DMEA 3582

DOCKET INDEX

ACTION DOCUMENTS

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2	CONTRACT	DATE	6-10-55
3	TERMINATION AGREEMENT	DATE	8-20-56
4	CERTIFICATION	DATE	
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Docket copy

Ruben Samuels
"Appd, Sol. Off."
Murphy
J. Vincent Chambers
Martin
Robinson
Whitehead

TERMINATION AGREEMENT

It is agreed this 20th day of August, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-2796 (Docket No. DMEA-3582), dated June 10, 1955, hereinafter called the "Contract," that:

1. Effective May 15, 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 only to the fixed unit costs of work performed prior to said effective date.

3. The Operator shall preserve records as required by the contract, and 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. Graves
Executive Officer
DMEA Field Team, Region III

WALTER DUNCAN MINING COMPANY

By J. Walter Duncan, Jr.
J. Walter Duncan, Jr.

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MF-200A
(Revised June 1954)

Docket No. DMEA- 3582

Commodity Uranium

Contract No. Idm-E 790

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

It is agreed this 10th 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] J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company, whose mailing address is P. O. Box 1468 Cortez, Colorado, hereinafter called the "Operator," as follows:

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

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

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

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] lessee of [5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of [6] lessee, [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 of the land (lessor, seller, optionor, etc.), are attached, as follows: Consent to Lien of Quentin S. Bullock and Consents to Lien of G. O. Patterson, Lyle Francis, R. F. Jenkins, F. E. Jenkins, and Frank L. Seymour

[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."

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

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of uranium. The work to be performed is described in Exhibit "A." The Operator on or before July 15, 1955 shall commence the work, and on or before December 30, 1956 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

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

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

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $76,088.00 The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $57,066.00 (rounded): *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

WALTER DUNCAN MINING COMPANY
(Operator)

By J. Walter Duncan, Jr.

THE UNITED STATES OF AMERICA

By O. Mitteudorf
Administrator, Defense Minerals Exploration Administration

"Appd. Sol. Off."

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

[CORPORATE SEAL]

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

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EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

ANNEX I

The land referred to in Article 2 of the contract form consists of parts of sixteen (16) unpatented lode mining claims which are recorded in the office of the County Recorder, San Juan County, Utah, as follows:

Claim	Book No.	Page No.
Paragon No. 5	223	517
Paragon No. 7	223	517
Paragon No. 8	223	518
White Rock No. 1	247	458
White Rock No. 2	247	459
White Rock No. 3	247	460
White Rock No. 4	247	460
White Rock No. 2 East Extension	259	245
Red Rock No. 1 West Extension	259	245
Red Rock No. 1	247	441
Red Rock No. 2	247	442
Red Rock No. 3	247	443
Red Rock No. 4	247	444
Red Rock No. 5	247	445
Red Rock No. 6	247	446
Patterson Fraction	273	204

The parts of the claims which constitute the land are in Sections 34 and 35, T. 30 S., R. 25 E., S.L.M., and are shown on the map entitled "Figure 3, Claim Map Showing Location of Proposed Drill Holes on Walter Duncan Mining Co. Claims, . . . etc.," which is attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

EXHIBIT "A"

Description of the Work

The object of this project is the discovery of uranium ore in a sedimentary rock, locally known as the Chinle formation of Triassic age. To penetrate the ore-bearing horizon of this formation will require drill holes ranging from 505 to 743 feet in depth, or an average depth of 603 feet.

The work shall be performed in three stages. The Operator shall perform Stage I and so much of the work set forth under Stages II and III as is approved in writing in advance by the Government.

Stage I

Stage I consists of bulldozing access roads to and preparing 13 drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and identified by an X and the letter A. [XA]

From the drill sites prepared, thirteen (13) holes shall be drilled, aggregating not to exceed 8501 feet of drilling. Each hole shall be started with a noncore bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

Stage II

Stage II consists of bulldozing access roads to and preparing ten (10) drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and are identified by an X and the letter B. [XB]

From the drill sites prepared under this stage, not to exceed ten (10) holes, aggregating not to exceed 6678 feet,

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shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

The locations of Stage II drill holes, as shown on map, Figure 3, are subject to such changes as are approved by the Government, based upon an evaluation of Stage I drilling results.

Stage III

Stage III consists of bulldozing access roads to and preparing seventeen (17) drill sites at locations determined after a geologic evaluation of the results of drilling under Stages I and II. The holes in this stage shall be offset holes, and shall not be drilled closer than 100 feet to any other hole.

Not in excess of seventeen (17) holes aggregating not to exceed 10,321 feet shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on entering the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

General

A supervising engineer or geologist shall be employed full time while work under this contract is being performed. The supervisor's work shall consist of a daily examination and logging of the drill core, hole probing with company-owned instruments, determination of drilling depths, necessary surveying, locating drill-hole sites, and all other duties necessary to the satisfactory technical progress of the work described in this contract.

No hole shall be started unless it can be completed within the maximum footage provided for a stage; and the Government will not contribute to the cost of any incompleted hole.

Certified drill and geologic logs, and certified copies of analytical returns shall be submitted with the Operator's monthly progress reports.

All drill holes under this contract shall bottom with BX minimum size core bits.

One-half of the cuttings and core shall be stored for Government use.

No hole shall be drilled closer than 100 feet to the outer boundary of the land described in Annex I of this contract.

The supervision, the extent and method of sampling and drill-hole logging, the manner of storing and splitting drill cuttings and core, the location of access roads and drill sites, and the drilling method used, shall all be subject to Government approval.

Fixed Unit Costs

Stage I

7,906 feet of noncore drilling @ $2.86/ft.	$22,611.16	
595 feet of core drilling @ $4.49/ft.	2,671.55	
16 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each sample	80.00	
Estimated Total Cost for Stage I		$25,362.71
Government Participation @ 75%		19,022.03

Stage II

6,211 feet of noncore drilling @ $2.86/ft.	$17,763.46	
467 feet of core drilling @ $4.49/ft.	2,096.83	

13 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each sample	65.00	
Estimated Total Cost for Stage II		$19,925.29
Government Participation @ 75%		14,943.97

Stage III

9,599 feet of noncore drilling @ $2.86/ft.	$27,453.14	
722 feet of core drilling @ $4.49/ft.	3,241.78	
21 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each sample	105.00	
Estimated Total Cost for Stage III		$30,799.92
Government Participation @ 75%		23,099.94

S U M M A R Y

Estimated Total Cost Stage I	$25,362.71	
Estimated Total Cost Stage II	19,925.29	
Estimated Total Cost Stage III	30,799.92	
Estimated Total Cost of Project (rounded to)		$76,088.00 1/
Government Participation @ 75% (rounded to)		$57,066.00

1/ The unit cost for drilling includes the costs of access roads, preparing drill sites, and all other costs whatsoever necessary in connection with the performance of the project work.

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Uhlter Bunen Mining Co.
Docket No. DMEA-[illegible]
Contract No. Idm-E
Contract Date

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of San Juan, State of Utah, described as follows:1/

The Patterson Fraction Mining Claim recorded in Book 273, Page 204 Official records of said county.

which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. Undertakes and agrees that property in which the Government may acquire an interest or equity under the contract may be dismantled, severed from the land, and removed, as may be provided in the contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned;

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

None

3. Undertakes and agrees neither to commit any act nor assert any claim in conflict with the provisions of this Consent to Lien; and to give advance notice of the Government's rights under this Consent to Lien to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, or interest in the land; and

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

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

3/ Write "none" if that is the case. Do not leave lines blank.

4. Consents to all amendments and assignments of the contract without notice thereof, and agrees that this Consent to Lien shall extend and apply thereto.

5. Added provision: _____

Dated this 16th day of May, 1955.

Frank L. Symour [Seal]

_____ [Seal]

_____ [Seal]

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

_____

[Corporate Seal]

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

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

CLAIM NAME	P.L. 585 Notice Posted	Notice Recorded	Book	Page
Paragon 5	11-2-54	11-4-54	223	517
Paragon 7	11-2-54	11-4-54	223	517
Paragon 8	11-2-54	11-4-54	223	518

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

2/ J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

hereinafter called the "Operator"; and

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

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

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

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

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

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

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

(OVER)

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

4. Changes and added provisions **In Paragraph Two the words "the period fixed in the contract or any amendment thereof has" are substituted for "ten years have".**

Dated this 14th day of MARCH, 1955.

Quentin S. Bullock [Seal]

[Seal]

[Seal]

(Seal)

(Seal)

DEPT. OF THE INTERIOR
Minerals Administration
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MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

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

CLAIM NAME	P.L. 585 Notice Posted	Notice Recorded	Book	Page
Red Rock 1 West Extension	12-7-54	12-15-54	259	245
Red Rock 1	12- 1-54	12-8-54	247	441
Red Rock 2	12- 1-54	12-8-54	247	442
Red Rock 3	11-24-54	12-8-54	247	443
Red Rock 4	11-24-54	12-8-54	247	444
Red Rock 5	11-24-54	12-8-54	247	445
Red Rock 6	11-24-54	12-8-54	247	446

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

2/ J. Walter Duncan, Jr. d/b/a Walter Duncan Mining Company

P. O. Box 1468

Cortez, Colorado

hereinafter called the "Operator"; and

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

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

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

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

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

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

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

(OVER)

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

4. Changes and added provisions **In Paragraph Two the words "the period fixed in the contract or any amendment thereof has" are substituted for "ten years have".**

Dated this _____ day of _____, 195____.

G. O. Patterson [Seal]
G. O. Patterson

_____ [Seal]

Lyle Francis [Seal]
Lyle Francis

R. F. Jenkins (Seal)
R. F. Jenkins

F. B. Jenkins (Seal)
F. B. Jenkins

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

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

CLAIM NAME	P.L. 585 Notice Posted	Notice Recorded	Book	Page
White Rock 1	11-24-54	12-8-54	247	458
White Rock 2	11-24-54	12-8-54	247	459
White Rock 3	12- 1-54	12-8-54	247	460
White Rock 4	11-24-54	12-8-54	247	460
White Rock 2 East Extension	12-10-54	12-15-54	259	245

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

2/ J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company

P. O. Box 1468

Cortez, Colorado

hereinafter called the "Operator"; and

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

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

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

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

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

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

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

(OVER)

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

4. Changes and added provisions **In Paragraph Two the words "the period fixed in the contract or any amendment thereof has" are substituted for "ten years have".**

Dated this _____ day of _____, 195____.

G O Patterson [Seal]
G. O. PATTERSON

_____ [Seal]

_____ [Seal]
R. F. JENKINS

R. F. Jenkins (Seal)

F. B. Jenkins (Seal)
F. B. JENKINS

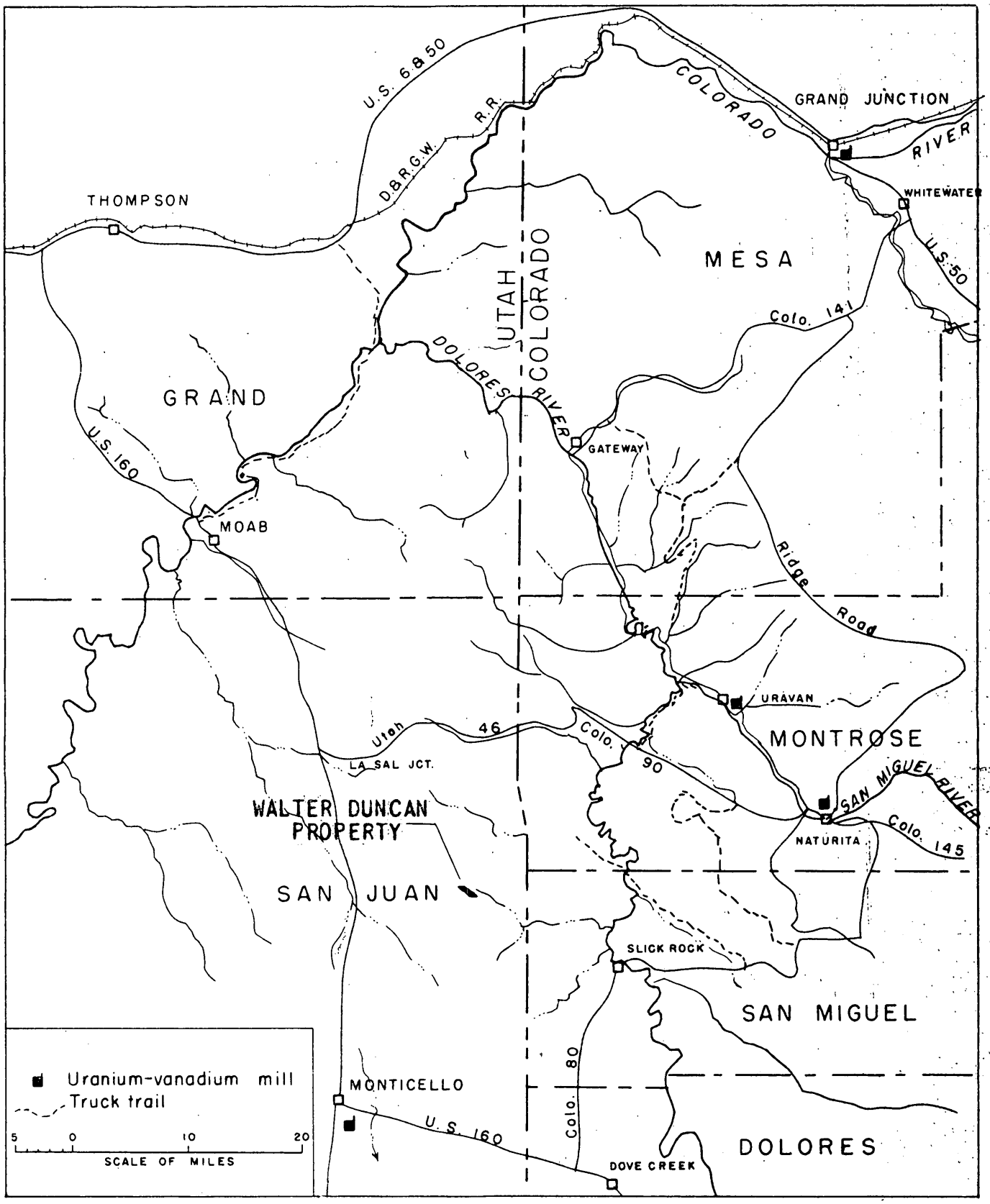

Figure 1. INDEX MAP OF PART OF THE COLORADO PLATEAU SHOWING LOCATION OF WALTER DUNCAN MINING CO. CLAIMS, LISBON VALLEY AREA SAN JUAN COUNTY, UTAH

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3582

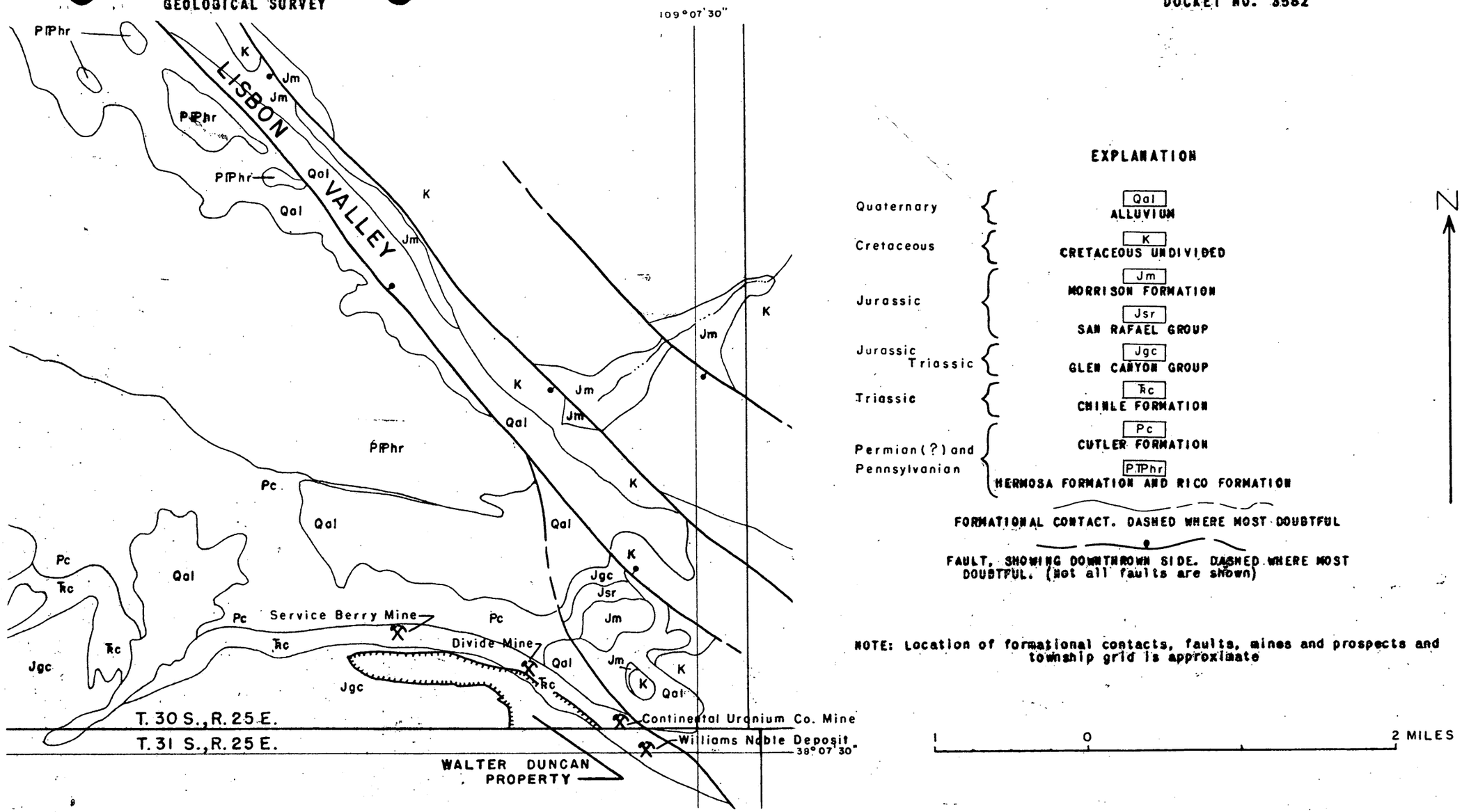

Figure 2. MAP SHOWING GEOLOGIC SETTING OF THE WALTER DUNCAN CO. MINING CLAIMS, LISBON VALLEY AREA, SAN JUAN COUNTY, UTAH

Government's copy

MF-200A
(Revised June 1954)

Docket No. DMEA -3582

Commodity Uranium

Contract No. Idm-E - 796

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this 10th day of May, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company, whose mailing address is P. O. Box 1468 Cortez, Colorado, hereinafter called the "Operator," as follows:

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

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

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

(b) The Operator represents and undertakes that:

(1) The Operator is the[4] lessee of[5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of ~~a~~[6] leases,[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 of the land (lessor, seller, optionor, etc.), are attached, as follows: Consent to Lien of Quentin S. Bullock and Consents to Lien of G. O. Patterson, Lyle Francis, R. F. Jenkins, and F. B. Jenkins.

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

16—70618-1

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

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of uranium The work to be performed is described in Exhibit "A." The Operator on or before ..... shall commence the work, and on or before December 30, 1956 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

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

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

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $76,087.92 The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $57,065.94: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

WALTER DUNCAN MINING COMPANY
(Operator)

By .....

.....

THE UNITED STATES OF AMERICA

By Frank E. Johnson
ACTING Administrator, Defense Minerals
Exploration Administration

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

.....

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

ANNEX I

The land referred to in Article 2 of the contract form consists of fifteen (15) unpatented lode mining claims which are recorded in the office of the County Recorder, San Juan County, Utah, as follows:

Claim	Book No.	Page No.
Paragon No. 5	223	517
Paragon No. 7	223	517
Paragon No. 8	223	518
White Rock No. 1	247	458
White Rock No. 2	247	459
White Rock No. 3	247	460
White Rock No. 4	247	460
White Rock No. 2 East Extension	259	245
Red Rock No. 1 West Extension	259	245
Red Rock No. 1	247	441
Red Rock No. 2	247	442
Red Rock No. 3	247	443
Red Rock No. 4	247	444
Red Rock No. 5	247	445
Red Rock No. 6	247	446
Patterson Fraction	—	—

The above claims are in Sections 34 and 35, T. 30 S., R. 25 E., S.L.M., and are shown on the map entitled "Figure 3, Claim Map Showing Location of Proposed Drill Holes on Walter Duncan Mining Co. Claims, . . . etc.," which is attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

EXHIBIT "A"

Description of the Work

The object of this project is the discovery of uranium ore in a sedimentary rock, locally known as the Chinle formation of Triassic age. To penetrate the ore-bearing horizon of this formation will require drill holes ranging from 505 to 743 feet in depth, or an average depth of 603 feet.

