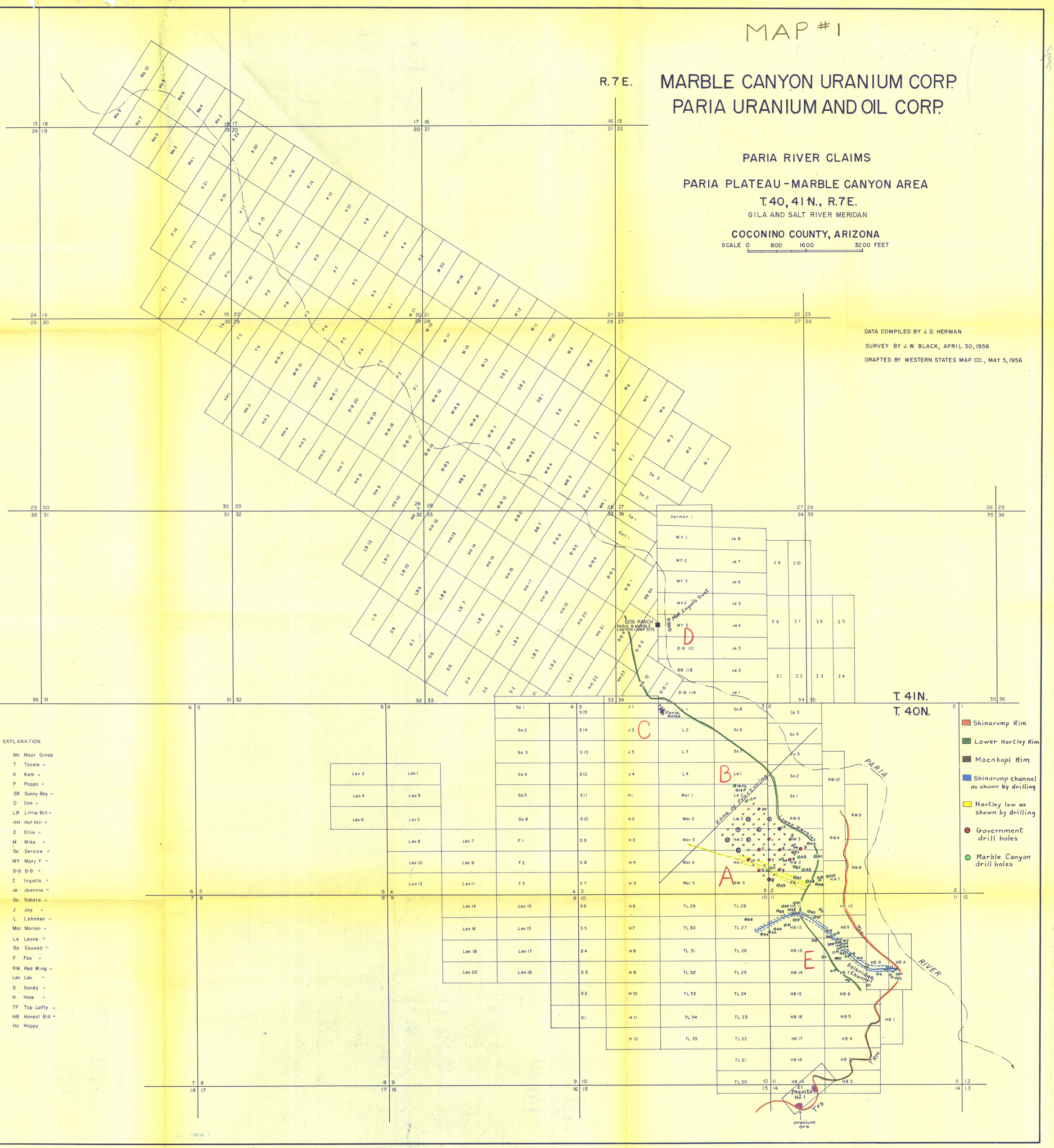
COCONINO COUNTY, ARIZONA

SCALE 0 800 1600 3200 FEET

DATA COMPILED BY J. D. HERMAN

SURVEY BY J. W. BLACK, APRIL 30, 1956

DRAFTED BY WESTERN STATES MAP CO., MAY 5, 1956

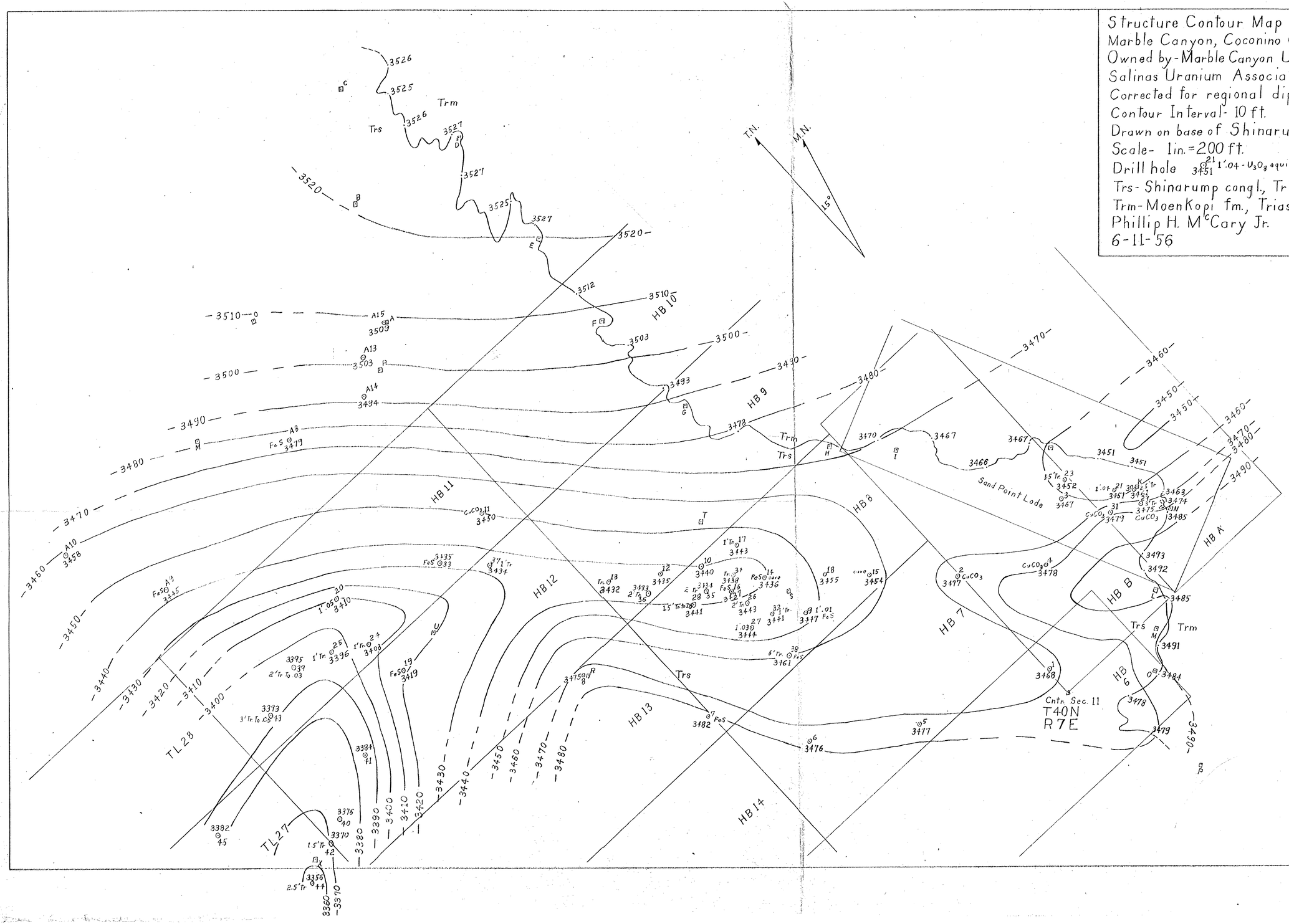


EXPLANATION

Ma	Maur Group
T	Tooele "
K	Kem "
P	Pappo "
SB	Sunny Boy "
D	Don "
LB	Little Bill "
HH	Hot Hill "
E	Ellie "
M	Mike "
Se	Service "
MY	Mary Y "
B-B	B-B "
I	Ingalls "
Je	Jeannie "
Sa	Sahara "
J	Joy "
L	Lehnhen "
Mar	Marion "
Le	Leone "
So	Souvall "
F	Fox "
RW	Red Wing "
Leo	Leo "
S	Sandy "
H	Hale "
TF	Top Lofty "
HB	Honest Bill "
Ha	Happy

Structure Contour Map of Delbridge Channel.
Marble Canyon, Coconino County, Arizona.
Owned by-Marble Canyon Uranium Inc. and
Salinas Uranium Associates
Corrected for regional dip
Contour Interval- 10 ft.
Drawn on base of Shinarump conglomerate, Triassic
Scale- 1in.=200 ft.
Drill hole $\frac{3451}{3451}$ 1'.04-U_3O_8 equiv.
Trs- Shinarump congl., Triassic
Trm-MoenKopi fm., Triassic
Phillip H. McCary Jr.
6-11-56

MAP #3



Structure Contour Map of Upper Hartley sandstone

Marble Canyon Uranium Inc.