The work shall be performed in three stages. The Operator shall perform Stage I and so much of the work set forth under Stages II and III as is approved in writing in advance by the Government.

Stage I

Stage I consists of bulldozing access roads to and preparing 14 drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and identified by an X and the letter A. [X^A].

From the drill sites prepared, fourteen (14) holes shall be drilled, aggregating not to exceed 8501 feet of drilling. Each hole shall be started with a non-core bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

Stage II

Stage II consists of bulldozing access roads to and preparing eleven (11) drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and are identified by an X and the letter B. [X^B].

From the drill sites prepared under this stage, not to exceed eleven (11) holes, aggregating not to exceed 6678 feet, shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

The locations of Stage II drill holes, as shown on map, Figure 3, are subject to such changes as are approved by the Government, based upon an evaluation of Stage I drilling results.

STAGE III

Stage III consists of bulldozing access roads to and preparing seventeen (17) drill sites at locations determined after a geologic evaluation of the results of drilling under Stages I and II. The holes in this stage shall be offset holes, and shall not be drilled closer than 100 feet to any other hole.

Not in excess of seventeen (17) holes aggregating not to exceed 10,321 feet shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on entering the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

General

A supervising engineer or geologist shall be employed full time while work under this contract is being performed. The supervisor's work shall consist of a daily examination and logging of the drill core, hole probing with company-owned instruments, determination of drilling depths, necessary surveying, locating drill-hole sites, and all other duties necessary to the satisfactory technical progress of the work described in this contract.

No hole shall be started unless it can be completed within the maximum footage provided for a stage.

Certified drill and geologic logs, and certified copies of analytical returns shall be submitted with the Operator's monthly progress reports.

All drill holes under this contract shall bottom with BX minimum size core bits.

One-half of the cuttings and core shall be stored for Government use.

The supervision, the extent and method of sampling and drill-hole logging, the manner of storing and splitting drill cuttings and core, the location of access roads and drill sites, and the drilling method used, shall all be subject to Government approval.

Fixed Unit Costs

Stage I

7906 feet of noncore drilling @ $2.86/ft.	$22,611.16	
595 feet of core drilling @ $4.49/ft.	2,671.55	
16 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	80.00	
Estimated Total Cost for Stage I		$25,362.71
Government Participation @ 75%		19,022.03

Stage II

6211 feet of noncore drilling @ $2.86/ft.	17,763.46	
467 feet of core drilling @ $4.49/ft.	2,096.83	
13 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	65.00	
Estimated Total Cost for Stage II		19,925.29
Government Participation @ 75%		14,943.97

Stage III

9599 feet of noncore drilling @ $2.86/ft.	27,453.14	
722 feet of core drilling @ $4.49/ft.	3,241.78	

21 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	$ 105.00	
Estimated Total Cost for Stage III		$30,799.92
Government Participation @ 75%		23,099.94

S U M M A R Y

Estimated Total Cost Stage I	$25,362.71	
Estimated Total Cost Stage II	19,925.29	
Estimated Total Cost Stage III	30,799.92	
Estimated Total Cost of Project		$76,087.92 1/
Government Participation @ 75%		$57,065.94

1/ The unit cost for drilling includes the costs of access roads, preparing drill sites, and all other costs whatsoever necessary in connection with the performance of the project work.

Docket copy

MF-200A
(Revised June 1954)

Docket No. DMEA -3562

Commodity Uranium

Contract No. Idm-E - 796

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

It is agreed this 10th day of May, 1955 between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company, whose mailing address is P. O. Box 1463, Cortez, Colorado, hereinafter called the "Operator," as follows:

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

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

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

(b) The Operator represents and undertakes that:

(1) The Operator is the[4] lessee of[5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of[6] leases, [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 of the land (lessor, seller, optionor, etc.), are attached, as follows: Consent to Lien of Quentin S. Pullock and Consents to Lien of G. O. Patterson, Lyle Francis, R. F. Jenkins, and F. E. Jenkins.

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

16—70618-1

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

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of uranium ..... The work to be performed is described in Exhibit "A." The Operator on or before ..... shall commence the work, and on or before December 30, 1956 ..... (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

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

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

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $76,087.92 ..... The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $57,065.94 .....: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

WALTER DUNCAN MINING COMPANY

(Operator)

By

THE UNITED STATES OF AMERICA

By Frank E. Johnson
ACTING Administrator, Defense Minerals Exploration Administration

Chamberlin
Martin
Ellis
Hoffman
Murphy

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

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

ANNEX I

The land referred to in Article 2 of the contract form consists of fifteen (15) unpatented lode mining claims which are recorded in the office of the County Recorder, San Juan County, Utah, as follows:

Claim	Book No.	Page No.
Paragon No. 5	223	517
Paragon No. 7	223	517
Paragon No. 8	223	518
White Rock No. 1	247	458
White Rock No. 2	247	459
White Rock No. 3	247	460
White Rock No. 4	247	460
White Rock No. 2 East Extension	259	245
Red Rock No. 1 West Extension	259	245
Red Rock No. 1	247	441
Red Rock No. 2	247	442
Red Rock No. 3	247	443
Red Rock No. 4	247	444
Red Rock No. 5	247	445
Red Rock No. 6	247	446
Patterson Fraction	——	——

The above claims are in Sections 34 and 35, T. 30 S., R. 25 E., S.L.M., and are shown on the map entitled "Figure 3, Claim Map Showing Location of Proposed Drill Holes on Walter Duncan Mining Co. Claims, . . . etc.," which is attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

EXHIBIT "A"

Description of the Work

The object of this project is the discovery of uranium ore in a sedimentary rock, locally known as the Chinle formation of Triassic age. To penetrate the ore-bearing horizon of this formation will require drill holes ranging from 505 to 743 feet in depth, or an average depth of 603 feet.

The work shall be performed in three stages. The Operator shall perform Stage I and so much of the work set forth under Stages II and III as is approved in writing in advance by the Government.

Stage I

Stage I consists of bulldozing access roads to and preparing 14 drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and identified by an X and the letter A. [X^A].

From the drill sites prepared, fourteen (14) holes shall be drilled, aggregating not to exceed 8501 feet of drilling. Each hole shall be started with a non-core bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

Stage II

Stage II consists of bulldozing access roads to and preparing eleven (11) drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and are identified by an X and the letter B. [X^B].

From the drill sites prepared under this stage, not to exceed eleven (11) holes, aggregating not to exceed 6678 feet, shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

The locations of Stage II drill holes, as shown on map, Figure 3, are subject to such changes as are approved by the Government, based upon an evaluation of Stage I drilling results.

STAGE III

Stage III consists of bulldozing access roads to and preparing seventeen (17) drill sites at locations determined after a geologic evaluation of the results of drilling under Stages I and II. The holes in this stage shall be offset holes, and shall not be drilled closer than 100 feet to any other hole.

Not in excess of seventeen (17) holes aggregating not to exceed 10,321 feet shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on entering the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

General

A supervising engineer or geologist shall be employed full time while work under this contract is being performed. The supervisor's work shall consist of a daily examination and logging of the drill core, hole probing with company-owned instruments, determination of drilling depths, necessary surveying, locating drill-hole sites, and all other duties necessary to the satisfactory technical progress of the work described in this contract.

No hole shall be started unless it can be completed within the maximum footage provided for a stage.

Certified drill and geologic logs, and certified copies of analytical returns shall be submitted with the Operator's monthly progress reports.

All drill holes under this contract shall bottom with BX minimum size core bits.

One-half of the cuttings and core shall be stored for Government use.

The supervision, the extent and method of sampling and drill-hole logging, the manner of storing and splitting drill cuttings and core, the location of access roads and drill sites, and the drilling method used, shall all be subject to Government approval.

Fixed Unit Costs

Stage I

7906 feet of noncore drilling @ $2.86/ft.	$22,611.16	
595 feet of core drilling @ $4.49/ft.	2,671.55	
16 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	80.00	
Estimated Total Cost for Stage I		$25,362.71
Government Participation @ 75%		19,022.03

Stage II

6211 feet of noncore drilling @ $2.86/ft.	17,763.46	
467 feet of core drilling @ $4.49/ft.	2,096.83	
13 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	65.00	
Estimated Total Cost for Stage II		19,925.29
Government Participation @ 75%		14,943.97

Stage III

9599 feet of noncore drilling @ $2.86/ft.	27,453.14	
722 feet of core drilling @ $4.49/ft.	3,241.78	

21 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	$ 105.00	
Estimated Total Cost for Stage III		$30,799.92
Government Participation @ 75%		23,099.94

SUMMARY

Estimated Total Cost Stage I	$25,362.71	
Estimated Total Cost Stage II	19,925.29	
Estimated Total Cost Stage III	30,799.92	
Estimated Total Cost of Project		$76,087.92 1/
Government Participation @ 75%		$57,065.94

1/ The unit cost for drilling includes the costs of access roads, preparing drill sites, and all other costs whatsoever necessary in connection with the performance of the project work.

Division copy

MF-200A
(Revised June 1954)

Docket No. DMEA 5X2

Commodity Uranium

Contract No. Idm-E - 796

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this 10th day of May, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company, whose mailing address is P. O. Box 1460 Cortez, Colorado, hereinafter called the "Operator," as follows:

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

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

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

(b) The Operator represents and undertakes that:

(1) The Operator is the[4] lessee of[5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of[6] lease,[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 of the land (lessor, seller, optionor, etc.), are attached, as follows: Consent to Lien of Quentin S. Bullock and Consents to Lien of G. C. Patterson, Lyle Francis, R. F. Jenkins, and F. S. Jenkins.

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

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

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of [illegible] The work to be performed is described in Exhibit "A." The Operator on or before ..... shall commence the work, and on or before December 30, 1956 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

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

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

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $76,[illegible],92 The Government will contribute [illegible] percent of the fixed unit costs as work is performed, in a total sum not in excess of $57,[illegible]: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

WALTER DURKAN MINING COMPANY
(Operator)

By .....

.....

THE UNITED STATES OF AMERICA

By Frank E. Johnson
ACTING Administrator, Defense Minerals Exploration Administration

Butrin
Hefflund
Chambers
Murphy
Martin
Ellis

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

.....

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

ANNEX I

The land referred to in Article 2 of the contract form consists of fifteen (15) unpatented lode mining claims which are recorded in the office of the County Recorder, San Juan County, Utah, as follows:

Claim	Book No.	Page No.
Paragon No. 5	223	517
Paragon No. 7	223	517
Paragon No. 8	223	518
White Rock No. 1	247	458
White Rock No. 2	247	459
White Rock No. 3	247	460
White Rock No. 4	247	460
White Rock No. 2 East Extension	259	245
Red Rock No. 1 West Extension	259	245
Red Rock No. 1	247	441
Red Rock No. 2	247	442
Red Rock No. 3	247	443
Red Rock No. 4	247	444
Red Rock No. 5	247	445
Red Rock No. 6	247	446
Patterson Fraction	273	209

The above claims are in Sections 34 and 35, T. 30 S., R. 25 E., S.L.M., and are shown on the map entitled "Figure 3, Claim Map Showing Location of Proposed Drill Holes on Walter Duncan Mining Co. Claims, . . . etc.," which is attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
WALTER DUNCAN MINING COMPANY
DOCKET NO. DMEA-3582

EXHIBIT "A"

Description of the Work

The object of this project is the discovery of uranium ore in a sedimentary rock, locally known as the Chinle formation of Triassic age. To penetrate the ore-bearing horizon of this formation will require drill holes ranging from 505 to 743 feet in depth, or an average depth of 603 feet.

The work shall be performed in three stages. The Operator shall perform Stage I and so much of the work set forth under Stages II and III as is approved in writing in advance by the Government.

Stage I

Stage I consists of bulldozing access roads to and preparing 14 drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and identified by an X and the letter A. [XA].

From the drill sites prepared, fourteen (14) holes shall be drilled, aggregating not to exceed 8501 feet of drilling. Each hole shall be started with a non-core bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

Stage II

Stage II consists of bulldozing access roads to and preparing eleven (11) drill sites. The locations of the drill sites are shown on the attached map, Figure 3, and are identified by an X and the letter B. [XB].

From the drill sites prepared under this stage, not to exceed eleven (11) holes, aggregating not to exceed 6678 feet, shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on reaching the inferred mineralized horizon, each hole shall be cored for approximately the last 40 feet, including up to 5 feet of the Cutler formation.

The locations of Stage II drill holes, as shown on map, Figure 3, are subject to such changes as are approved by the Government, based upon an evaluation of Stage I drilling results.

STAGE III

Stage III consists of bulldozing access roads to and preparing seventeen (17) drill sites at locations determined after a geologic evaluation of the results of drilling under Stages I and II. The holes in this stage shall be offset holes, and shall not be drilled closer than 100 feet to any other hole.

Not in excess of seventeen (17) holes aggregating not to exceed 10,321 feet shall be drilled in this stage. Each hole shall be started with a noncore bit; however, on entering the inferred mineralized horizon, each hole shall be cored for approximately the last 80 feet, including up to 5 feet of the Cutler formation.

General

A supervising engineer or geologist shall be employed full time while work under this contract is being performed. The supervisor's work shall consist of a daily examination and logging of the drill core, hole probing with company-owned instruments, determination of drilling depths, necessary surveying, locating drill-hole sites, and all other duties necessary to the satisfactory technical progress of the work described in this contract.

No hole shall be started unless it can be completed within the maximum footage provided for a stage.

Certified drill and geologic logs, and certified copies of analytical returns shall be submitted with the Operator's monthly progress reports.

All drill holes under this contract shall bottom with BX minimum size core bits.

One-half of the cuttings and core shall be stored for Government use.

The supervision, the extent and method of sampling and drill-hole logging, the manner of storing and splitting drill cuttings and core, the location of access roads and drill sites, and the drilling method used, shall all be subject to Government approval.

Fixed Unit Costs

Stage I

7906 feet of noncore drilling @ $2.86/ft.	$22,611.16	
595 feet of core drilling @ $4.49/ft.	2,671.55	
16 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	80.00	
Estimated Total Cost for Stage I		$25,362.71
Government Participation @ 75%		19,022.03

Stage II

6211 feet of noncore drilling @ $2.86/ft.	17,763.46	
467 feet of core drilling @ $4.49/ft.	2,096.83	
13 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	65.00	
Estimated Total Cost for Stage II		19,925.29
Government Participation @ 75%		14,943.97

Stage III

9599 feet of noncore drilling @ $2.86/ft.	27,453.14	
722 feet of core drilling @ $4.49/ft.	3,241.78	

21 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ @ $5.00/each	$ 105.00	
Estimated Total Cost for Stage III		$30,799.92
Government Participation @ 75%		23,099.94

S U M M A R Y

Estimated Total Cost Stage I	$25,362.71	
Estimated Total Cost Stage II	19,925.29	
Estimated Total Cost Stage III	30,799.92	
Estimated Total Cost of Project		$76,087.92 1/
Government Participation @ 75%		$57,065.94

1/ The unit cost for drilling includes the costs of access roads, preparing drill sites, and all other costs whatsoever necessary in connection with the performance of the project work.

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

224 New Customhouse
Denver 2, Colorado

February 6, 1957

DMEA
RECEIVED FEB 11 1957

DATE	INITIALS	CODE
2/12	C	220
2/11	[illegible]	130
2-20	C	220

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA-3582 (Uranium), Contract No. Idm-E796
Walter Duncan Mining Company (Red Rock, White Rock, and Paragon Claims), San Juan County, Utah
FINAL REPORT

Enclosed are the original and three copies of a joint final engineering and geologic report dated January, 1957, by J. William Hasler, Geologist, Geological Survey, and Carl Belser, Mining Engineer, Bureau of Mines, and transmittal thereof dated January 18, 1957 from John F. Shaw and E. N. Harshman.

The original and one copy of the Operator's final report were forwarded to the Washington Office by memorandum of May 14, 1956.

The contract was terminated before completion of all the work provided for, by a Termination Agreement dated August 20, 1956, which was made effective May 15, 1956.

The exploration work completed consisted of 20 drill holes aggregating 11,763 feet of plug drilling and 727 feet of core drilling at a total accepted cost of $36,906.41, toward which the Government contributed 75 percent, or an amount of $27,679.82.

Final payment to the Operator was processed August 28, 1956 in conformance with the Report of Review of reported project costs by the Contract Administration and Audit Division, DMEA, dated August 27, 1956.

The exploration work did not result in the discovery or development of a significant quantity of uranium ore. The Operator was

Reviewed by
DMEA OPERATING COMMITTEE
2-15-57
(date)

advised by letter of January 10, 1957 from the Acting Administrator, DMEA, that the Government retained no claim or lien against the property for the payment of royalty on production.

DMEA Field Team, Region III

W. M. Traver

W. M. Traver

E. N. Harshman

E. N. Harshman

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

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

Building 20
Denver Federal Center
Denver 2, Colorado

REGION III

January 18, 1957

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DMEA
RECEIVED FEB 11 1957

DATE	INITIALS	CODE
		130
		220

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: Docket DMEA 3582 (Uranium) Contract Idm-E796, Walter Duncan Mining Company (Red Rock, White Rock, Paragon Claims) San Juan County, Utah

Enclosed are 10 copies of Final Engineering and Geological Report on subject project by J. William Hasler and Carl Belser.

The Walter Duncan Mining Company had applied for DMEA aid in exploring for uranium on approximately 100 acres of mineral land in San Juan County, Utah. The possible ore-bearing bed, underlying the ground, is the Moss Back member of the Triassic Chinle formation, which could be prospected by drilling holes from the surface, ranging from 482 to 745 feet deep. Prospecting in nearby ground had resulted in significant ore discoveries which encouraged the belief that similar finds would be made on the subject land.

A contract providing for a 3-stage drilling program was entered into on June 10, 1955. The program, as planned, comprised 25,500 feet of drilling at a total cost of $76,088.00

Drilling commenced June 29, 1955, was recessed in October, resumed February 13, 1956, and stopped before March 1, 1956.

Thirteen holes of Stage I and 7 holes of Stage II drilling were completed. The cost of the work was $36,906.41, of which the government paid 75 percent or $27,679.81.

No ore discovery was made and the contract was terminated on May 15, 1956, at the request of the operator.

Reviewed by
DMEA OPERATING COMMITTEE
2-15-57
(date)

E. N. Harshman for
John F. Shaw, Supervising Mining Engineer
E. N. Harshman, Member Field Team
E. N. Harshman

JFS:jg
Enclosures
cc: 9
DMEA 3582
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS MCKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
FINAL REPORT
REGION III

OFFICIAL FILE COPY
D M E A
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DMEA 3582

CONTRACT Idm-E796

RED ROCK, WHITE ROCK AND PARAGON CLAIMS

WALTER DUNCAN MINING COMPANY

SAN JUAN COUNTY, UTAH

Uranium

Final Engineering and Geological Report

by

J. William Hasler
Geological Survey

Carl Belser
Bureau of Mines

January 1957

Reviewed by
DMEA OPERATING COMMITTEE
2-15-57
(date)

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DATE	INITIALS	CODE

DMEA 3582

RED ROCK, WHITE ROCK, AND PARAGON CLAIMS
WALTER DUNCAN MINING COMPANY
SAN JUAN COUNTY, UTAH

INTRODUCTION AND SUMMARY

Walter Duncan Mining Company, P. O. Box 1468, Cortez, Colorado, submitted an application to the Defense Minerals Exploration Administration for aid in an exploration project on the Red Rock, White Rock, and Paragon claims in San Juan County, Utah(Fig. 1). The applicant, in DMEA 3582, requested aid in completing 25,500 feet (45 holes) of plug-bit and core drilling at an estimated cost of $92,200.00

A field examination was made on January 25, 1955. The claims, covering about 100 acres, are in a solid block about 7,900 feet long, and from 500- to 1,000-feet wide. The claims are on a mesa south of, and overlooking Lisbon Valley, 44 miles by road, northeast of Monticello, Utah.

The property is on the southwest or upthrown side of the Lisbon Valley fault and the basal 50 to 100 feet of the Wingate sandstone is exposed on the claims. This is underlain by the Chinle formation of the upper Triassic age which is exposed a few hundred feet to the north. The Chinle is about 400 feet thick and rests unconformably on the underlying Cutler formation of Permian age.

The known ore deposits of the area are contained in an ill-defined basal member of the Chinle formation that is probably equivalent to the Moss Back member of the Chinle to the west. This member has been exposed by rim workings north and northeast of the claims, and in a large number of drill holes have outlined at least two substantial ore bodies. One of these ore bodies lies just east of the claims, and Continental Uranium, Inc., is estimated to have produced 1,000 tons of ore a month from this deposit during the past two years. A second ore body, immediately north of the claims, is being developed by the Apache Mining Corporation.

A contract, calling for a three-stage drilling program, consisting of 25,500 feet of plug-bit and core drilling at an estimated cost of $76,088.00, was signed on June 10, 1955. Drilling commenced on June 29, 1955 and was recessed in late October. Work was resumed on February 13, 1956, and terminated in the same month. All 13 Stage I holes were completed, and an amended Stage II program consisting of 7 holes, five of which were relocated, was completed. No ore was penetrated in any of the holes. The Walter Duncan Mining Company has asked that the contract be terminated.

The total cost of the project was $36,906.41, of which the Government participation was 75 percent, or $27,679.81.

No discovery was made under the contract and no ore has been shipped.

RECOMMENDATIONS

Although the original contract was not completed, the area nearest to the known ore bodies has been adequately drilled with negative results. Holes drilled by other operators just outside of the northwest, west, and south boundaries of the property are barren. It is recommended that no discovery be certified and additional exploration, with Government assistance, is not recommended.

LOCATION AND ACCESSIBILITY

The Red Rock, White Rock and Paragon claims comprise a solid block of land, some 7900 feet in length and from 500- to 1,00-feet wide, in s. 34 and 35, T. 30 S., R. 25 E., Salt Lake meridian, San Juan County, Utah. (figs. 1 and 2). The average altitude is about 7,200 feet. The claims occupy a dip-slope surface 300 to 400 feet southwest of an escarpment over-looking Lisbon Valley. Erosion has formed only a shallow drainage pattern on most of the claim area.

The climate of the region is hot in summer and moderately severe in winter with a low total precipitation, but subject to severe storms of short duration at any season, however year around operations are feasible both underground and on the surface.

The property is accessible over a 22 mile long access road connected with U. S. Highway 160 at a point 22 miles north of Monticello and 35 miles south of Moab, Utah. Uranium buying stations are located in both of these towns where labor and materials can also be obtained.

Water for mine use can be obtained within a distance of 5 miles, and water for domestic use can be obtained from nearby La Sal, Moab, or Monticello.

OWNERSHIP AND EXTENT

The property consists of parts or fractions of 16 unpatented claims of which a long solid block containing about 100 acres appears to be free of conflicts. The 16 claims are recorded in the office of the County Recorder of San Juan County, Utah, as follows:

Claim	Book	Page
Paragon No. 5	223	517
Paragon No. 7	223	517
Paragon No. 8	223	518
White Rock No. 1	247	458
White Rock No. 2	247	459
White Rock No. 3	247	460
White Rock No. 4	247	460
White Rock No. 2 East Extension	259	245
Red Rock No. 1 West Extension	259	245
Red Rock No. 1	247	441
Red Rock No. 2	247	442
Red Rock No. 3	247	443
Red Rock No. 4	247	444
Red Rock No. 5	247	445
Red Rock No. 6	247	446
Patterson Fraction	273	204

The three Paragon claims were leased to the Walter Duncan Mining Company by Quentin S. Bullock. The remaining 13 claims were leased to the Walter Duncan Mining Company by G. O. Patterson, Lyle Francis, Rupert Jenkins, Floyd E. Jenkins, and Frank L. Seymour.

The lease agreements require payments of 15 percent royalty from any production obtained from the claims, and of doing annual assessment work. The lease agreement appears to be in good order.

HISTORY AND PRODUCTION

The Chinle outcrops on the southwest side of Dry Valley were prospected following the introduction of the Government uranium-ore buying program in 1948, and some mining was done on the Divide and Service Berry claims. Activity was limited until exploratory drilling by the Continental Uranium, Inc., discovered a substantial ore body at depth. In 1954, about 1,000 tons of ore a month, averaging 0.49 percent U_3O_8 and 0.64 percent V_2O_5, was being produced from this ore body. Most of the claims were located in 1953. During 1955, the Apache Mining Corporation blocked out an ore body north of the Duncan Property and started an incline early in 1956.

The Red Rock, White Rock, and paragon claims were located in 1953 and 1954, and were later leased to the Walter Duncan Mining Company. A DMEA drilling program was started in July 1955, and terminated upon the request of the contractor in March 1956.

Production from adjacent properties from 1948 to November 1954, inclusive, follows:

Mine	Dry Tons	U_3O_8 percent	V_2O_5 percent	U_3O_8 pounds	V_2O_5 pounds
Service Berry	395.42	0.25	0.60	2,002.04	4,740.12
Divide	112.77	0.23	0.77	524.62	1,747.29
Continental	5,515.35	0.49	0.64	54,050.43	70,596.84

There has been no production from the Duncan property.

GEOLOGY

The Walter Duncan Mining Companies Red Rock group of claims in San Juan County, Utah, lie near the southeast end of Lisbon Valley, a collapsed salt anticline that has been cut longitudinally by a northwest striking fault known locally as the Lisbon Valley Fault. The Red Rock claims lie on the southwest or upthrown side of this fault. Triassic and Jurassic rocks are exposed on the subject claims and also underlie them (Fig. 3).

Only the basal 50 to 200 feet of the Wingate formation consisting of sandstone of upper Triassic age is exposed on the property, although both younger and older rocks are exposed on nearby claims. The Wingate formation is a massive cross-bedded, fine grained, orange collored sandstone.

The Chinle formation of Upper Triassic age underlies the Wingate formation is the chief ore-bearing formation in the Lisbon Valley area. The Chinle formation is exposed a few hundred feet northeast of the claims and is about 400 feet thick and rests unconformably on the Cutler formation of Permian age. The Chinle consists of red and green mudstone and red and gray sandstone, siltstone, and conglomeratic sandstone. Uranium deposits are found in the lowermost sandstone unit of the Chinle formation, the Moss Back member. The Moss Back is a gray to greenish-gray and sandstone, sandy siltstone and conglomeratic sandstone with green mudstone. The Moss Back ranges from a knife edge to more than 30 feet thick along the outcrop near the subject claims, and believed to thicken southwesterly away from the Lisbon Valley salt anticline.

The Cutler formation of Permian age, which underlies the Chinle formation, consists largely of red, purple, and brown mudstone and red, purple and white arkosic sandstone and conglomerate. The Chinle-Cutler contact can generally be recognized in drill core by the first appearance of the above mentioned lithologic characteristics immediately below the contrasting green mudstone and gray sandstone of the Moss Back member.

Structure

The Red Rock claims lie on the southwest flank of the Lisbon Valley anticline about one-half mile southwest of the Lisbon Valley fault. The Lisbon Valley anticline is believed to be underlain by a thickened roll of salt in the Paradox member of the Hermosa formation of Pennsylvanian age. The anticline probably existed as a structural and topographic high since the late Paleozoic, as all Mesozoic formations appear to thin near the axis of the structure. The beds on the property strike about N. 85° W., and dip about 10° southwest. The northwesterly trending Lisbon Valley fault is a normal fault and has a stratigraphic throw of more than 4,000 feet. The southwest side of the fault is upthrown. Northeast of the Walter Duncan company's claim, the Lisbon Valley fault splits into a number of smaller faults. No faults are known to exist on the company claims although the Wingate sandstone shows a well-developed set of vertical joints that trend N. 75° W., about parallel with the trend of the structural contours of the claim area.

ORE DEPOSITS

The basal part of the Chinle formation, which the applicant explored under Contract Idm-E796, is not known to contain mineralized material on the subject claims. Significant ore deposits known to exist on nearby properties suggested that the Red Rocks claims merited at least a limited amount of exploration. These neighboring deposits include the original producing properties in the Chinle formation in the Lisbon Valley area, the recently developed Continental school section 36 mine and the recently discovered Williams-Noble deposit. The Walter Duncan claims were necessarily appraised or evaluated on the basis of neighboring properties, which are briefly described below.

The workings on the Divide claims were mined as early as 1943. The ore was found in sandstone that had been impregnated with gray vanadium minerals and a yellow uranium mineral, probably carnotite. Here the Moss Back member of the Chinle is only about 10 feet thick and is cross-bedded, brownish-gray in color, and conglomeratic. Total production is small, probably less than 200 tons having an average grade of about 0.20 percent U_3O_8. The Divide property is presently idle and has no significant reserves.

The Service Berry mine was developed in 1948. The workings consist of several small open cuts and three adits with small side

stopes and rooms. The ore is similar to that of the Divide claims, except that vanadium minerals appear less abundant, making the rocks more difficult to outline insofar as ore is concerned. Here, the Moss Back member is about 15 feet to 20 feet thick, and total production did not exceed 500 tons, with an average grade of about 0.20 percent U_3O_8. The Service Berry mine is now idle, and there are no significant reserves.

The School Section 36 deposit was discovered by drilling, in 1953 and an incline was sunk and present workings are in excess of 2,000 feet. The ore differs somewhat from the ore found in the Divide and Service Berry mines, in that it is unoxidized and contains the minerals uraninite, montroseite, corvusite, pyrite, and galena as replacement, of calcite or as impregnations in the sandstone. Carbonaceous debris and hematite are also present in the ore. The Moss Back is 30 feet or more thick and consists of conglomerate, coarse- to fine-grained silty sandstone and claystone. The school section 36 mine has produced approximately 30,000 tons of ore averaging 0.38 percent U_3O_8 and 0.65 percent V_2O_5. The ore in the section 36 mine averages about 4 feet thick, has been outlined by diamond drilling for a width of about 300 feet and a length of more than 1,000 feet. Although the ore is somewhat discontinuous, it shows a well-developed elongation trending almost due west.

The Williams-Noble deposit was discovered by drilling during 1954. Assay data is incomplete, but estimates based on AEC gamma-ray logs indicate reserves amounting to 12,200 tons on the Silvey claims that will average 0.21 percent U_3O_8 or more. However, the depth to the ore is approximately 600 feet which probably would make the ore grade material unprofitable to mine.

The field examination indicated that the Red Rock group of claims merited at least a minimum amount of exploration as there were numerous uranium deposits in the immediate vicinity of the claims, and because the claims were probably underlain by a thicker lower Chinle which is usually more favorable for ore deposits than the thinner Chinle found on the Divide or Service Berry properties. The outcrops and drilling suggest that the ore-bearing lower Chinle thickens away from the axis of the Lisbon Valley anticline. Further, the school section 36 deposit suggests that the thicker lower Chinle is more favorable for large deposits. The projected trend of the School section 36 ore body also suggests that the southern part of the Walter Duncan claims provide the more favorable area for finding ore.

The claims appeared more favorable because of their similarity to the areas where the larger deposits in Lisbon Valley, such as the Mi Vida, were found. All of the promising ore bodies have

occurred at depth in the Lisbon Valley area, and as this portion of the valley had been explored but very little at the time of the examination, it was deemed advisable to explore the subject claims for possible buried ore bodies.

ORE RESERVES

There are no known ore reserves on the property.

THE PROJECT

Geologic Justification

The applicant originally proposed a drilling program in two phases, consisting of 42 holes amounting to 25,000 feet of plug-bit drilling and core drilling, to cost an estimated $92,200.00. In a field conference with the examining team it was pointed out that the applicant's proposal was actually a three phase program, because the applicant's first phase was divided into two parts, the second of which was based on drilling results of the first. A revised program embodying three stages was finally agreed upon by all parties.

This program was justified because, where exposed, the basal Chinle formation appeared favorable for ore deposition, and because Continental Uranium Inc. operating just to the northeast,

was producing 1,000 tons of ore a month. Also, the Divide and Service Berry mines, to the north and northwest, had been small producers.

Original Program and Modifications

The original program recommended consisted of three stages. The first stage contained 13 holes (8,501 feet of drilling) in 5 north-south fences spaced about 2,000 feet apart. Stage II consisted of 10 holes (6,678 feet of drilling) in 4 north-south fences spaced midway between the Stage I fences. Stage III had a maximum of 17 holes (10,321 feet of drilling). The locations of Stage III holes would be determined by the results of the previous drilling. The total estimated cost was $76,088.00.

A contract, Idm-E796, was signed on June 10, 1955. Drilling commenced on June 29, was recessed for two weeks on July 20, and was recessed a second time in late October. Work was resumed on February 13, 1956, and terminated the same month. Stage II drilling was reduced from 10 to 7 holes on September 19, 1956, following a request of the operator.

Description of Work Completed

Thirteen Stage I holes, totaling 7,881 feet of drilling, and 2 Stage II holes, totaling 1,325 feet, were completed in accordance with the contract.

As Stage I drilling, and drilling on nearby claims, indicated that the best chance to find ore would be near the east end of the claims, five relocated Stage II holes (3,284 feet) were drilled in this area. No ore was penetrated by any of the drill holes and the contractor requested that the contract be terminated. The results of individual holes are shown in Annex I.

SUMMARY OF FACTUAL DATA

The contract called for a maximum of 25,500 feet of drilling to be done in three stages at the following stipulated costs.

Stage I	
7,906 feet of non-core drilling at $2.86/ft.	$22,611.16
595 feet of core drilling at $4.49/ft.	2,671.55
16 chemical analyses at $5.00 each	80.00
Estimated total cost of Stage I	25,362.71
Stage II	
6,211 feet of non-core drilling at $2.86/ft.	17,763.46
467 feet of core drilling at $4.49/ft.	2,096.83
13 chemical analyses at $5.00 each	65.00
Estimated total cost for State II	19,925.29
Stage III	
9,599 feet of non-core drilling at $2.86/ft.	25,362.71
722 feet of core drilling at $4.49/ft.	3,241.78
21 chemical analyses at $5.00 each	105.00
Estimated total cost for State III	30,799.92
Total estimated cost of project (rounded)	76,088.00
Government participation 75 percent, or	57,066.00

Actual Costs

Because of the unfavorable results the contract was terminated after 20 holes had been completed. Actual contract costs follow:

Stage I	
7,388 feet of non-core drilling at $2.86/ft.	$21,129.68
493 feet of core drilling at $4.49/ft.	2,213.57
Total cost of Stage I drilling	$23,343.25
Stage II	
4,375 feet of non-core drilling at $2.86/ft.	12,512.50
234 feet of core drilling at $4.49/ft.	1,050.66
Total cost of Stage II drilling	$13,563.16
Total cost of Project	**$36,906.41**
Government participation 75 percent or	$27,679.81

No chemical analyses were made during the contract and there was no production during the life of the contract.

Equipment consisted of one Mayhew 1,000 drill and one bulldozer furnished by the Walter Duncan Mining Co. The company also furnished an engineer-geologist, counter, and probe. Holes were also probed by the Geological Survey gamma ray unit.

DISCUSSION OF CONCLUSIONS

With the exception of three months when the work was recessed, there were no marked delays in the performance of contract work. The work progressed smoothly and core recovery was good.

The east end of the claim block, nearest to known ore deposits, was adequately explored. The examining team believes that there are no known targets worthy of additional exploration at present, as none of the holes penetrated ore-grade material. Therefore it is not believed that a discovery should be certified.

ANNEX I

Stage I Holes Drilled under the Contract

Hole No.	Footage Plug-bit	Footage Cored	Footage Total	Cutler Contact	Feet Host Sand	Uranium Mineralization
A-1	657	40	697	684'	10'	Barren
A-2	679	40	719	712'	0'	Barren
A-3	563	40	603	589'	2'	575.3'-577.2'-.025% eU_3O_8
A-4	640	40	680	669'	0'	644.7-645.7'-slightly radioactive
A-5	605	40	645	627'	0'	611.4'-615.6'-.099% eU_3O_8
A-6	547	40	587	583'	0'	Barren
A-7	500	38	538	534'	0'	Barren
A-8	500	20	520	516'	11'	482'-483'-.005% eU_3O_8 492'-499'-slight 500.2-501'-.045% eU_3O_8
A-9	530	40	570	568'	0'	Barren
A-10	705	39	744	735'	6'	Barren
A-11	442	40	482	471'	0'	266.5'-270.0'-.006% eU_3O_8
A-12	473	36	509	497'	0'	Barren
A-13	547	40	672	579'	0'	Barren
Stage II holes drilled under the contract						
B-14	632	40	672	669'	11'	Barren
B-15	608	32	640	621'	16'	600.2'-601.2'-.005% eU_3O_8 603.7'-604.4'-.01% eU_3O_8 608.1'-609'-.029% eU_3O_8
B-16	649	36	685	669'	18'	Barren
B-17	582	30	612	608'	0'	638.7'-649.1'-spotted slight eU_3O_8 651.2'-654.6'-.01% eU_3O_8
B-18	632	36	668	665'	0'	Barren
B-19	700	20	720	706'	18'	Barren
B-20	572	40	612	600'	12'	Barren

ANNEX 2

Resume of Diamond Drilling, Walter Duncan Mining Company, Red Rock and Paragon claims, San Juan County, Utah

DMEA docket 3582 (Uranium) contract Idm-E 796

Hole No.	Thickness of Moss Back	From To	Total Depth	Ore	Mineralized	Barren	Classi-fied
1	10.9'	672' - 682.9'	697'	-	slight	--	Fav.
2	28.0'	679' - 707'	719'	-	--	Barren	Unfav.
3	13.0'	576' - 589'	603'	-	0.05e at 576-577.7'		Fav.
4A	5	665' - 670'	678'	-	slight " 644.7-645.7		Unfav.
5	20'	625' - 645'	645'	-	slight " 610 - 612		Unfav.
6	23.5'	557.5'-581'	587'	-	-	Barren	Unfav.
7	34'	500' - 534'	540'	-	-	Barren	Unfav.
8	11'	502' - 513'	520'	-	0.02 - 0.10 e(498-499)		S.F.
9	7.5'	560.5'-568'	570'	-	-	Barren	Unfav.
10	37.5'	706.5'-744	745'	-	-	Barren	S.F.
11	16.5'	460 - 476.5'	482'	-	-	Barren	Unfav.
12	14'	485.5'-499.5'	509'	-	-	Barren	Unfav.
13	10'	569' - 579'	587'	-	-	Barren	Unfav.
14	11'	652' - 663'	672'	-	-	Barren	S.F.
15	16'	605' - 621'	646'	-	0.01-0.04e at 606-607		Fav.
16	18'	651' - 669'	685'	-	slight at 558.5		Fav.