Coconino County, Arizona

Drawn on base of upper sandstone member

Corrected for regional dip

Displacement of fault corrected

Contour Interval - 10 ft.

Scale - 1 in. = 200 ft.

Chinle fm. - Triassic

Contour lines - ——— 3810 - - -

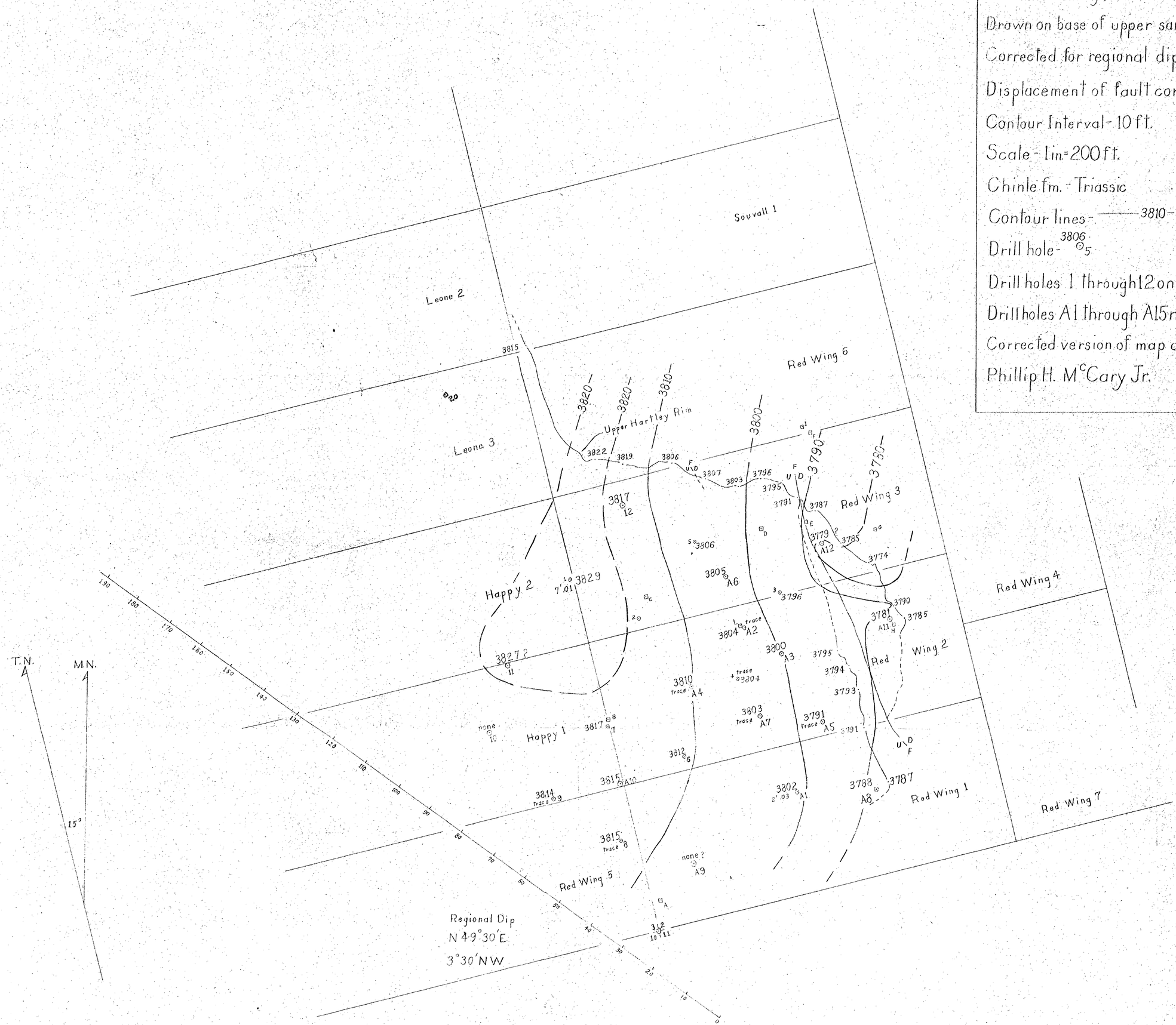
Drill hole - 3806 ⊙5

Drill holes 1 through 12 on Government grid

Drill holes A1 through A15 not on Government grid

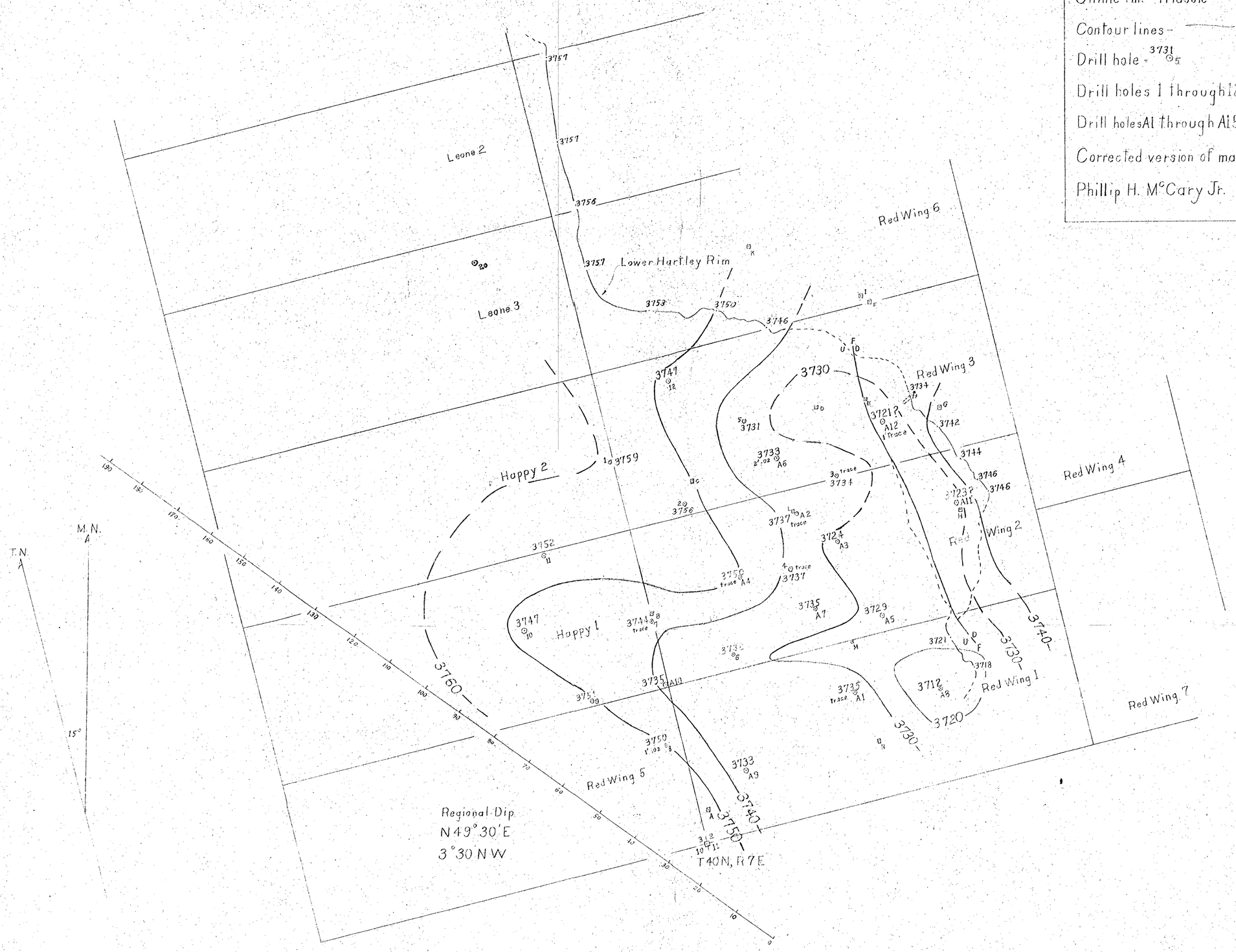
Corrected version of map dated 12-9-55

Phillip H. McCary Jr. 2-17-56



Rec'd w/ MF 104 for 1+2 of 1956

Structure Contour Map of Lower Hartley Sandstone
Marble Canyon Uranium Inc.
Coconino County, Arizona
Drawn on base of lower sandstone member
Corrected for regional dip
Displacement of fault corrected
Contour Interval - 10 ft.
Scale - 1 in. = 200 ft.
Chinle fm. - Triassic
Contour lines - 3740
Drill hole - 3731 5
Drill holes 1 through 12 on Government grid
Drill holes A1 through A15 not on Government grid
Corrected version of map dated 12-9-55
Phillip H. McCary Jr. 2-17-56