ANNEX 2
(continued)

Hole No.	Thickness of Moss Back	From To	Total Depth	Ore	Mineralized	Barren	Classi-fied
17	0.5'	584' - 584.5'	612'	-	-	Barren	Unfav.
18	1.5'	660.5'- 662'	668'	-	-	Barren	Unfav.
19	18'	690' - 708'	720'	-	-	Barren	S.F.
20	12'	584' - 596'	612'	-	-	Barren	S.F.
	307.9	Total ---	12,497'				

Average 15.3

ANNEX 3

USGS Gamma-Ray Log Interpretations, DMEA 3582

Walter Duncan Mining Company

Hole No.	Anomaly Detected	Thickness	Grade % eU_3O_8	Barren
1	--	--	--	Barren
2	--	--	--	--
3	576'-589'	--	1.0' 0.05 @ 576'-577.7' 0.032 @ 577'	
4	--	--	--	Barren
5	--	--	--	--
6	--	--	--	--
7	--	--	--	--
8	502'-513'	--	0.8' 0.045 @ 500'	
9	--	--	--	Barren
10	--	--	--	Barren
11	--	--	--	Barren
12	--	--	--	Barren
13	--	--	--	Barren
14	--	--	--	Barren
15	--	--	--	Barren
16	--	--	--	Barren
17	--	--	--	Barren
18	--	--	--	Barren
19	--	--	--	Barren
20	--	--	--	Barren

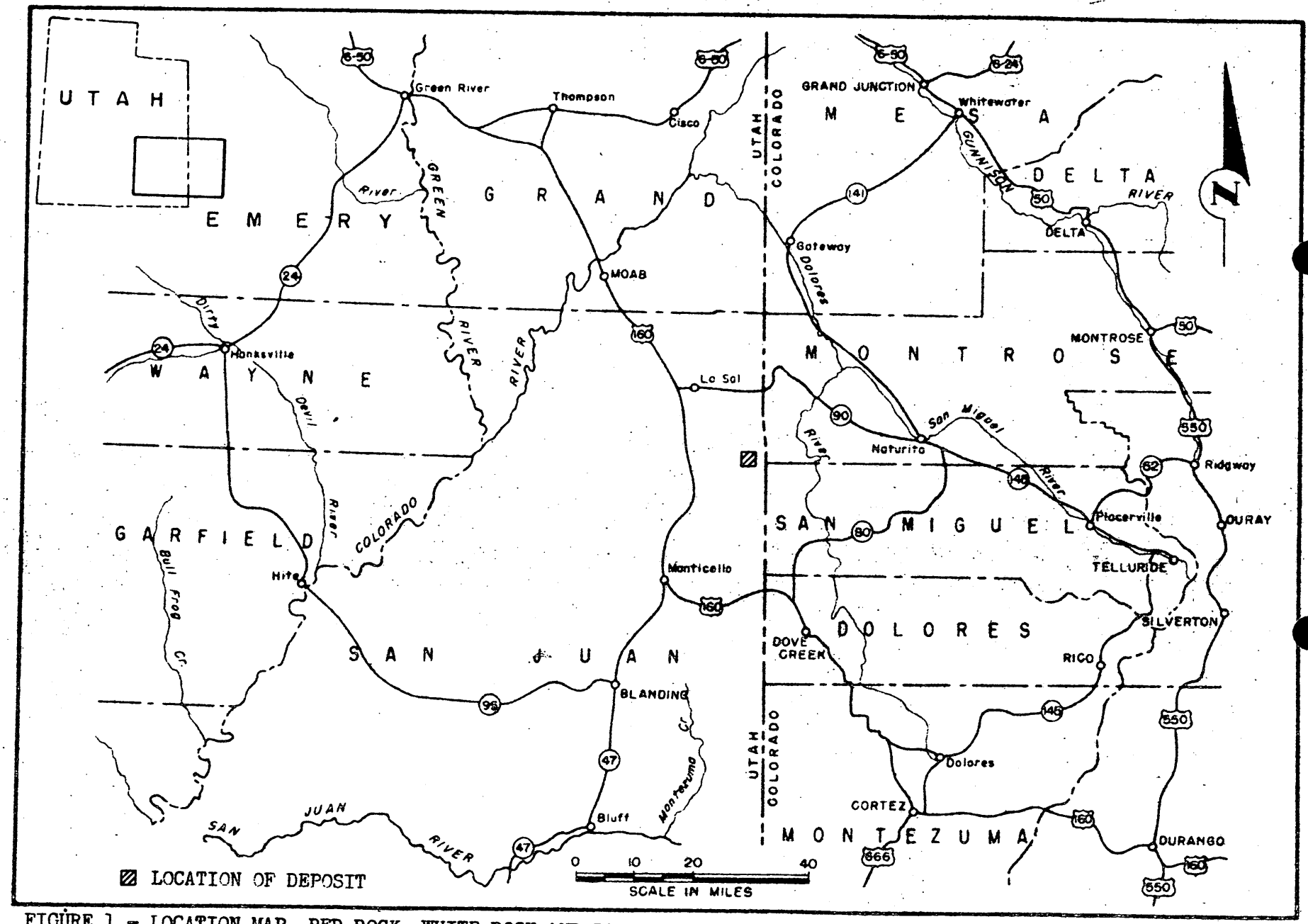
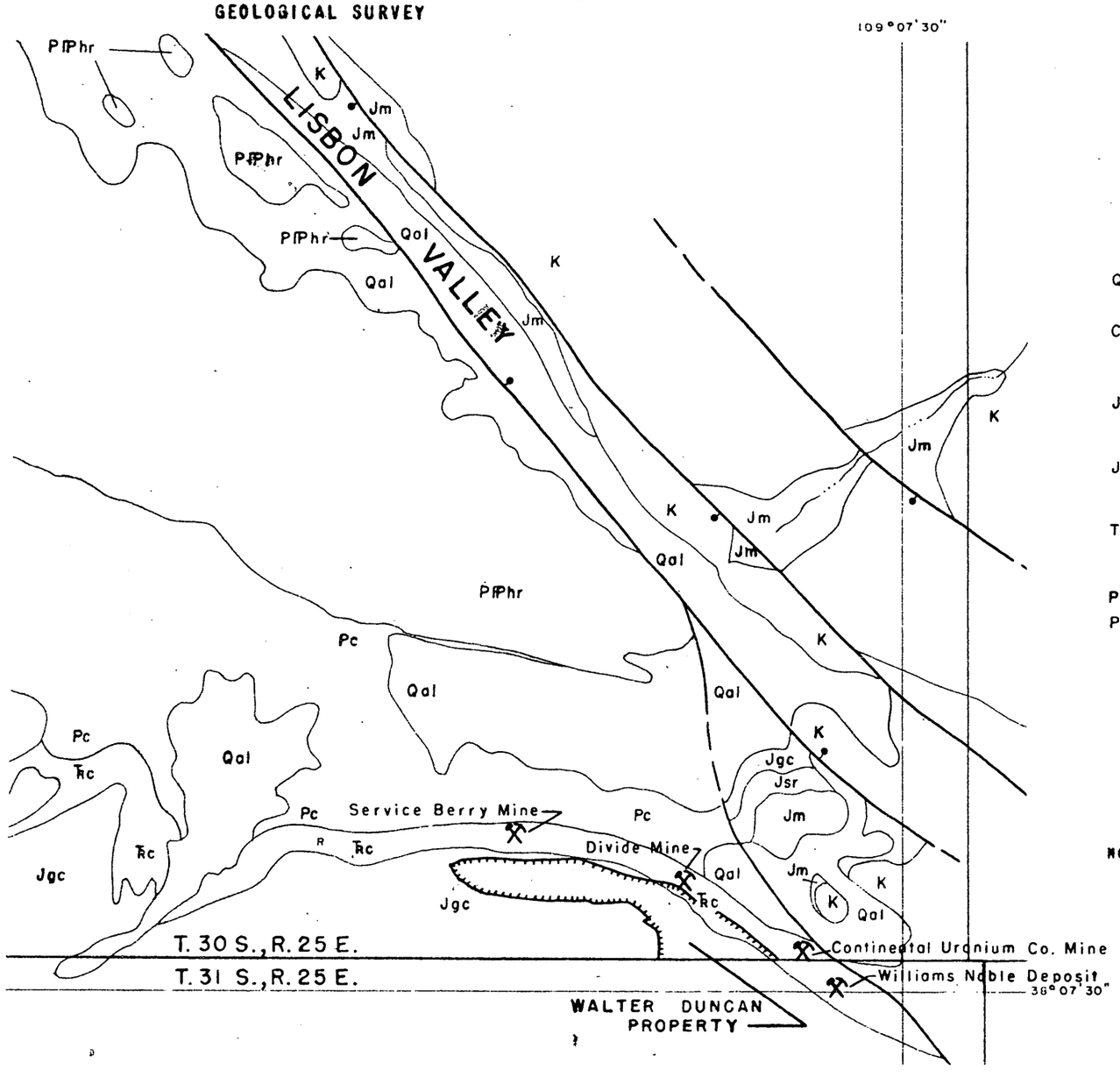


FIGURE 1 - LOCATION MAP, RED ROCK, WHITE ROCK AND PARAGON CLAIMS, WALTER DUNCAN MINING COMPANY, SAN JUAN COUNTY, UTAH. DMEA 3582

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3582



EXPLANATION

Quaternary	Qal	ALLUVIUM
Cretaceous	K	CRETACEOUS UNDIVIDED
Jurassic	Jm	MORRISON FORMATION
	Jsr	SAN RAFAEL GROUP
Jurassic Triassic	Jgc	GLEN CANYON GROUP
Triassic	Trc	CHINLE FORMATION
Permian(?) and Pennsylvanian	Pc	CUTLER FORMATION
	PIPhr	HERMOSA FORMATION AND RICO FORMATION

FORMATIONAL CONTACT. DASHED WHERE MOST DOUBTFUL

FAULT, SHOWING DOWNTHROWN SIDE. DASHED WHERE MOST DOUBTFUL. (Not all faults are shown)

NOTE: Location of formational contacts, faults, mines and prospects and township grid is approximate

N

1 0 2 MILES

Figure 3. MAP SHOWING GEOLOGIC SETTING OF THE WALTER DUNCAN CO. MINING CLAIMS, LISBON VALLEY AREA, SAN JUAN COUNTY, UTAH

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
2-4	Murphy	700
2-4	[illegible]	700
4	[illegible]	110
11	Mittendorf	100
2/5	C	220
		225

FEB 5 1957

Mr. J. Walter Duncan, Jr.
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket No. DMA-3582 (Uranium)
Contract No. Idm-E796
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Duncan:

In connection with the Acting Administrator's letter to you of January 10, 1957, regarding the subject project contract, enclosed is correspondence forwarded on the same date to Mr. R. F. Jenkins, Moab, Utah, who signed Owner's Consents to Lien. This mail was returned by the Post Office for the reasons checked on the envelope.

Since our file does not contain the full address for Mr. R. F. Jenkins, we will appreciate your forwarding these letters to him.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

FMMurphy/izm 2-4- 57
cc to: Code 700
Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Reg. 3(2)

8623

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
1-17	Murphy	700
1-18	Ellis	700
1-18	Johnson	110
"	Weeden	100
1-18	cw	220
		225

JAN 18 1957

Mr. J. Walter Duncan, Jr.
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Duncan:

In connection with the Acting Administrator's letter to you of January 10, 1957, regarding the subject project contract, enclosed is correspondence forwarded on the same date to Mr. F. B. Jenkins, Grand Junction, Colorado, who signed an Owner's Consent to Lien. This mail was returned by the Post Office for the reasons checked on the envelope.

Since our file does not contain the full address for Mr. Jenkins, we will appreciate your forwarding these letters to him.

Sincerely yours,

E. O. Mi[illegible] (for)

Administrator

Enclosures

FMMurphy/gla/izm 1-17-57
cc to: Code 700
Mr. Murphy
Admr.'s Reading File
DMEA Field Team, Reg. 3 (2)

cw

8623

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
1/7/57	Murphy	700
1-9	Ellis	700
1-9	Chandler	800
1/10	Selfridge	120
1/10	Johnson	110
1/11	CW	~~100~~
		225

JAN 10 1957

Mr. G. O. Patterson
Moab, Utah

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Patterson:

Reference is made to the undated Owner's Consents to Lien which you executed in connection with the DMEA contract for an exploration project on property located in San Juan County, Utah.

For your information, there is enclosed a copy of our letter of this date to Mr. J. Walter Duncan, Jr., Walter Duncan Mining Company, P. O. Box 1468, Cortez, Colorado, advising that the Government retains no claim or lien against the property described in the contract or on any future production therefrom.

Sincerely yours,

Frank E. Johnson (for)

ACTING Administrator

Enclosure

Similar letters to: R. F. Jenkins, Moab, Utah
F. B. Jenkins, Grand Junction, Colorado

FMMurphy/gla
1-7-57
cc to: Admr.'s Reading File
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Contract Adm.& Audit Division

A.C.S.

8623

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(12-56)

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OFFICIAL FILE COPY

Date	Surname	Code
1/7/57	Murphy	700
1-9	Ellis	700
1-9	Chapman	800
1/10	Selfridge	120
1/10	Frank E. Johnson	110
		~~200~~
		225

JAN 10 1957

Mr. Lyle Francis
Moab, Utah

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Francis:

Reference is made to the undated Owner's Consent to Lien which you executed in connection with the DMEA contract for an exploration project on property located in San Juan County, Utah.

For your information, there is enclosed a copy of our letter of this date to Mr. J. Walter Duncan, Jr., Walter Duncan Mining Company, P. O. Box 1468, Cortez, Colorado, advising that the Government retains no claim or lien against the property described in the contract or on any future production therefrom.

Sincerely yours,

Frank E. Johnson

ACTING Administrator

Enclosure

FMMurphy/gla
1-8-57
cc to: Admr.'s Reading File
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Contract Adm. & Audit Division

8623

DMEA Form 7
(12-56)

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OFFICIAL FILE COPY

Date	Surname	Code
1/7/57	Murphy	700
1-8	Ellis	700
1-9	Chamberlin	800
1/10	Jeffrey	120
1/10	Johnson	110
		~~100~~

225

Mr. J. Walter Duncan, Jr.
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Duncan:

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,

Frank E. Johnson (fw)

ACTING Administrator

FMMurphy/gla
1-8-57
cc to: Admr.'s Reading File
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Contract Adm. & Audit Division

G. O. Patterson, Moab, Utah
R. F. Jenkins, " "
Lyle Francis, " "
F. B. Jenkins, Grand Junction, Colorado
Quentin S. Bullock, P. O. Box 322, Bryan, Texas
Frank L. Seymour, 317 Main Street, Grand Junction, Colorado

R.C.G.

8623

DMEA Form 7
(12-56)

700

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Date	Surname	Code
1/7/57	Murphy	700
1-9	Ellis	700
1-9	Chamberlin	000
1/10	Selfridge	120
1/10	Frank E. Johnson	110
		~~100~~

225

Mr. Frank L. Seymour
317 Main Street
Grand Junction, Colorado

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Seymour:

Reference is made to the Consent to Lien which you executed on May 16, 1955, in connection with the DMEA contract for an exploration project on property located in San Juan County, Utah.

For your information, there is enclosed a copy of our letter of this date to Mr. J. Walter Duncan, Jr., Walter Duncan Mining Company, P. O. Box 1468, Cortez, Colorado, advising that the Government retains no claim or lien against the property described in the contract or on any future production therefrom.

Sincerely yours,

Frank E. Johnson (for)

ACTING Administrator

Enclosure

FMMurphy/gla
1-7-57
cc to: Admr.'s Reading File
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Contract Adm.& Audit Division

R.C.G.

8623

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
1/7/57	Murphy	700
1-9	Ellis	700
1-9	Chamberlain	800
1/10	Selfridge	120
1/10	Frank E. Johnson	110
		~~300~~ 225

JAN 10 1957

Mr. Quentin S. Bullock
P. O. Box 322
Bryan, Texas

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-D796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Bullock:

Reference is made to the Owner's Consent to Lien which you executed on March 14, 1955, in connection with the DMEA contract for an exploration project on property located in San Juan County, Utah.

For your information, there is enclosed a copy of our letter of this date to Mr. J. Walter Duncan, Jr., Walter Duncan Mining Company, P. O. Box 1468, Cortez, Colorado, advising that the Government retains no claim or lien against the property described in the contract or on any future production therefrom.

Sincerely yours,

Frank E. Johnson (fw)

ACTING Administrator

Enclosure

FMMurphy/gla
1-7-57
cc to: Admr.'s Reading File
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)
Contract Adm. & Audit Division

R.C.G.

8623

Docket 700

Project Summary Report

By: F. M. Murphy Date: January 7, 1957

1. Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
Operator: Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Operator's Property Rights:

Lessee of 16 claims - Paragon (3), White Rock (5), Red Rock (7), and Patterson Fraction (1), situated in secs. 34 and 35, T. 30 S., R. 25 E., SLBM, San Juan County, Utah.

2. Contract: dated June 10, 1955
terminated by mutual agreement on August 20, 1956

Work Authorized:

	UNITS			
	Stage I (13 holes)	Stage II (10 holes)	Stage III (17 holes)	COST
Non-core drilling @ $2.86/ft.	7,906	6,211	9,599	$67,827.76
Core drilling @ $4.49/ft.	595	467	722	8,010.16
Analaysis V_2O_5, U_3O_8, $CaCO_3$ @ $5/sample	16	13	21	250.00

Total Estimated Cost (rounded) $76,088.00
Government Participation @ 75% (rounded) $57,066.00

Work Completed:

Stage I-13 holes, Stage II - 7 holes, Stage III not authorized.

February 1956 - MF-104:

Non-core drilling, 11,763 ft. @ $2.86/ft. $33,642.18
Core drilling, 727 ft. @ $4.49/ft. 3,264.23
Total Cost submitted by Operator $36,906.41

3. Audit Report of Review - August 27, 1956

Total cost as billed by Contractor $36,906.41
Exceptions -
Total Accepted Cost $36,906.41
Government Participation @ 75% $27,679.82

4. Certification: None

5. Comments: The object of the project was to explore the basal (Moss Back?) member of the Chinle formation.

The exploratory work was approved as the property lies in a major uranium producing area, the Lisbon Valley anticline. Prior to DMEA drilling the Continental Uranium Company discovered a 75000-100,000 ton ore body within 1,000 feet of the western boundary of the project area. Also mineralized outcrops near the northern boundary of the project area suggested a possible continuation of the ore-bearing host rock of the Continental deposit.

The Stage I holes were located to intersect any channels or lenses trending in an east-west direction.

Stage II consisted of 7 holes to test an area of thick basal Chinle sandstone in the eastern portion of the project area.

The core shows that the Chinle sandstone in the project area is well washed and flushed by ground water. Structure contours at the base of the Chinle show no particular scouring or channeling. This relatively uniform contact between the Chinle and Cutler suggests that the basal Chinle in the project area was probably in a broad shallow basin rather than in a Sharply dilineated channel that would be favorable for ore deposition.

Exploratory drilling under the contract started in July, 1955 and completed in February, 1956. No uranium ore was found.

The work was carried out in a satisfactory manner.

The Operator's Final Narrative Report was received in Washington May 17, 1956.

The Field Team report has not been received to date, but the Operator's report is complete enough.

Final payment to the Operator was approved August 28, 1956.

F M Murphy

F. M. Murphy, Mining Engineer
Rare & Miscellaneous Metals Div.

Name copy

700

Murphy

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

DEC 21 1956

Re: Field Team final reports
(Uranium contracts)

Dear Mr. Traver:

A review of the files on DMEA uranium contracts, where the work has been completed by the Operator or the work has been terminated for over six months, reveals that the final Field Team reports have not been received for the contracts listed below:

Contract No.	Docket number	Operator
Idm-E381	DMEA-2135	Sunnyside Uranium Company (Stage III)
Idm-E517	DMEA-2857	Sodak Uranium & Mining Company, Inc.
Idm-E631	DMEA-3032	Rare Earth Mining Company
Idm-E638	DMEA-3060	Thornburg Uranium Mines
Idm-E691	DMEA-3239	Urova Co.
Idm-E723	DMEA-3360	Mid-Continent Uranium Corp.
Idm-E796	DMEA-3582	J. Walter Duncan, Jr.
Idm-E823	DMEA-3514	Climax Uranium Co.
Idm-E860	DMEA-3613	Chatu Uranium Mining Company, Inc.
Idm-E870	DMEA-3762	Shannon Oil Co.
Idm-E877	DMEA-3767	Uranium Prospectors Co., Ltd.
Idm-E906	DMEA-3868	La Salle Mining Co.
Idm-E910	DMEA-3896	Hecla Mining Company
Idm-E928	DMEA-3962	Norbute Corporation

Kindly advise the status of the preparation of these reports and the date they may be expected in Washington. It is requested that these reports be given priority wherever possible in order that our dockets may be closed on these older projects.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:
P. F. Yopes
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

EWE/gla 12-28-56
cc to: Admr.'s Reading File
Operating Committee
J. E. Crawford, 3643
T. H. Kiilsgaard, 5224 14 dockets
J. O. Hosted, 3210, CSA
Code 700

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 3582 (Uranium), Contract Idm-E796, Walter Duncan Mining Company, San Juan County, Colorado

Enclosed are the Government's, Division, and Docket copies of the "TERMINATION AGREEMENT" which was forwarded by your letter of August 2, 1956, for signature by the Operator and this office.

Copies of the Termination Agreement have been distributed to the Operator, the Finance Office, Region III, and others concerned.

W. M. Traver

W. M. Traver

Enclosures

RECEIVED
AUG 22 1956

700

FILE COPY

Surname:

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

AUG - 2 1956

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-8796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Traver:

This is in response to your memorandum, dated July 2, 1956, in which you request our advice as to whether or not termination of the captioned contract by mutual agreement is necessary.

It is noted that all 13 holes allowed under Stage I of the contract and 7 of the 10 holes allowed under Stage II were completed, also, none of the 17 holes under Stage III were drilled. No uranium ore was discovered in the holes completed.

By inference your letter of April 16, to Mr. Charles F. Butler, manager of the Walter Duncan Mining Company, implies that the Government concludes that further drilling is not necessary and the project would be wound up on receipt of an adequate final report from the Operator. Copies of the Operator's Final Report were transmitted to this office with your memorandum of May 14, 1956. However, a formal termination of the contract by mutual agreement will be necessary. Therefore, we are enclosing copies of the agreement for execution.

The Administrator's final letter to the Operator will be prepared as soon as this office receives and reviews the Final Field Team Report, executed termination agreement, and the Final Audit relating to the subject contract.

Sincerely yours,

W. S. Martin 857

Chairman, Operating Committee

APPROVED:

/s/ Robert W. Nelson 854

Member, Geological Survey

W. E. Nelson 857

Member, Bureau of Mines

FMMurphy/izm (7-12-56) 7-19-56

cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3843
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

R.C.

700

FILE COPY
Surname:
Murphy
Duncan

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

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

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock Claims, et al.
San Juan County, Utah

Dear Mr. Travar:

This is in response to your memorandum, dated July 2, 1956, in which you request our advice as to whether or not termination of the captioned contract by mutual agreement is necessary.

It is noted that all 13 holes allowed under Stage I of the contract and 7 of the 10 holes allowed under Stage II were completed, also, none of the 17 holes under Stage III were drilled. No uranium ore was discovered in the holes completed.

By inference your letter of April 16, to Mr. Charles F. Butler, manager of the Walter Duncan Mining Company, implies that the Government concludes that further drilling is not necessary and the project would be wound up on receipt of an adequate final report from the Operator. Copies of the Operator's Final Report were transmitted to this office with your memorandum of May 14, 1956.

A formal termination of the contract by mutual agreement will not be necessary. If you believe it advisable at this time, a letter from the Field Team to the Operator advising that the Government will not participate in further exploration work will be sufficient.

The Administrator's final letter to the Operator will be mailed as soon as this office receives and reviews the Final Field Team Report and the Final Audit relating to the subject contract.

Sincerely yours,

Chairman, Operating Committee

FROM SOLICITOR
JUL 16 1956
FOR SIGNATURE

APPROVED:

Member, Geological Survey

Member, Bureau of Mines

Operating Committee
Messrs. JECrawford, Rm. 3643
THKilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

FMMurphy/izm 7-12-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File

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

RECEIVED
JUL 5 - 1956

224 New Customhouse
Denver 2, Colorado

VIA AIR MAIL

July 2, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), Contract Idm-E796, Walter Duncan Mining Company, San Juan County, Utah

It has been brought to our attention that, even though we initiated action toward that goal, the subject contract has not been officially terminated. In that respect, you are referred to our memorandum of April 12, 1956 to John F. Shaw and E. N. Harshman, two copies of which were forwarded to you at the time of writing, wherein we requested the field's recommendation relative to terminating the contract.

Subsequent to our request to the field for their recommendations, and disregarding the necessity to terminate the contract by mutual agreement, we indicated in correspondence to the Operator that his final report was in order.

In conjunction with the matter, we are enclosing the original and three copies of a memorandum from Carl Belser, Mining Engineer, Bureau of Mines, dated June 26, 1956, and transmittal thereof from John F. Shaw, Supervising Mining Engineer, dated June 27, 1956, relative to terminating the contract.

We will appreciate your reviewing the matter and advising us as soon as possible as to whether or not termination of the contract by mutual agreement is necessary.

The original and one copy of the Operator's final report were forwarded to you by memorandum of May 14, 1956.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

RECEIVED
JUL 5 - 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
June 27, 1956

DMEA
Date Rec'd.
JUN 28 1956

BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
Supervising Mining Engineer

Subject: Docket DMEA 3582 (Uranium) Contract Idm-E796, Walter Duncan Mining Company (Red Rock, White Rock and Paragon claims) San Juan County, Utah

Enclosed are the original and 9 copies of a memorandum by Carl Belser recommending that Contract Idm-E796 be terminated.

John F. Shaw
Supervising Mining Engineer

Enc.
JFS/mw
Idm-E796
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

RECEIVED
JUL 5 - 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
June 26, 1956

DMEA
Date Rec'd.
JUN 28 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: John F. Shaw, Supervising Mining Engineer

From: Carl Belser

Subject: Docket 3582 (Uranium) Contract Idm-E796, Walter Duncan Mining Company, (Red Rock, White Rock and Paragon claims) San Juan County, Utah -- Request for termination

The October 10, 1955 memorandum of J. W. Hasler and M. H. Salsbury concludes that Stage II drilling should be terminated with a seven hole program and written consent was granted on October 21, 1955.

No ore was penetrated in any of the Stage I or Stage II holes.

The operator wrote a final report included with his progress reports for February. In his first paragraph of this report he states "No significant mineralization has thus far been found and we propose that the project be terminated."

A memorandum dated April 18, 1956 from W. M. Traver to T. A. Christensen -- quote "All authorized work under the contract has been completed."

Final payment of $250.00 was withheld pending the receipt of a seperate final report. A copy of this final report is not in this office.

It is recommended the contract Idm-E796 be terminated.

Carl Belser
Mining Engineer

CB/mw
Idm-E796
Chron

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

RECEIVED
MAY 17 1956

224 New Customhouse
Denver 2, Colorado

May 14, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

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

Subject: Docket DMEA 3582 (Uranium), Contract Idm-E796, Walter Duncan Mining Company (White Rock and Perryton Claims), San Juan County, Utah.

Enclosed are the original and one copy of the Operator's final report pertaining to work completed under the subject contract, which was received in this office May 14, 1956.

The Field Team final report will be forwarded as soon as the engineering and geologic sections are made available to this office.

E. N. Harshman

E. N. Harshman

Enclosures

WEA

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

RECEIVED
MAY 17 1956
BUREAU OF MINES
Denver, Colorado

DMEA
Date Rec'd.
MAY 14 1956

FINAL NARRATIVE REPORT

DMEA 3582

INTRODUCTION:

Application for aid in an Exploration Project pursuant to DMEA Order 1 was approved and granted on June 10, 1955 as Contract No. Idm-E 796, Docket No. DMEA-3582. This contract was between the United States of America acting through the Department of the Interior, Defense Minerals Exploration Administration and J. Walter Duncan, Jr., dba Walter Duncan Mining Company.

Exploratory drilling operations under this contract were commenced in July, 1955 and completed in February, 1956. No discovery resulted from this work.

PURPOSE AND PLAN:

Plate 1 shows the location of the project in relation to regional geology and to the main ore deposits in the Lisbon Valley area. This area has proven itself as a major uranium producing district, and several large ore bodies have been found in basal Chinle sandstones on the Southwest flank of the Lisbon Valley anticline.

Exploratory work in the project area was proposed because of its location within the Lisbon Valley district and because of its proximity to known ore bodies and favorable outcrops. Recent drilling by the Continental Uranium Company had resulted in the discovery of a 75,000 to 100,000 ton ore body in the Southwest corner of Section 36, T 30 S, R 25 E and within 1000 feet of the Western boundary of the project area.

Mineralized outcrops from a knife edge to thirty feet in thickness near the Northern boundary of the project area were considered favor= able criteria. The East-West trend of the Continental ore body plus the aforementioned mineralized outcrops suggested a possible continuation of the ore bearing host rock sandstone of the Continental Mine to these outcrops. The purpose of the drilling project was to trace out these sandstone lenses and to determine whether ore in commercial quantities was present.

The initial project plan divided the exploratory drilling in three stages. Stage 1 consisted of building access roads to and preparing 13 drill sites and drilling 13 holes not to exceed an aggregate of 8501 feet. The holes were plug bit drilled to the ore horizon, and cored for the last 40 feet. Stage 1 holes are numbered 1 through 13 on the enclosed drill map, and were located so as to intersect any sandstone channels or lenses treading in an East-West direction.

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

RECEIVED
MAY 17 1956

Stages 2 and 3 consisted of further drill site preperations and exploratory drilling. Seven holes were drilled in Stage 2 to test and evaluate an area of thick basal Chinle sandstone in the Eastern portion of the project area. Because of the negative results of this work, Stage 3 was not authorized and the project was terminated.

GEOLOGICAL EVALUATION OF RESULTS:

Logs of all holes drilled in Stage 1 and 2 are submitted as part of this final report. Thicknesses of the basal Chinle sandstone plus structure contours of the Chinle-Cutler contact are shown on the drill map accompanying the report.

As shown by the logs and drill map, several of the drill holes encountered favorable sections of carbonaceous, pyritic, medium to course grained, gray sandstones ranging from one to twenty feet in thickness. However, the original theory of an East-West trending sandstone lense that would connect the host rock of the Continental Mine with the outcrop of the Service Berry mine was shown to be erroneous by the results of the drilling.

The sandstone cores from all the DMEA drilling appeared well washed and leached. Although feldspar was noted in some of the cores, most of the interstitial material in the sands was of a clayey or argillaceous nature, and was probably decomposed feldspar. The inference here is that the basal Chinle sand lenses were washed and flushed by ground water in this particular area.

Structure contours on the base of the Chinle show no particular scouring or channeling, either within the limits of the DMEA project or within the areas of known ore North and East of the project boundary. This relatively uniform contact between the Chinle and the Cutler suggests that the depositionof the basal Chinle in this area was probably in a broad shallow basin rather than in a sharply delineated channel.

Post basal Chinle erosion probably accounts for the lenslike nature of the sandstone and the uncomformable contact between the basal sand and the overlying mud stones.

The writer is unable to offer any particular suggestions for future drilling in this area except to recommend tracing out the basal Chinle sandstone lenses if future drilling were contemplated. Section 2, T 31 S, R 25 E, to the South of the DMEA project appears to be favor= ably situated for the extension of the lenses, but drill depths are all in excess of 700 feet.

ENGINEERING EVALUATION OF RESULTS:

Drilling conditions on this project were difficult, but no particular problems other than the usual problems associated with deep drilling were encountered. A Mayhew 1000 rotary was employed for this job.

The normal drilling procedure was to drill with air as far as possible and then to use water to complete the hole. Circulation was lost several times in the Wingate and Chinle formation and several holes were abandoned and redrilled on offset locations because of this problem. Core recovery was about 90%.

ESTIMATE OF ORE RESERVES:

No ore was encountered as a result of the DMEA drilling.

COMPLETE ASSAY DATA:

Although several slightly mineralized holes were encountered, no chemical samples were taken. However, all holes were probed by either the Duncan Babbel unit or the USGS Baraby unit. The drilling map shows those holes that showed from .01 to .05% U_3O_8 as a result of the radiometric probing.

SUMMARY OF WORK PERFORMED:

Bulldozing - Access roads and drill sites were constructed for the 20 DMEA holes of Stages 1 and 2. Actual costs of surveying and constructing these roads and drill sites is estimated at $1000.00.

Drilling - Stages 1 and 2 required 11,763 feet of plug bit drilling and 727 feet of coring. Actual costs of this drilling, based on a charge of $2.25 per foot from the Walter Duncan Drilling Company to the Walter Duncan Mining Company, were $28,102.50. The drill rig was operated on a two shift basis for about five months. Based on an average operating cost of $5,500 per month for a two shift full time operation, actual drilling costs for this project were quite close to DMEA unit cost calculations.

Other Work - One full time geologist was employed on the project during the drilling of Stages 1 and 2. This man supervised the taking of cuttings and core samples, logged and probed drill holes, surveyed drill sites and did all other duties necessary to the satisfactory technical progress of the work described in the contract. In addition to these duties, the geologist collected and compiled data from drilling operations on properties adjoining the DMEA project and

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

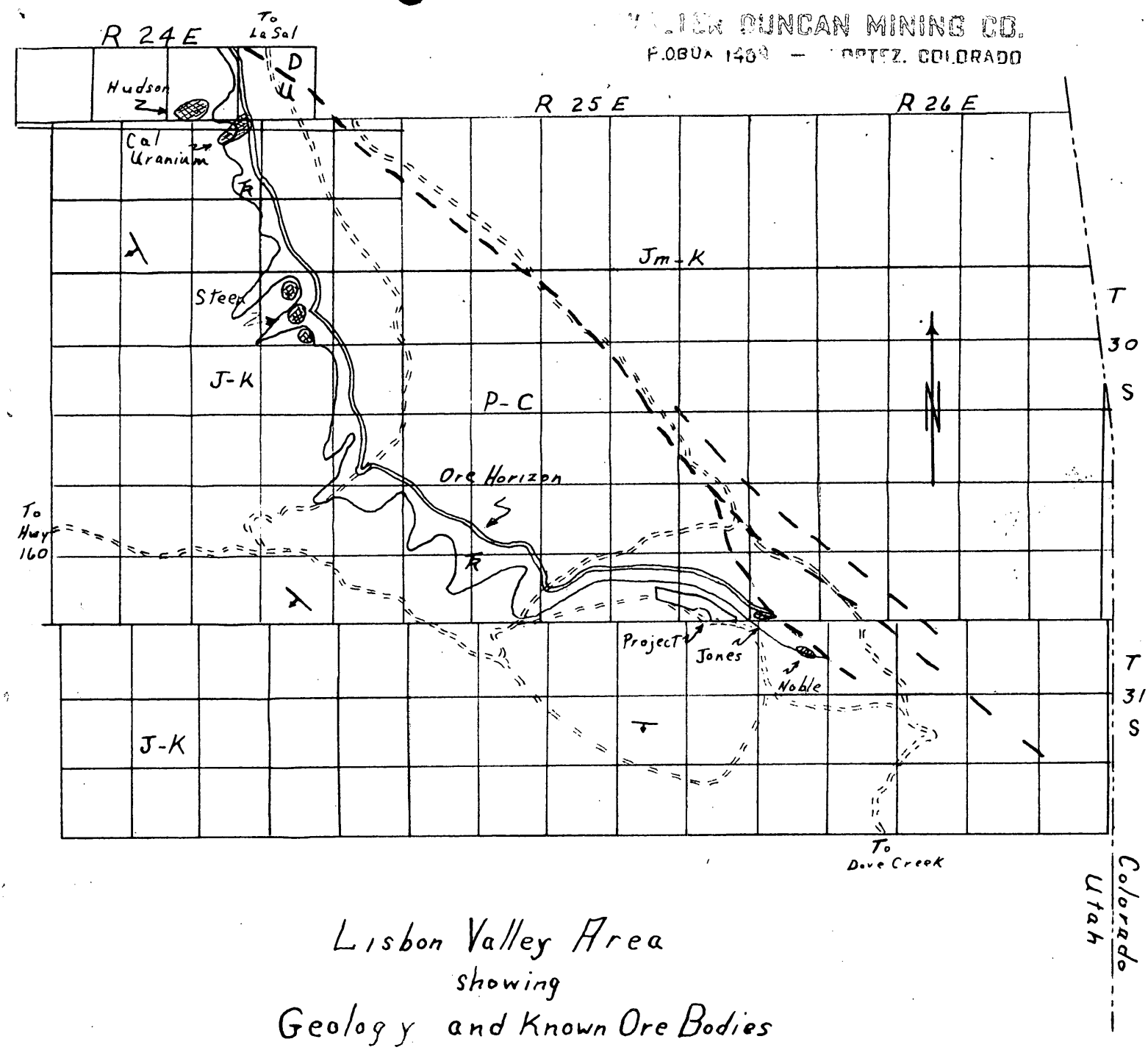
incorporated this data into the overall geologic picture for the project.

UNIT COSTS:

Total costs of the project as calculated from the fixed unit cost figures of the contract were $36,906.41. Core drilling totaled 727 feet and at a unit cost of $4.49 per foot totaled $3264.23. Plug bit drilling totaled 11,763 feet, and at a unit cost of $2.86 per foot totaled $33,642.18. The unit costs for drilling included the cost of access roads, preparing drill sites, and all other costs whatsoever necessary in connection with the performance of the project work.

Charles R Butler

WILLIAM DUNCAN MINING CO.
P.O. BOX 1489 — CORTEZ, COLORADO



Lisbon Valley Area
showing
Geology and Known Ore Bodies
1" = 2 miles

C - Pennsylvanian
P - Permian
Ꞧ - Triassic Chinle fm
J-K Jurassic + Cretaceous
— — Fault
Ore body

PLATE I

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

RECEIVED
MAY 17 1956

Project Lisbon Valley
Drill Hole No. DMEA #1
Collar Elev.
Total Depth 697
Location

Date July 1, 1955
Ore.
Min. X
Bar.
By - W. T. Davis

From	To	Rock	Color	Carbon	Remarks
0	32	SS	Red		Kayenta
32	294	SS	Red-Buff		Wingate
294	657	sh, ss, mudstone	Red-green		Chinle.
657	672	SH	gray-green		Chinle
672	682	SS	light gray	sparce	Medium grained sugar SS with cong. lenses.
					This is ore sand of Moss back member of lower Chinle.
682	682.9	siltstone	lightgray	medium	Chinle. Slight mineralization 682 - 682.4
682.9	697	mudstone siltstone	dark ged and gray		Cutler ?
Note - Mineralized core will be assayed.					

Summary of Log. OBSS _____ Thick 10' SS Color _____

Sh. _____ Under O.B.S.S.

Core zone - 657 to 697
Recovery - 95%

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

RECEIVED
MAY 17 1956

Project Lisbon Valley
Drill Hole No. DMEA #2
Collar Elev.
Total Depth 719
Location

Date July 12, 1955
Ore
Min.
Bar. X
Hole probed by Duncan 7/12/55

From	To	Rock	Color	Carbon	Remarks
0	69	SS	Red		Kayenta
69	322	SS	Red-buff		Wingate
322	540	SH	Red		Chinle
540	679	SH	Gray-green	Traces	Chinle
679	696	Siltst	Gray		Micaceous Some into blue mudstone.
696	700	Siltst	Gray-green Splits		
700	707	Mudst	Green		Conglomeritic
707	713	SS	White	None	Fine grained, Clear
713	714	Mudst	Green		Cutler?
714	719	Mudst	Red		Micaceous Cutler

Summary of Lot. CO2 Thick 6' SS Color White

Sh. Under S.S.

Core zone - 679 to 719
Recovery 95%.

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA #3
Collar Elev.
Total Depth 603
Location

Date 7/15/55
Ore.
Min. X
Bar.

Probed 7/15/55 by Duncan and also USGS.

From	To	Rock	Color	Carbon	Remarks
0	205	SS	Red-buff		Wingate
205	370	SS-mudst	Red		Chinle
370	563	Mudst	gray-green	traces	Chinle (Mossback)
563	583	Mudst	Green		See note below
					Chinle mineralized approx. 0.05% e U_3O_8 576 to 577.7'
583	586	Mudst	green		
586	589	mudst	gray-green	medium	conglomeritic
~~586~~	~~589~~	~~mudst~~			
589	590	siltst	green		micaceous _ Cutler?
590	603	siltst	Red		micaceous - Cutler

Summary of Int. C.B.S. Thick less than 10'S Color

Sh. Under C.B.S.

Had 50% recovery in first 20' core. Lost mineralized section.

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 4A
Collar Elev.
Total Depth 678
Location

Date Aug. 26, 1955
Ore.
Min. X
Bar.
Probed by USGS

From	To	Rock	Color	Carbon	Remarks
0	40	ss	wh		kayenta
40	280	ss	bn		Wingate
280	438	ms, ss	red		Chinle
438	640	ms	green		Chinle
640	657	ms	green		Slight min. 644.7 - 645.7
657	660	mds cong	green	sparce	abundant pyrite
660	661	mds, slts	gn & gr	sparce	
661	661.5	mds cong	gn & gr		large mds inclusions
661.5	665	slts	gn & gr		rds inclusions
665	678	ss	red		Cutler, gn mds splits
Core zone 640 - 678					

Summary of Lot. OBS _____ Thick 0 SS Color _____

Sh. _____ Under O.B.S.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 5
Collar Elev.
Total Depth 645
Location

Date August 15, 1955
Ore.
Min. X
Bar.

From	To	Rock	Color	Carbon	Remarks
0	248	SS	lt br		Wingate
248		SS, ms	red		Chinle
	605	ms	gn		Chinle
605	622	ms	gn	sp	slight min. 610 - 612
622	625.5	ms cong	wh & gn	ab	pyrite & ls, gn ms galls
625.5	626.7	SS	wh	sp	fine grn
626.7	645	ss, ms	red		gn layers - Cutler
Core zone 605 - 645					

Summary of Lot. O.B.S. 0 Thick 0 S.S. Color

Sh. Under O.B.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA - 6
Collar Elev.
Total Depth 587
Location

Date Aug. 17, 1955
Ore.
Min.
Bar. X

From	To	Rock	Color	Carbon	Remarks
0	197	SS	it bn		Wingate
197	460	ms	Red		Chinle
460	547	ms	gn		Chinle
547	549	ms cong	gn	med	
549	551	var.ms,ss	gn, gr	med	
551	557.5	ms	gn, gr		splits
557.5	558.5	ms cong.	gn, gr	med	limy
558.5	569	ms cong	gn, gr	med	interbedded, limy=
569	577	ms cong	gn, fr	med	limy
577	580.5	ms	gn	med	
580.5	581	ss	wh		fine grained
581	587	ms, ss	Red		Cutler
Core zone 547 - 587					

Summary of Lot. OBS _____ Thick 0 SS Color _____

Sh. Red Under C.B.S.S.
Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA # 7
Collar Elev.
Total Depth 540
Location

Date August 17, 1955
Ore.
Min.
Bar. X
Probed by USGS

From	To	Rock	Color	Carbon	Remarks
0	152	ss	tan		Wingate
152	350	ms	red	Chinle	
350	500	ms	gn		Chinle
500	520	ms	it gn	med	(mcs)
520	534	ms	itgn		(mcs)
534	540	ss, ms	red		(mcs) Cutler
Core zone - 500 - 540					
Note: No core recovered from 534 to 540, but cuttings were saved.					