UNITED STAT. DEPARTMENT OF THE INTERIC
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3612

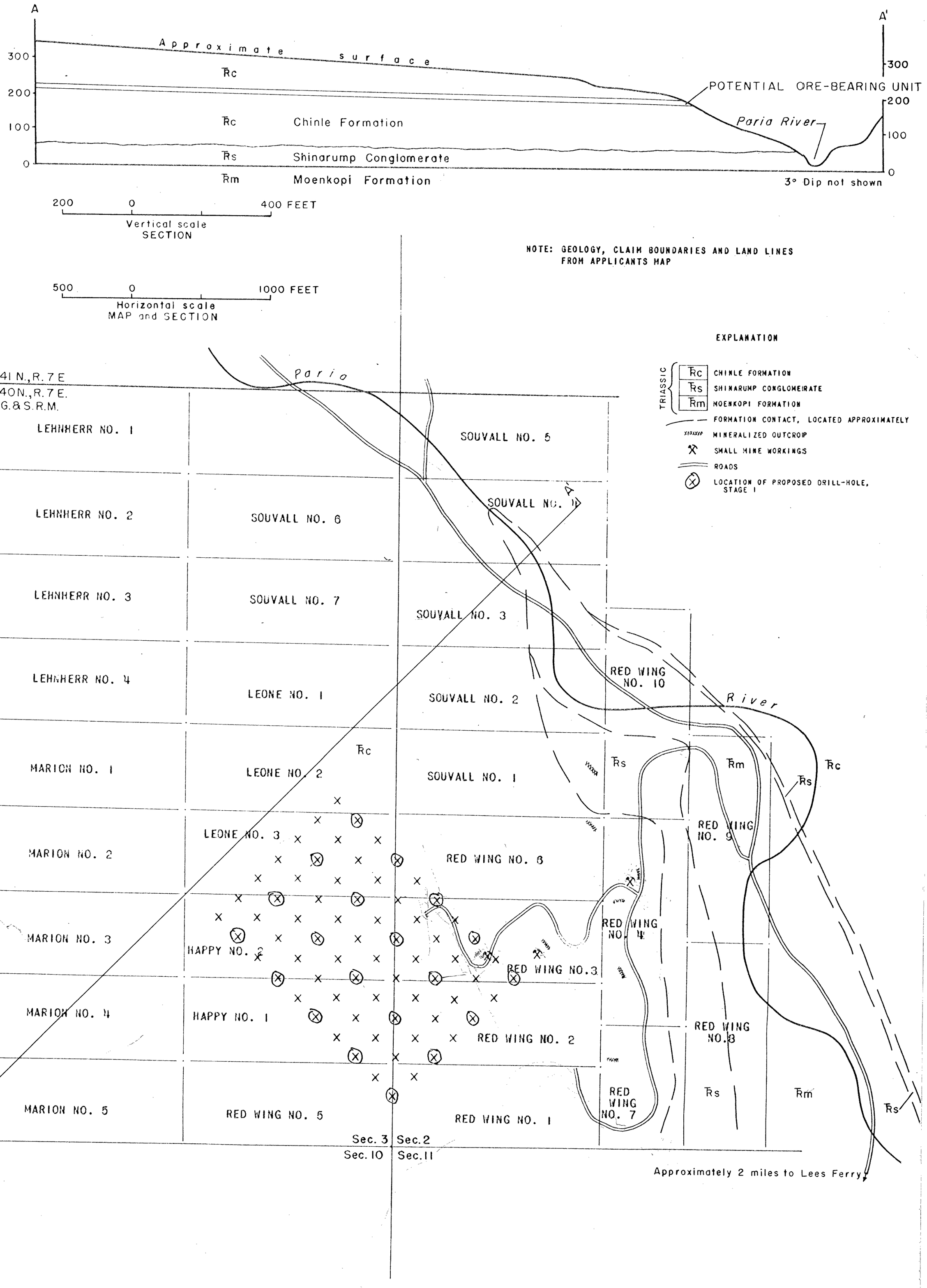


Figure 2. GEOLOGIC MAP SHOWING LOCATION OF PROPOSED DRILL HOLES ON THE RED WING CLAIMS
MARBLE CANYON URANIUM, INC.
COCONINO COUNTY, ARIZONA