Summary of Lot. OBS _____ Thick 0 SS Color _____

Sh. _____ Under O.B.S.S.

unfavorable

[illegible]

DRILL HOLE LOG

Project: Lisbon Valley
Drill Hole No.: DMEA 8
Collar Elev.:
Total Depth: 520
Location:

Date: Aug. 29, 1955
Crew:
Rig: x
Bit:
Probed by USGS

From	To	Rock	Color	Carbon	Remarks
0	140	ss	tan		Wingate
140	360	ms	red	Chinle	
360	500	ms	gn		Chinle
500	502	slts	gr, gn	med	gn ms galls
502	502.5	slts	gr, gn	med	large flakes carbon
502.5	508	ms,ss cong	gr, gn	med	gr size and carbon increasing in lower section
508	508.2	carbon	black	all	abundant pyrite
508.2	513	ms,ss,cong	gr,gn	med	med to large grn size. more cong at base
513	515	ms	gn		limy
515	520	ms,ss	choc red	med	Cutler
498	499	Babble probe shows .02e U_3O_8 to .10e U_3O_8			
Core zone 500 - 520					

Summary of Lot. Core ms,ss cong. Thick 11' SS Color

Sh. Under O.S.S.

semi-favorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 9
Collar Elev.
Total Depth 570
Location

Date Sept 1, 1955
Ore.
Min.
Bar. X
Probed by Duncan

From	To	Rock	Color	Carbon	Remarks
0	186	ss	tan		Wingate
186	425	ms	red		Chinle
425	530	ms	gn		Chinle
530	545	ms	gn		
545	552	ms	gr-gn		(mcs) gn ms galls
552	556	ms	gr-gn	sp	(mcs)
556	560.5	slts	gn		(mcs)
560.5	565	ss-ms	gn-gr	med to ab	limy, some feldspar
					some pyrite
565	565.5	ss	wh-gr	~~xx~~ sp	XX limy, gn grn, feldspar
565.5	567	ms	gn		
567	568	slts	gr-gn		Some feldspar
568	570	ms	choc. bn		(mcs) Cutler
Core zone 530 - 570					

Summary of Lot. CBSS _____ Thick 0 SS Color _____

Sh. _____ Under C.B.S.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

RECEIVED
MAY 17 1956

Project Lisbon Valley
Drill Hole No. DMEA 10
Collar Elev.
Total Depth 745
Location

Date Sept 12, 1955
Ore.
Min.
Bar. X
Probed by USGS to 725.5
Probed by Duncan to bottom

From	To	Rock	Color	Carbon	Remarks
0	348	ss	tan		Wingate
348	552	ms	red		Chinle
552	705	ms	gn		Chinle
705	706.5	ms cong	gn	ab	Some pyrite
706.5	708	slts	gn	med	Carbon parting at 708
708	709	ms cong	gn	med	
709	728.8	ss,slts	gr-gn	med	(mcs) fine grn
728.8	733.5	ms cong	gn	med	gn ms galls
533.5	735				no core recovery
735	744	ss	wh	none	fine to course grn. Some feldsp. pebbles. Quartzitic in places
744	754	ms-slts	chec brn		Cutler
Core zone 705 - 744					
Hole plugged from 744 to 754 to confirm Chinle - Cutler contact.					

Summary of Hot. OBS ss Thick 0 SS Color

Sh. Under O.B.S.

Semi-favorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 11
Collar Elev.
Total Depth 482
Location

Date Sept 16, 1955
Ore.
Min.
Bar. X
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	92	ss	tan		Wingate
92	315	ms	red		Chinle
315	430	ms	gn		Chinle
430	431	ms cong	gn, gr	ab	ab. pyrite, ms galls
431	442	ms	gn		(mcs)
442	443	ss	wh	sp	(mcs) gn to med grn
443	448	ms	gn		(mcs)
448	451	ms cong	gn-gr	med	some large ms galls
451	453	ms	gn	med	
453	458	ss	wh, gn	ab.	(mcs) Limy, fn grn
458	459	ss	wh,gn	ab.	(mcs) trashy, gr ms galls
459	460	ms	gn	ab.	(mcs)
460	461	ms cong	gn	ab.	(mcs) limy, mud galls
461	462	ss	wh	med	
462	467.5	ss	wh,gn	med	(mcs) clean med-fn grn
467.5	470	ms cong	gn,gr	ab.	pyrite, limy
470	471	slts	gn	ab.	pyrite
471	476.5	slts	wh		(mcs) Cutler?
476.5	482	ms	choc. brn		(mcs) Cutler
Core zone 430-482					

Summary of Lot. OBS _____ Thick 0 SS Color _____

Sh. _____ Under O.B.S.S.

XX Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 12
Collar Elev.
Total Depth 509
Location

Date Sept 20, 1955
Ore.
Min.
Bar. X
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	105	ss	tan		Wingate
105	370	ms	red		Chinle
370	473	ms	gn		Chinle
473	485.5	ms	gn	med	(mcs)
485.5	495.5	ss,ms,cong	gr-gn	med	limy, large ms galls
495.5	497	ms cong	gr-gn	med	limy, pyrite
497	499.5	ms	red,purple		Cutler?
499.5	509	ms	choc.brn		(mcs) Cutler-grn ms
					inclusions
Core zon	e 473 -	509			

Summary of Lot. OBS _____ Thick 0 SS Color _____

Sh. _____ Under O.B.S.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 13
Collar Elev.
Total Depth 587
Location

Date Sept 21, 1955
Ore.
Min.
Bar. X
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	198	ss	tan		Wingate
198	440	ms	red		Chinle
440	547	ms	gn		Chinle
547	569	ms	gn	sp-med	(mcs) Carbon increasing at base.
569	577	ms cong	gr-gn	med-ab	(mcs) Limy pyritic. some
					feldsp. pebbles in lower
					section, Carbon trash zone 572.5
577	579	ss	gr	med	vf grn limy, mud galls (mcs)carbon trash zone 578.5
579	580	ms	gn		(mcs) Cutler?
580	587	ms	choc.brn		(mcs) Cutler
Core zone	547-587				

Summary of Lot. OBSS _____ Thick 0 BS Color _____

Sh. _____ Under O.B.S.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 14
Collar Elev.
Total Depth 672
Location

Date Sept. 30, 1955
Ore.
Min.
Bar. X
Probed by USGS ~~ZMX~~ & Duncan

From	To	Rock	Color	Carbon	Remarks
0	15	ss	red		Kayenta
15	275	ss	tan		Wingate
275	545	ms	red		Chinle
545	632	ms	gn		Chinle
632	652	ms	gn	ab	
652	663	ss	wh-gr	ab	(msc) pyritic, med to course grn feldspar pebbles, trashy zones. Friable
663	664	slts	gr	sp	(mcs) pyritic
664	668	ms	gr-gn	~~x~~sp	(mcs)
668	669	ss	wh		limy, feldspar in lower sec.
669	670	ms	red,gn		(mcs) Cutler?
670	672	ms	bhic.brn		(mcs) gn ms inclusions Cutler
Core zone	632 -	672			

Summary of Lot. CBSS ss Thick 11' SS Color

Sh. Under C.B.S.S.

Semi-favorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 15
Collar Elev. 7073
Total Depth 646
Location

Date Oct 3, 1955
Ore.
Min. X
Bar.
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	236	ss	tan		Wingate
236	475	ms	red		Chinls
475	592	ms	gn		Chinle
592	593	ms cong	gn	sparce	(mes) ms galls
593	605	ms	gn	sp. to ab	(mes)
605	605.5	cong	wh	med	friable,limy
605.5	621	ss	wh	med to ab.	med. grn, friable, limonitic carbon trash zones.
621	624	ms	gn		(mes) Cutler?
624	640	ms	choc. bn		Cutler
Core zone - 592 to 624					
Hole plugged to 640 to confirm Cutler contact and to facilitate probing.					
606 to 607 shows slight radioactivity .01e to .04e U308					

Summary of Lot. OBSS ss Thick 16' SS Color ~~sh~~ wh

Sh. green Under O.B.S.S.
favorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 16
Collar Elev. 7071.1
Total Depth 685
Location

Date Oct. 15, 1955
Ore.
Min. X
Bar.
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	285	ss	tan		Wingate
285	530	ms	red	XXXXXX	Chinle
530	649	ms	gr-gn		Chinle
649	651	ms-ss	gr-gn	sparce	(mcs) Limy, ms galls
651	652	ss cong	gr=wh		limy
652	654	ss	gr=wh	ab.	pyritic, fine to med. grn. carbon trash zones
654	654.5	ms	gn	ab.	(mcs)
654.5	656.5	ss	wh	sp	med to course grn, cong.
656.5	658.5	ss	wh	sp to med	fine to med grn.
658.5	659	ss	wh	ab	med to course grn. "½" highly radioactive carbon in trash zone at 558.5
659	669	ss	wh	sp to med	med to course grn, friable
669	671.5	slts	gn	sp	(mcs) Cutler?
671.5	685	ms	choc.br		(mcs) Cutler
Core zone 649 to 685					

Summary of Lot. C.B.S. ss Thick 18 S.S. Color wh

Sh. Under C.B.S.S.

favorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 17
Collar Elev.
Total Depth 612
Location

Date Oct. 18, 1955
Ore.
Min.
Bar. X
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	227	ss	tan		Wingate
227	530	ms	red		Chinle
530	582	ms	gr-gn		Chinle
582	584	slts	gr-gn	med	
584	584.5	ms cong	gn	med	large ms galls
;584.5	605	ms	gn	sparce	
605	607.5	slts	gr	sparce	very hard, limy
607.5	612	ms	choc. br		(mcs) Cutler
Core zone - 528 to 612					

Summary of Lot. CBSS _____ Thick 0 SS Color _____

Sh. _____ Under O.B.S.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 18
Collar Elev.
Total Depth 668
Location

Date Oct 7, 1955
Ore.
Min.
Bar. X
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	275	ss	tan		Wingate
275	435	ms	red		Chinle
435	632	ms	gr-gn		Chinle
632	641.5	slts	gn-gr	med to ab	(mcs)
641.5	655	ms	gr-gn	sp	(mcs)
655	656	ss	sh-gr		med to fine grn, limy
656	658.5	ss	wh=gr		hard med to fine grn, limy, some small ms gas
658.5	660.5	slts	gr-gn	med to ab	(mcs)
660.5	662	ss	wh		med grn, some lim. stain
662	664.5	slts	gr-gn	med	some pyrite
664.5	665	ss	wh	limy, limonite, course grn	
665	668	ms	choc. brn		(mcs) Cutler
Core Zone	632 to	668			

Summary of Lot. OBSS ss Thick 1.5 SS Color wh

Sh. Under O.B.S.S.

Unfavorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

Project Lisbon Valley
Drill Hole No. DMEA 19
Collar Elev.
Total Depth 720
Location

Date Feb. 21, 1956
Ore.
Min.
Bar. X
Probed by Duncan & USGS

From	To	Rock	Color	Carbon	Remarks
0	60	ss	red		Kayenta
60	320	ss	tan		Wingate
320	600	ss,ms,sltst	red		Chinle - variegated
600	680	sltst, ms	green	FREE	Chinle
680	k 690	ms	green		
690	700	ss	wh	traces	med to course grained, well washed and leached.
700	708	ss	wh	traces	"
708	720	ms,sltst	gr,choc.brn		Cutler
Core zone 680 to 720					
Note - second core dropped out of core barrel and had to drilled out with plug bit.					

Summary of Lot. OBS ss Thick 18' SS Color wh

Sh. Under O.B.S.S.
semi-favorable

WALTER DUNCAN MINING COMPANY

DRILL HOLE LOG

RECEIVED
MAY 17 1956

Project Lisbon Valley
Drill Hole No. DMEA 20
Collar Elev.
Total Depth 612
Location

Date Feb. 29, 1956
Ore.
Min.
Bar. X
Probed by USGS & Duncan

From	To	Rock	Color	Carbon	Remarks
0	205	ss	brown		Wingate
205	490	ss,sltst	red		chinle
490	572	ms	green		Chinle
572	584	ms	green,blue		
584	596	ss	white	nil	med to course grained, no carbon or pyrite, ss appeared washed and leached.
596	612	ms,sltst	red,green		Variagated in upper section Chocolate brown in lower. Cutler.
Core zone 572 to 612					

Summary of Lot. OBSS Thick 12' SS Color wh

Sh. Under O.B.S.S.

semi favorable....

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

RECEIVED
APR 18 1956

224 New Customhouse
Denver 2, Colorado

April 16, 1956

Mr. Charles F. Butler, Manager
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket DMEA 3582 (Uranium);
Contract Idm-2796,
Walter Duncan Mining Company,
San Juan County, Utah

Dear Mr. Butler:

Reference is made to your narrative report accompanying form MF-104, Operator's Monthly Report and Voucher, for the month of February, 1956.

The narrative report is headed, "Final Narrative Report, DMEA 3582." However, the report is not considered as adequate to satisfy the requirements under Article 6(e) of the contract form pertaining to your rendering of a final engineering and geologic report relative to the work performed under the contract.

The narrative report in itself would be considered adequate under the circumstances had it been supported by geologic logs and other pertinent data pertaining to all the work completed under the contract.

A final report rendered by the Operator under a DMEA contract must be complete in itself without making it necessary for a reviewer to refer to data attached to prior accounting reports. Therefore, please submit your final engineering and geologic report in quintuplicate as separate from the narrative report accompanying the last accounting report. The narrative portion of your final report should contain a summary of the number of holes completed, the total footage completed, the total cost of performing the work, and the resulting unit cost. Each copy of the report should be complete with logs, maps, and all other pertinent data.

The sum of $250.00 will be withheld from reimbursement to you in processing the MF-104 report for February, 1956, pending

receipt in this office of an adequate final engineering and geologic report, and release to this office of a report of review of contract expenditures by the Contract Administration and Audit Division.

Very truly yours,

W. M. TRAVER

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

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

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

224 New Customhouse
Denver 2, Colorado

April 12, 1956

Memorandum

To: John F. Shaw

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), Contract Idm-E796, Walter Duncan Mining Company, San Juan County, Utah - Progress Report for February, 1956.

In the engineer's report relative to the subject progress report, he states that the Contractor's final report appears adequate for the return of $250.00 withheld in October, 1955. In that respect, the Operator's report which he labels, "Final Narrative Report," is not considered as adequate under the circumstances.

In this case, and in all similar instances, whenever more than one form MP-104, "Operator's Monthly Report and Voucher," is involved, the Operator's narrative report accompanying his last accounting report will not be considered as adequate as a final report unless the narrative report contains a summary of all prior work, summarizing drill logs, a summary of the results of all the work performed, and any other pertinent data which will provide a reviewer with a complete analysis of the project work without his having to refer to information contained in prior reports.

Please contact the Operator and advise him of the foregoing. We will continue to withhold an amount of $250.00 until a more adequate final report is received from the Operator.

W. M. TRAVER

W. M. Traver

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

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

RECEIVED
APR 16 1956

224 New Customhouse
Denver 2, Colorado

April 12, 1956

Memorandum

To: John F. Shaw - w/copy of Operator's report.
E. N. Marshman " " "

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), Contract Idm-E796, Walter Duncan Mining Company, San Juan County, Utah

There follows an excerpt from the Operator's narrative report accompanying form MF-104 for the month of February, 1956:

> "Stage II of the DMEA project was completed in February with the drilling of holes DMEA Nos. 19 and 20. Although a favorable basal Chinle sandstone lense, ranging from 1 to 20 feet thick has been delineated by this drilling, no significant mineralization has thus far been found and we propose that the project be terminated."

Inasmuch as only a portion of the work scheduled for Stage II and none of the work scheduled under Stage III has been completed, it will be necessary that you forward to this office a joint engineering and geologic report containing your recommendations relative to terminating the contract in its present status.

You should advise the Operator that he is not to consider the contract as terminated until he receives official notice from the Government to that effect.

W. M. TRAVER

W. M. Traver

JWT:prl
cc: Chairman, Oper. Comm. (2)) w/copy of Operator's report
Hasler
Townsend
Corres. file
Chron.

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

APR 1 1956
RECEIVED
MAR 1 9 1956
Div. of Mineral Technology
BUREAU OF MINES
Location

FINAL NARRATIVE REPORT
DMEA 3582

February, 1956

Stage 2 of the DMEA project was completed in February with the drilling of holes DMEA No's 19 and 20. Although a favorable basal Chinle sandstone lense ranging from one to twenty feet thick has been delineated by this drilling, no significant mineralization has thus far been found and we propose that the project be terminated.

Drill logs for the February holes are attached as part of this report. DMEA No. 19 (see map) was drilled within the area of known basal Chinle sandstone and showed 18' of medium to course grained sand. However, the sandstone contained no pyrites and only traces of carbon. DMEA No. 20 was drilled to the west of the known basal Chinle sandstone, but surprisingly showed 12' of medium to course grained sand. This sand contained no pyrites and only traces of carbon.

The sandstone in both drill holes was typical of most of the sandstone encountered by the DMEA drilling in that it appeared well washed and leached. Although feldspar was noted in some of the cores, most of the interstitial material in the sands was of a clayey or argilaceous nature and was probably decomposed feldspar. The inference here is that the basal Chinle sand lenses were washed and flushed by ground water in this particular area.

Structure contours on the base of the Chinle show no particular scouring or channeling either within the limits of the DMEA project or within the areas of known ore North and East of the project boundary. This relatively uniform contact between the Chinle and the Cutler suggests that the deposition of the basal Chinle sand in this area was probably in a broad shallow basin rather than in a sharply delineated channel.

Post basal Chinle erosion probably accounts for the lenslike nature of the sandstone and the uncomformable contact between the basal sand and the overlying mud stones.

The writer is unable to offer any particular suggestions for future exploration in an area such as this except to say that he would recommend tracing out the basal Chinle sand stone lenses if future drilling were contemplated. Section 2, to the South of the DMEA project appears to be favorably situated for the extension of the lenses, but drill depths are all in excess of 700 feet.

Stages 1 and 2 of this contract required 11,763 feet of plug bit drilling and 727 feet of coring. Although several slightly mineralized zones were encountered, no chemical samples were taken. However, all holes

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

were probed by either the Duncan Babbel unit or the USGS Bareaby unit.

In conclusion, the writer would like to express his appreciation to William Hassler and George Carlyle and other members of the USGS and Bureau of Mines field teams for the expeditious and cooperative manner in which they assisted in the project. He would also like to express his appreciation to the members of the DMEA unit in Denver for their assistance and cooperation.

Charles R Butler

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

RECEIVED
MAR 26 1956

224 New Customhouse
Denver 2, Colorado

March 21, 1956

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket DMEA 3582 (Uranium)
Contract Idm-E796

Dear Mr. Butler:

Thank you for your letter of March 15, 1956, advising that all Stage II work under Contract Idm-E796 was completed as of February 29, 1956, and requesting instructions relative to the disposal of the cuttings and cores from the drill holes.

A Government engineer or geologist will pick up the cuttings and cores from the drill holes at the first opportunity. Therefore, the material must be stored for protection until that time.

Very truly yours,

W. M. TRAVER

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

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

w/copy of Butler's letter

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

MAR 19 1956
BUREAU OF MINES
Denver, Colorado

March 15, 1956

Mr. W.M. Traver
224 New Customhouse
Denver, Colorado

Re: Docket DMEA 3582 (Uranium)
Contract Idm-E 796

Dear Mr. Traver,

We completed Stage 2 of our DMEA contract in Lisbon Valley on February 29, 1956. The results of Stage 2 were discouaging, and we do not intend to request further DMEA assistance for this project. A final report showing the results of February drilling plus a summary of the entire project wi will be submitted shortly.

In accordance with previous instructions, we have saved cuttings and cores from all our drill holes. What are your wishes in regards to this material?

Very truly yours,

Charles R Butler

Charles R. Butler, Manager
Walter Duncan Mining Company

cc: Wm Hassler

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 14, 1955

Mr. Charles R. Butler
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket DMEA 3582 (Uranium)
Contract Idm-R796

Dear Mr. Butler:

In your letter to Mr. William Hasler of October 17, 1955, you advised that you are moving off the project area involved in Contract Idm-R796 and will complete the remaining holes in the Spring. You further advised that you expect to finish the remaining holes prior to the termination date of the Contract and do not think it necessary to request an extension of that date.

A suspension of operations under a DMEA contract which involves an extension of the period for completion of the project work would necessitate an amendment to the contract to authorize the recess of operations, thereby justifying the extension of the period for completion of the work.

Therefore, if there is any possibility that you will not be able to complete the work by the stipulated date, you should, to protect yourself from default under the terms of the Contract, request the Government's approval for the suspension of operations. In the event you do request the foregoing, please advise the date operations were suspended and the date on or before which you expect to resume operations.

Very truly yours,

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

JWT:prl
cc: Chairman, Oper. Comm. (2)
Harshman
Shaw
Hasler
Townsend
Pres. file
Gen.

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

RECEIVED
OCT 27 1956

224 New Customhouse
Denver 2, Colorado

October 25, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), Contract Idm-E796, J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company, (Red Rocks et al. claims), San Juan County, Utah

Enclosed for your records are four copies of DMEA Field Team, Region III, approval of a portion of the drilling to be performed under Stage II of the contract.

Also enclosed are four sets of data relevant to the work approval.

W. M. Traver

W. M. Traver

Enclosures

RECEIVED
OCT 27 1955

[illegible] Ben Gutenberger
Denver 2, Colorado

October 21, 1955

Mr. J. Walter Duncan, Jr.
d/b/a Walter Duncan Mining Company
P. O. Box 1468
Gorian, Colorado

Attention: Mr. Gordon R. Butler, Manager

Re: Project NMMA 5282 (Uranium),
Contract AEC-E796

Dear Sir:

Consistent with contract stipulations, and confirming verbal approval of September 19, 1955, you are hereby authorized to drill seven drill holes, Nos. 14 through 20, inclusive, under Stage II of the contract at the locations shown on the attached map which is made a part of this work approval.

Nothing in this work approval shall be construed to increase the estimated total cost of the project, the amount of the Government's contribution, nor the agreed unit cost of any item of work.

Very truly yours,

W. H. Beaver

E. H. Harbeson

Enclosure
JWB:pcl
cc: Gutenberger
Shelmire, Spec. Cont. (4)
Harbeson
Beaver (2)
Butler
Accnt. File
Terrant
Survey. File
Chron.

NMMA FIELD TEAM, REGION III

RECEIVED
OCT 27 1955

[illegible] New Customhouse
Denver 2, Colorado

October 21, 1955

Mr. J. Walter Duncan, Jr.
d/b/a Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Attention: Mr. Charles R. Butler, Manager

Re: Docket DMEA 3502 (Uranium),
Contract IAm-8796

Dear Sir:

Consistent with contract stipulations, and confirming verbal approval of September 19, 1955, you are hereby authorized to drill seven drill holes, Nos. 14 through 20, inclusive, under Stage II of the Contract at the locations shown on the attached map which is made a part of this work approval.

Nothing in this work approval shall be construed to increase the estimated total cost of the project, the amount of the Government's contribution, nor the agreed unit cost of any item of work.

Very truly yours,

W. M. Graves
W. M. Graves

E. W. Hardman
E. W. Hardman

DMEA FIELD TEAM, REGION III

Enclosure
JWHrgrd
cc: Christensen
Shulman, Oper. Supt. (4)
Hardman
Shaw (2)
Butler
Supt. File
Hammond
Secret. File
Chron.

MINE... RECEIVED
OCT 11 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLORADO

October 10, 1955

Memorandum

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

From: J. William Hasler and M. H. Salsbury

Subject: DMEA 3582 (Uranium), Walter Duncan Mining Company, contract Idm-E 796. Request for stage II drilling.

RECEIVED
OCT 27 1955

The applicant has completed stage I drilling on the Red Rock, White Rock, and Paragon claims in San Juan County, Utah. The results of stage I drilling are not too encouraging; however, the holes drilled on the Red Rock 4 and 6 claims and the Paragon 5, 7, and 8 claims penetrated varying thicknesses of ore-bearing sands and also showed some mineralization. The applicant discussed these results with the Grand Junction office and expressed the desire to concentrate stage II drilling on these claims on which the ore-bearing sandstone is thicker, or where mineralization has been discovered.

Ore bodies of considerable size have been discovered by the Continental Uranium Company and the Apache Uranium Company adjacent to the southeast property line of the Duncan Mining Company. The enclosed map, (fig. 1) shows a concentration of holes that lie in the southwest corner of sec. 36. These holes represent the westernmost portion of the continental ore body and represent an estimated 20,000 tons. The tonnage for the entire Continental ore body is estimated to reach from 75,000 to 100,000 tons of ore. Recent drilling by the Apache Uranium Company has discovered ore

within 300 feet of the project boundary. Diamond-drill holes D-16, D-18, and D-13, drilled by Apache discovered ore-grade material 3.1 foot thick, averaging 0.3 percent eU_3O_8.

The results of stage I drilling have been reviewed and it is concluded that stage II drilling should be concentrated in the southeastern portion of the Walter Duncan property in order to take advantage of possible occurrence of ore that may extend into the property from adjacent ground. It is recommended that 7 diamond-drill holes under stage II be drilled as shown on the accompanying map. Verbal approval was given the applicant on September 19, 1955, to drill stage II holes 14, 15, 16, 17, 18, 19, and 20, by the Regional Field Team.

Enclosed are the necessary maps for execution of the request of stage II drilling.

D. D. Haynes
For J. William Hasler,
Geologist, USGS

M. H. Salsbury
M. H. Salsbury
Engineer, USBM

JWH/mlr

Enclosures

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

DMEA
Date Rec'd,
SEP 19 1955
RECEIVED
OCT 27 1956
BUREAU OF MINES
Denver, Colorado

Mr, W.M. Traver
Executive Officer, DMEA
224 New Customhouse
Denver 2, Colorado

Contract Dm-E 796

Re: DMEA 3582 (Uranium)

Dear Mr. Traver,

We intend to complete our Stage 1 drilling by Sept. 23, 1955. The two holes remaining in Stage 1 are at the western end of the Project Block.

Our evaluation of results to date indicates that additional drilling should be concentrated at the eastern end of the project near known ore and favorable host rock occurrences.

The August Narrative includes a map showing all data to date in the area covering and adjoining the project. This map shows several ore and mineralized holes to the east and north of the project, and also shows the presence of favorable sandstone host rock within and to the north, east and south of the project area. The following list shows detailed data on some of the holes that would influence the spotting of additional holes.

Hole No.	Thickness Ore sand	Assay Data Interval	eU_3O_8	U_3O_8	Remarks
BI-6	6.0				
DMEA-1	10.0	682-682.4	.05		
D-C-2	11.0				
D-C-1	20.0				
DMEA-10	6.0				Sept. completion
DMEA-4A	0	644.7-645.7	-.05		
DMEA-3	0	576.0-577.7	.05		
D-10	2.5	525 -527.5	.02-.15		
D-11	7.5	585-586.5	.02-.11		
D-8	13.0	564-567.5	.03-.90	.03-.40	
D-16	16.0	6'	.20-1.00	.20-1.00	will average .50
D-13	2.0	2'	?	?	strong min.
D-18	?	2'	.20	.20	

On the basis of this data, I hereby request authorization to commence Stage 2 drilling. The proposed locations for the initial Stage 2 holes are as follows:

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

RECEIVED
OCT 27 1966

Hole No.	Coordinates East	Coordinates North	Estimated Depth
DMEA-14	137780	59920	660
DMEA-15	137370	60165	635
DMEA-16	137270	59850	700
DMEA-17	136980	60400	585
DMEA-18	136930	60125	650
DMEA-19	136880	59860	715
DMEA-20	136550	60870	560

Inasmuch as the August Narrative includes a map showing all the holes discussed here and also the locations of the proposed Stage 2 holes, I have not included additional maps with this letter. I am mailing a copy of this letter plus a copy of the August Narrative to William Hasler at Grand Junction to expedite confirmation of the Stage 2 work.

Very truly yours,

Charles R Butler

Charles R. Butler, Manager
Walter Duncan Mining Company

cc: Wm Hasler

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

SEP 1
BUREAU OF MINES
Denver, Colorado
RECEIVED
OCT 27 1955

Mr. W.M. Traver
Executive Officer, DMEA
224 New Customhouse
Denver 2, Colorado

Re: DMEA 3532 (Uranium)
Contract Jam-E 796

Dear Mr. Traver,

We intend to complete our Stage 1 drilling by Sept. 23, 1955. The two holes remaining in Stage 1 are at the western end of the Project Block.

Our evaluation of results to date indicates that additional drilling should be concentrated at the eastern end of the project near known ore and favorable host rock occurrences.

The August Narrative includes a map showing all data to date in the area covering and adjoining the project. This map shows several ore and mineralized holes to the east and north of the project, and also shows the presence of favorable sandstone host rock within and to the north, east and south of the project area. The following list shows detailed data on some of the holes that would influence the spotting of additional holes.

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D-13	2.0	2'	?	?	strong min.
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WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

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Very truly yours,

Charles R Butler

Charles R. Butler, Manager
Walter Duncan Mining Company

cc: Wm Hasler

RECEIVED
OCT 11 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLORADO

October 10, 1955

Memorandum

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

From: J. William Hasler and M. H. Salsbury

Subject: DMEA 3582 (Uranium), Walter Duncan Mining Company, contract Idm-E 796. Request for stage II drilling.

RECEIVED
OCT 27 1956

The applicant has completed stage I drilling on the Red Rock, White Rock, and Paragon claims in San Juan County, Utah. The results of stage I drilling are not too encouraging; however, the holes drilled on the Red Rock 4 and 6 claims and the Paragon 5, 7, and 8 claims penetrated varying thicknesses of ore-bearing sands and also showed some mineralization. The applicant discussed these results with the Grand Junction office and expressed the desire to concentrate stage II drilling on these claims on which the ore-bearing sandstone is thicker, or where mineralization has been discovered.

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within 300 feet of the project boundary. Diamond-drill holes D-16, D-18, and D-13, drilled by Apache discovered ore-grade material 3.1 foot thick, averaging 0.3 percent eU_3O_8.

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Enclosed are the necessary maps for execution of the request of stage II drilling.

W. D. Haynes
For J. William Hasler,
Geologist, USGS

M. H. Salsbury
M. H. Salsbury
Engineer, USBM

JWH/mlr

Enclosures

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

RECEIVED
AUG 29 1955

224 New Customhouse
Denver 2, Colorado

August 25, 1955

Memorandum

To: John F. Shaw, Supervising Mining Engineer

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3582 (Uranium), Contract Idm-E796, Walter Duncan Mining Company, San Juan County, Utah - Monthly Report for July, 1955.

In accordance with your telephone instructions of this morning we are returning all copies of the subject report to your office for correction of two typographical errors in the examining engineer's memorandum.

W. M. TRAVER.

W. M. Traver

Enclosures

JDC:jy

cc: MF-104 File E796
Sec. Opr. Comm. (2)
Chron.

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

JUL - 8 1955

Memorandum

To: Administrator, DMEA
Attention: E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3582 (Uranium), J. Walter Duncan, Jr., Contract No. Idm-E796

In response to Mr. Murphy's memorandum dated July 5 we have reviewed two supplemental agreements concerning land dated June 21 and June 23, 1955, submitted with the Executive Officer's memorandum of June 28 to the Operating Committee, and are of the view that the Operator has now demonstrated a sufficient interest in the land for the purposes of an exploration project contract.

J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

Rubin
Murphy

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

JUL 1955

Memorandum

To: Administrator, DMEA
Attention: E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3582 (Uranium), J. Walter Duncan, Jr., Contract No. Idm-E796

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J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

HCRubin:gjb 7/7/55

Copy to: DMEA Docket
Sol. Docket
E. W. Ellis (2)
J. L. Hofflund
H. C. Rubin
Chron. File

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

July 5, 1955

Temporary docket copy

Memorandum

To: Acting Assistant Solicitor, DMEA

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

Subject: Review of Supplemental Agreements
Docket No. DMEA-3582 (Uranium)
Contract No. IdmE-796
J. Walter Duncan, Jr.
d/b/a Walter Duncan Mining Co.

Referring to the above executed contract and Mr. Traver's memorandum dated June 28, 1955, I have checked the legal papers submitted by the Field Team and believe they meet our requirements. However, I believe the Supplemental Agreements should be forwarded to you for further check.

F. M. Murphy

FMMurphy:am
cc to: Docket
Code 700
Mr. Murphy

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

224 New Customhouse
Denver 2, Colorado

RECEIVED
JUL - 1 1955
JUN 28 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), Contract Idm-E796, J. Walter Duncan, Jr., dba Walter Duncan Mining Company, Red Rock et al. claims, San Juan County, Utah

Enclosed are one copy each of two Supplemental Agreements which we believe will satisfy the requirement of the Legal Division concerning the applicant's property rights. On that basis we have released the contract to the operator for signature and are enclosing the Government, Division and Docket copies of the executed contract.

Copies of the contract have been given to the operator, the Finance Office, Region III, and a copy has been retained for our files.

W.M. Traver

W.M. Traver

Encls.

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

RECEIVED
JUL - 1 1955

224 New Customhouse
Denver 2, Colorado

June 24, 1955

Mr. J. Walter Duncan
d/b/a Walter Duncan Mining Company
Post Office Box 1468
Cortez, Colorado

Re: Docket DMEA-3582 (Uranium)
Contract Idm-E796

Dear Mr. Duncan:

Enclosed herewith is your copy of Exploration Project Contract No. Idm-E796, Docket DMEA-3582.

Also enclosed are six copies of form MF-104, "Operator's Monthly Report and Voucher" and six copies of form MF-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. J. F. Shaw, U. S. Bureau of Mines, Room 137, Building 20, Denver Federal Center, Denver 2, Colorado. The sixth form is for your records.

Please note that the monthly report requires a narrative report which should be accompanied by maps or sketches. The narrative report must be signed by the operator. The monthly report will not be processed for payment unless accompanied by a narrative report. Additional copies of forms MF-104 and MF-104A will be forwarded to you as required.

For your information and in reply to many questions that have been asked, after forms MF-104 and MF-104A are received an engineer will check progress and approve your accounts, after which it will be sent to the Regional Office, Region III, U. S. Bureau of Mines, 224 New Customhouse, Denver 2, Colorado, for auditing and vouchering. If the report is in order, a check will be issued by the Treasury Department for the Government's portion of the costs. If you have any difficulty in completing these forms and the reports, please call on Mr. Shaw or this office for assistance.

In the matter of your claim for reimbursement of drilling costs, reimbursement to you under the terms of the contract will be on the basis of a hole or holes completed to the objective, therefore your monthly report should include only such holes that are completed.

Your attention is directed to the provision that Stage II work is contingent on the results obtained from Stage I and performance of the work under Stage II is subject to the prior approval of the Government.

When Stage I has been completed you should request approval from this office of the work you propose to perform under the next stage. Your request for the work approval must be in sextuplicate, complete with a map showing the location of the holes drilled under Stage I, the proposed location of holes to be drilled under Stage II and the results of the work performed under Stage I, including assay returns and any other pertinent data which will be of value to the Government in evaluating the work performed under Stage I. You should anticipate a suspension of operations between stages of work to enable the Government geologist and engineer to evaluate the results of the work performed and make their recommendations to this office relative to the additional work you propose.

To eliminate as much delay as possible, if that is of serious consideration, you should expedite forwarding of the results of the work completed and your request for the Government's approval of the additional work you propose.

Field representatives of the Government are not authorized to approve any changes in the work program or contract provisions. Such approval can only be given by the Washington office, DMEA or the DMEA Field Team, Region III which is comprised of E. N. Harshman, U. S. Geological Survey member and W. M. Traver, U. S. Bureau of Mines member.

It is a regulation that reimbursement for the cost of work accomplished prior to the date of the contract will not be allowed. It is also a requirement that you notify this office in writing the date work actually commences under the contract, with a copy of your letter to Mr. Shaw.

Very truly yours,

J W Townsend

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

Enclosures

JWT:sr

cc Subject
Chron
Amendment File
Chairman Op. Comm. (2)
Harshman
Shaw
Hassler
Townsend

6/20/55 gla

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

RECEIVED
JUN 20 1955

224 New Customhouse
Denver 2, Colorado

June 14, 1955

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

Dear Mr. Butler:

In reply to our letter of May 13, 1955 you furnished copies of all leases which we had requested. The lease on the Patterson Fraction is satisfactory; however, the other leases provide for the assignment of AEC leases when issued. No AEC leases were issued; instead, the lessors validated their claims under the provisions of Public Law 585 and therefore there should be new leases of the lessors' interests in all claims involved in the exploration project except the Patterson Fraction.

Will you please forward this office the following:

1. A copy of a new lease of the Paragon claims No. 5, 7, and 8 from Bullock to Walter Duncan Mining Company.

2. A copy of a new lease on the Red Rock 1 West Extension and Red Rock claims, No. 1, 2, 3, 4, 5, and 6, from G. O. Patterson, Lyle Francis R. F. Jenkins, and F. B. Jenkins to Walter Duncan Mining Company.

3. A copy of a new lease on the White Rock claims No. 1, 2, 3, 4 and White Rock 2 East Extension from G. O. Patterson, R. F. Jenkins, and F. B. Jenkins to Walter Duncan Mining Company.

When we receive a copy of the above leases we will forward copies of the contract to you for the Operator's signature.

Very truly yours,

W. M. TRAVER,

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

HMC:pw

cc: Subject
Chron
Sec.Op.Comm. (2)
Connors Townsend

Note: Legal Div. reviewed submitted amended leases of Duncans lawyers. They will submit amended leases of the claims involved.

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

RECEIVED
JUN 20 1955

224 New Customhouse
Denver 2, Colorado

June 14, 1955

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

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3. A copy of a new lease on the White Rock claims No. 1, 2, 3, 4 and White Rock 2 East Extension from G. O. Patterson, R. F. Jenkins, and F. B. Jenkins to Walter Duncan Mining Company.

When we receive a copy of the above leases we will forward copies of the contract to you for the Operator's signature.

Very truly yours,

W. M. TRAVER,

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

HMC:pw

cc: Subject
Chron
Sec.Op.Comm. (2)
Connors Townsend

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

Surname copy

Murphy
Ellis
Talbut
Selfridge
Fitzsimmons

JUN 10 1955

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

Re: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock claims, et al.
San Juan County, Utah

Dear Mr. Traver:

Enclosed are the original and five copies of a revised proposed short-form contract between the Government and J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company. Also enclosed are two copies of a memorandum, dated June 6, 1955, to the Administrator from the Acting Assistant Solicitor, which is self-explanatory.

Copies of a proposed contract were forwarded to your office on May 10, together with copies of a memorandum from the Legal Division concerning the property rights of the Applicant. Copies of that contract, together with other data, were returned to Washington with your covering memorandum, dated May 20, 1955, because of land conflicts that could not be resolved by the Applicant.

Your memorandum also expressed some doubt as to whether the proposed contract (originally forwarded) authorized sufficient drilling footage to complete the first stage work. A review of the land withdrawn and the small fraction added under the revised contract indicated that one hole could be eliminated from the original proposed contract in both Stage I and II. In the revised proposed contract, therefore, we deleted one hole from each of these stages. However, to provide sufficient footage to complete the proposed work, the same totals for authorized drilling footages have been used and the total estimated cost of the contract remains the same.

R.C.S.

When the recommendations mentioned by the Legal Division have been complied with, if you and the Operator find the revised proposed contract in order, please insert in Article 3 of the contract form the date work shall commence. Then have the Operator sign the original and all copies. Thereafter, kindly make the usual distribution.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

Enclosures

APPROVED:

J. H. Hedges (JHB)

Member, Bureau of Mines

Thor H. Kiilsgaard (JHB)

Member, Geological Survey

FMMurphy/gla
6-8-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Murphy

P.S. Referring to your observation in the above-mentioned memorandum, that for efficient administration, drilling contracts should only limit the number of holes authorized and should allow the actual footage required to complete each stage. To avoid auditing difficulties previously encountered, all units and unit costs are now written as maxima as has been done in this short form contract.

Recent information gained by the exploratory drilling on the property adjacent to the captioned claims might indicate that the location of the drill holes and the direction of the lines of holes, shown on the map attached to the proposed contract, should be changed to take advantage of such information (see Allied Uranium Mines, Inc., DMEA-3834). This is your authority to make such changes. However, the distances between holes and the outer boundaries of the claim group, mentioned in the contract must remain within the prescribed limits mentioned in the contract.

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

June 8, 1955

Memorandum

To: Chairman, Operating Committee

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

Subject: Docket No. DMEA-3582 (Uranium)
Contract No. Idm-E796
J. Walter Duncan, Jr., d/b/a
Walter Duncan Mining Company
Red Rock claims, et al.
San Juan County, Utah
Revised proposed contract

In this revised contract, two holes mentioned in the originally proposed contract were deleted; however, the same total footage is authorized. The cost per foot for supervision was not recalculated, as the two holes eliminated (totaling 637 feet) represent only about nine days' difference in the total supervision period of 15 months.

F. M. Murphy

F. M. Murphy

Surname copy

Ellis

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

June 8, 1955

Memorandum

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FMM

F. M. Murphy

FMMurphy/gla
cc to: Docket
Code 700
Mr. Murphy

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

JUN - 6 1955.

Memorandum

To: The Administrator, DMEA
Attention: E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3582 (Uranium), Walter J. Duncan, San Juan County, Utah

With a memorandum dated May 2 we transmitted a proposed contract for the subject project and outlined several matters concerning the land which required clarification.

On May 31 Mr. Murphy resubmitted the matter to us together with a memorandum dated May 20 from the Field Team to the Operating Committee and attachments thereto, and requested that we revise the description of the land, and the work as indicated on the "Extra Copy" of the contract.

The documents submitted with the May 20 memorandum from the Executive Officer resolve that part of point 2 of our memorandum of May 2 that deals with the Patterson Fraction claim, resolve point 3 and resolve the last paragraph in the memorandum. However, they do not resolve the questions of the leases in points 1 and 2 covering all claims other than the Patterson Fraction. In fact, with respect to the claims other than Patterson Fraction, we have again been furnished copies of lease agreements which we already have. This probably occurred because the Executive Officer's letter to the applicant loosely paraphrased the context of our memorandum concerning the leases. The point involved, and to be resolved, is that we have been furnished with copies of leases which provide for the assignment of AEC leases when issued. However, no AEC leases were issued; instead, the lessors validated the locations of their claims and therefore there should be evidence of a new lease of the lessors' interests in the claims.

Accordingly, we have revised the land description, and the work, as indicated; however, execution of the contract is subject to the conditions discussed in this memo.

Henry C. Rubin
H. C. Rubin
For J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

Attachment

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

Memorandum

JUN - 6 1955

To: The Administrator, DMEA
Attention: E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3582 (Uranium), Walter J. Duncan, San Juan County, Utah

With a memorandum dated May 2 we transmitted a proposed contract for the subject project and outlined several matters concerning the land which required clarification.

On May 31 Mr. Murphy resubmitted the matter to us together with a memorandum dated May 20 from the Field Team to the Operating Committee and attachments thereto, and requested that we revise the description of the land, and the work as indicated on the "Extra Copy" of the contract.

The documents submitted with the May 20 memorandum from the Executive Officer resolve that part of point 2 of our memorandum of May 2 that deals with the Patterson Fraction claim, resolve point 3 and resolve the last paragraph in the memorandum. However, they do not resolve the questions of the leases in points 1 and 2 covering all claims other than the Patterson Fraction. In fact, with respect to the claims other than Patterson Fraction, we have again been furnished copies of lease agreements which we already have. This probably occurred because the Executive Officer's letter to the applicant loosely paraphrased the context of our memorandum concerning the leases. The point involved, and to be resolved, is that we have been furnished with copies of leases which provide for the assignment of AEC leases when issued. However, no AEC leases were issued; instead, the lessors validated the locations of their claims and therefore there should be evidence of a new lease of the lessors' interests in the claims.

Accordingly, we have revised the land description, and the work, as indicated; however, execution of the contract is subject to the conditions discussed in this memo.

s/H. C. Rubin
For J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

Attachment

HCRubin:gjb 6/6/55

Copy to: DMEA Docket
Sol. Docket
E. W. Ellis (2)
J. L. Hofflund
H. C. Rubin
Chron. File

Surname 700
Murphy
Ellis
Mitchenson

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

JUN - 2 1955

Mr. Charles R. Butler
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: Docket No. DMEA-3582 (Uranium)
Red Rock claims, et al.
San Juan County, Utah

Dear Mr. Butler:

This is in response to your letter, dated May 24, in regard to the proposed contract with Walter Duncan Mining Company which was returned to Washington for revision or an amendment.

We are presently revising the proposed contract in view of the request to delete certain land and add other land areas. It will not be necessary for you to make a special trip to Washington to resolve the land title questions unless you feel it essential.

The revised contract will be forwarded to our Region III Executive Officer as soon as possible.

Sincerely yours,

SIGNED
Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

FMurphy:am
6-1-55
cc to: Admr. Reading File
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Murphy
DMEA Field Team, Region III(2)

R.C.S.

5/26/55 g

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

May 24, 1955

Mr. Ellis, Chief
Trace Elements Division
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

DEPARTMENT OF THE INTERIOR
Colorado Minerals Administration
RECEIVED
MAY 26 1955

Re: DMEA 3582

Dear Mr. Ellis,

As you undoubtedly know, our DMEA contract has been returned to Washington for amendment or revision. The circumstances which made this necessary are explained in my letter to Mr. Traver of the Denver regional office, and I presume you are familiar with the contents of this letter.

I am writing to you for a twofold purpose. First of all I would appreciate an estimate of the time necessary to make the required changes in our contract and get it back to Denver. Such an estimate would aid us in planning our own program and scheduling our activities not only for the DMEA project but for the other exploration projects in which we are engaged. Naturally we hope the changes will not delay execution of the final contract for too long a period, but I can certainly appreciate the work required by your office to effect these changes.

Secondly, I am wondering if there is anything we can do to aid and expedite your work? I have been considering a trip east for sometime, and if my presence there would be of any help in resolving the various land title questions or in working out any of the other contract revisions or amendments, I would certainly consider contacting you there.

Please inform me if you think such a trip is advisable. We are anxious to commence our DMEA project, and want to cooperate with you in every possible way.

Very truly yours,

Charles R. Butler

Charles R. Butler, Manager
Walter Duncan Mining Co.

CRB;hm

5/26/55-gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

224 New Customhouse
Denver 2, Colorado

May 20, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: DMEA Docket 3582 (Uranium), Walter Duncan Mining Co., San Juan County, Utah - Proposed Exploration Project Contract Idm-E796

Enclosed are the following:

1. the original and five copies of a proposed contract forwarded this office by your letter of May 10, 1955

2. two copies of a letter from the applicant dated May 19, 1955 regarding a boundary conflict which involves two of the proposed drill holes

3. two copies of a claim map submitted by the applicant showing the area in conflict and the area which he wishes to include in the contract in lieu of the conflicting area

4. two copies of the amended legal description of the DMEA block.

The memorandum from the Acting Assistant Solicitor attached to your letter of May 10 requested the following, which are also enclosed:

1. a photostat of a signed copy of an Agreement on the Paragon claims; this agreement is dated May 7, 1954 by and between Quentin S. Bullock and Walter Duncan Mining Company

2. a photostat of a signed copy of the lease agreement between the owners of the Red Rock--White Rock claims and Walter Duncan Mining Co. dated April 22, 1954

3. a photostat of a signed copy of the Amendment to the Agreement dated April 22, 1954

4. a signed copy of a lease agreement on the Patterson Fraction, which includes the requested recording data

5. the original and five copies of Owner's Consent to Lien on the Patterson Fraction

6. two copies of letter from the applicant dated May 19, 1955 in which he states that all the owners have now signed form MF-203; if this is the case, we do not need the signatures of Frank Seymour and Lyle Francis.

The following recommendations are made for your consideration relative to the work description which should be included when the contract is revised:

The description of work under each stage of the contract establishes an allowable maximum footage for drilling for that particular stage. We have found that to establish a maximum allowable footage of work to be performed under any stage is too rigid for efficient administration of the contract, because the depths of the holes involved are only an estimate and many times it is necessary to increase the allowable footage in order to reach the objective of the desired or specified number of holes to be drilled under that particular stage. We prefer that where possible the drilling approved under each stage be established as a certain number of holes, estimated average depth and estimated aggregate footage, with a qualifying paragraph pertaining to all stages to the effect that any work and funds not expended in the early stages of the work may be expended in performing additional work under the last stage contingent upon prior written approval by the Government. It is our belief that Stage I should be approved for a specific number of holes. Each hole should have a specific objective. It follows then that to leave out a hole or holes from the planned primary drilling may seriously effect the overall results of the drilling program.

The present Exhibit "A" with the allowable maximum footage that can be drilled and the qualification that "No hole shall be started unless it can be completed within the maximum footage provided for a stage" possibly could lead to the circumstances outlined above pertaining to eliminating a hole or holes under the primary stage.

W. M. Traver

W. M. Traver

E. N. Harshman

E. N. Harshman

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 25 1955

224 New Customhouse
Denver 2, Colorado

May 20, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: DMEA Docket 3582 (Uranium), Walter Duncan Mining Co., San Juan County, Utah - Proposed Exploration Project Contract Idm-E796

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The present Exhibit "A" with the allowable maximum footage that can be drilled and the qualification that "No hole shall be started unless it can be completed within the maximum footage provided for a stage" possibly could lead to the circumstances outlined above pertaining to eliminating a hole or holes under the primary stage.

W. M. Traver

W. M. Traver

E. N. Harshman

E. N. Harshman

Enclosures

WALTER DUNCAN MINING COMPANY
P. O. BOX 1468
CORTEZ, COLORADO

May 19, 1955

Mr. W. M. Traver
224 New Customs House
Denver 2, Colorado

RE: DMEA No. 3582

Dear Mr. Traver:

I regret that I must ask that certain minor changes be made in our DMEA Contract before we can execute this Agreement. These changes are as follows:

I request that the bondaries of the DMEA Block be amended so as to delete that portion of the White Rock No. 2, and White Rock No. 3, as shown on the enclosed maps and colored red, and to add that portion of the Red Rock No. 1, the Red Rock No. 1 West Extension, the Red Rock No. 2, and the Patterson Fraction Claims, as shown on the enclosed map and colored in blue.

We are asking that these changes be made because we have been unable to resolve a boundary conflict with the National Lead Company concerning the area to be deleted, and do not wish to include any ground in our DMEA Block that does not have clear title.

We knew of this overlap when we submitted the Application, but preliminary conferences with the conflictees had assured me that this overlap would be resolved to the lines shown on our original maps. I had mentioned this overlap to the DMEA Field Team, and had assured them the area would be cleared shortly. However, these negotiations seemed to have gotten bogged down, and, although we still believe we eventually will get title to this ground, on a basis of previous verbal agreements, we feel it best that this area of questionable title be withdrawn from our project area.

To compensate for this land withdrawal, we are suggesting that those areas colored in blue be added to the project. Actually, the suggested land additions are in a much more favorable area than the deleted area, and the basic project is unchanged.

One Phase 1 hole, and one Phase 2 hole are located in the area that we propose to drop from the project. I recommend that the location of these two holes be changed as shown on the included map. The location of the Amended Phase 1 hole is 137,735 E and 59,930 N based on the map coordinate system. The location of the Amended Phase 2 hole is 132,060 E and 62,250 N. This will actually increase the possibility of finding ore because the proposed new locations are closer to the probable ore trend.

I enclose six copies of an amended description of the Project Block as proposed herein. I realize that the changes as proposed will result in additional work to you, and I regret that they are necessary. We are ready to commence work on this project and hope the revision or amendment to the contract may be effected speedily.

Very truly yours,

Charles R. Butler

Charles R. Butler, Manager
WALTER DUNCAN MINING COMPANY

CRB:rfb
Enc.

WALTER DUNCAN MINING COMPANY
P. O. BOX 1468
CORTEZ, COLORADO

May 19, 1955

Mr. W. M. Traver
224 New Customs House
Denver 2, Colorado

RE: DMEA No. 3582

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Very truly yours,

Charles R Butler

Charles R. Butler, Manager
WALTER DUNCAN MINING COMPANY

CRB:rfb
Enc.

WALTER DUNCAN MINING COMPANY
P. O. BOX 1468
CORTEZ, COLORADO.

May 19, 1955

AMENDED LEGAL DESCRIPTION OF DMEA BLOCK, SAN JUAN COUNTY,

TOWNSHIP 30 SOUTH, RANGE 25 EAST, S. L. M.

Sections 34 and 35

Beginning at a point 1050 feet west of the SE Corner of Section 35; thence North 300 feet to the SE Corner of Pitchblende No. 6; thence North 58° West 1220 feet to the NE Corner of Red Rock No. 5; thence 290 feet North 57° 32 min. West to the SE Corner of Pitchblende Extension No. 5; thence North 53° 42 min. West 1275 feet; thence North 56° 53' West 360 feet to the SE Corner of Pitchblende Extension No. 4; thence North 70° 13' West 1330 feet to the SE Corner of Pitchblende Extension No. 3; thence North 84° 30' West 900 feet to the SE Corner of Pitchblende Extension No. 2; thence North 25 feet; thence North 88° West 540 feet; thence North 81° West 1570 feet; thence South 2° East 300 feet; thence West 162 feet; thence South 68° 14' West 425 feet to the SW Corner of Service Berry No. 3; thence South 17° 31' East 350 feet; thence North 87° 43' East 428 feet to the SE Corner of White Rock No. 1; thence North 86° East 106 feet to the NW Corner of Spruce No. 2 (National Lead Company Claim Corner); thence North 89° East 561 feet to the NW Corner of Spruce No. 4; thence South 67° 30' East 540 feet to the NW Corner of Oak No. 2; thence South 76° East 605 feet to the NW Corner of Oak No. 4; thence South 71° East 521 feet to the NW Corner of Pinion No. 2; thence South 83° 30' East 500 feet; thence North 88° 46' East 328 feet to the SW Corner of White Rock No. 4; thence East 50 feet; thence South 20 feet; thence West 1060 feet; thence South 59° 30' East 710 feet; thence South 87° 30' West 260 feet to the NW Corner of Paragon No. 8; thence South 49° 15' East 590 feet to the SW Corner of Paragon No. 8; thence South 6° 15' East 748 feet along the West end lines of Paragon 5, and Paragon 7, to the Section Line between Section 35 and Section 2; thence 1850 feet to the point of beginning.

WALTER DUNCAN MINING COMPANY
P. O. BOX 1464
CORTEZ, COLORADO.

May 19, 1955

AMENDED LEGAL DESCRIPTION OF EMMA BLOCK, SAN JUAN COUNTY.

TOWNSHIP 38 SOUTH, RANGE 25 EAST, S. L. M.

Sections 34 and 35

Beginning at a point 1050 feet west of the SE Corner of Section 35; thence North 300 feet to the SE Corner of Pitchblende No. 6; thence North 38° West 1220 feet to the SE Corner of Red Rock No. 5; thence 290 feet North 57° 32 min. West to the SE Corner of Pitchblende Extension No. 5; thence North 55° 42 min. West 1275 feet; thence North 56° 53' West 360 feet to the SE Corner of Pitchblende Extension No. 4; thence North 70° 23' West 1320 feet to the SE Corner of Pitchblende Extension No. 3; thence North 84° 30' West 900 feet to the SE Corner of Pitchblende Extension No. 2; thence North 25 feet; thence North 88° West 540 feet; thence North 81° West 1570 feet; thence South 2° East 300 feet; thence West 162 feet; thence South 68° 14' West 425 feet to the SW Corner of Service Berry No. 3; thence South 17° 31' East 350 feet; thence North 87° 43' East 426 feet to the SE Corner of White Rock No. 1; thence North 88° East 106 feet to the NW Corner of Spruce No. 2 (National Lead Company Claim Corner); thence North 87° East 562 feet to the NW Corner of Spruce No. 4; thence South 87° 30' East 560 feet to the NW Corner of Oak No. 2; thence South 76° East 625 feet to the NW Corner of Oak No. 4; thence South 71° East 521 feet to the NW Corner of Pinion No. 2; thence South 83° 30' East 500 feet; thence North 88° 46' East 325 feet to the SW Corner of White Rock No. 4; thence East 50 feet; thence South 20 feet; thence West 1060 feet; thence South 59° 30' East 710 feet; thence South 87° 30' West 260 feet to the NW Corner of Paragon No. 8; thence South 49° 15' East 590 feet to the SW Corner of Paragon No. 8; thence South 6° 15' East 748 feet along the West end lines of Paragon 5, and Paragon 7, to the Section Line between Section 35 and Section 2; thence 1850 feet to the point of beginning.

5/17/55 glr

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

224 New Customhouse
Denver 2, Colorado

May 13, 1955

Memorandum

To: Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), J. Walter Duncan, Jr., Red Rock Claims, et al, San Juan County, Utah

Attached is a copy of our letter to the applicant in accordance with your letter and enclosure of May 10, 1955, on the subject docket.

It is our belief, as expressed to Mr. Selfridge on his recent visit to this office, that the proposed contracts should be held in the Washington office pending receipt of the complete required information before being released to the field.

We are of the opinion that time will be saved if the contracts are held by you until they are ready for the operator's signature as you are now doing in the case of DMEA Docket 3517, McFarland and Hullinger.

W. M. Traver

W. M. Traver

Attachment

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

224 New Customhouse
Denver 2, Colorado

May 13, 1955

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

Dear Mr. Butler:

Prior to the execution of a contract for exploration work on the Red Rock, White Rock, and Paragon claims the following is required:

1. A signed copy or photostat of a signed copy of a lease of the Paragon claims Nos. 5, 7, and 8, from Bullock to Walter Duncan Mining Company.

2. A signed copy or photostat of a signed copy of the lease of White Rock claims Nos. 1, 2, 3, 4, and 2 East Extension to Walter Duncan Mining Company.

3. A signed copy or photostat of a signed copy of the lease of Red Rock claims Nos. 1 West Extension, 1, 2, 3, 4, 5, and 6.

4. A signed copy or photostat of a signed copy of the lease of the Patterson Fraction.

5. The Book Number and Page Number of the recording of the Patterson Fraction.

6. A consent to lien covering the Patterson Fraction claim. Attached are the original and five copies of Form MF-203, Owner's Consent to Lien. Please fill in the book and page number of recording and have all the owners of the Patterson Fraction sign and return to this office all six copies.

7. The Owner's Consent to Lien for the White Rock group of claims which you previously submitted omits the signature of Frank Seymour. Attached are the original and five copies of Form MF-203 for the signature of Frank Seymour. Please return all six copies to this office.

8. The Owner's Consent to Lien for the White Rock group of claims which was submitted omits the signatures of Lyle Francis and Frank Seymour. Attached are six copies of Form MF-203 for their signatures. Please return all six signed copies to this office.

When the above information is received by this office we will continue to process the contract.

Yours very truly,

W. M. TRAVER

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

Enclosures

MMC:ld

Copy to: Chairman, Opr. Comm. (2)
E. N. Harshman
W. P. Williams
J. F. Shaw
J. W. Townsend
H. M. Connors
Subject
Caron

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 16 1955

224 New Customhouse
Denver 2, Colorado

May 13, 1955

Memorandum

To: Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), J. Walter Duncan, Jr., Red Rock Claims, et al, San Juan County, Utah

Attached is a copy of our letter to the applicant in accordance with your letter and enclosure of May 10, 1955, on the subject docket.

It is our belief, as expressed to Mr. Selfridge on his recent visit to this office, that the proposed contracts should be held in the Washington office pending receipt of the complete required information before being released to the field.

We are of the opinion that time will be saved if the contracts are held by you until they are ready for the operator's signature as you are now doing in the case of DMEA Docket 3517, McFarland and Hullinger.

W. M. Traver

W. M. Traver

Attachment

WMC:ld
Copy to: E. N. Harshman
W. P. Williams
J. F. Shaw
J. W. Townsend
H. M. Connors
Subject
Chron

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

224 New Customhouse
Denver 2, Colorado

May 13, 1955

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

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1. A signed copy or photostat of a signed copy of a lease of the Paragon claims Nos. 5, 7, and 8, from Bullock to Walter Duncan Mining Company.

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3. A signed copy or photostat of a signed copy of the lease of Red Rock claims Nos. 1 West Extension, 1, 2, 3, 4, 5, and 6.

4. A signed copy or photostat of a signed copy of the lease of the Patterson Fraction.

5. The Book Number and Page Number of the recording of the Patterson Fraction.

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8. The Owner's Consent to Lien for the White Rock group of claims which was submitted omits the signatures of Lyle Francis and Frank Seymour. Attached are six copies of Form MF-203 for their signatures. Please return all six signed copies to this office.

When the above information is received by this office we will continue to process the contract.

Yours very truly,

W. M. TRAVER,

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

Enclosures

HMC:ld

Copy to: Chairman, Opr. Comm. (2)
E. N. Harshman
W. P. Williams
J. F. Shaw
J. W. Townsend
H. M. Connors
Subject
Chron

Surname 700

Murphy
Ellis
Chambers
Martin
Johnson
Ma

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

MAY 1 0 1955

Re: Docket No. DMEA-3562 (Uranium)
J. Walter Duncan, Jr.
Red Rock claims, et al.
San Juan County, Utah

Dear Mr. Traver:

Enclosed are the original and five copies of a proposed short-form contract between the Government and J. Walter Duncan, Jr., d/b/a Walter Duncan Mining Company. Also enclosed are two copies of a memorandum, dated May 2, 1955, to the Administrator from the Acting Assistant Solicitor, which is self-explanatory.

You will note that the Operator must submit the documents mentioned in the above memorandum, prior to the execution of the contract. After this request is complied with, if you and the Operator find the proposed contract in order, please insert in Article 3 of the contract, the date work shall commence. Then have the Operator sign the original and all copies, and thereafter kindly make the usual distribution.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (HB)

Enclosures

FMMurphy:am
5-4-55

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
Code 700
Mr. Murphy

APPROVED:

/s/ John E. Crawford (HB)
Member, Bureau of Mines

/s/ R. D. Trace (HB)
Member, Geological Survey

R.C.H.

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

MAY 2 1955

Memorandum

To: The Administrator, DMEA
Attention: Mr. E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3582, Walter Duncan Mining Company (Uranium)

Pursuant to Mr. Murphy's memorandum dated April 15, we have prepared the attached contract.

From the documents in the docket it appears that the land referred to in Article 2 is derived by the Operator from two sources--under an agreement dated May 7, 1954, with Q. S. Bullock, and under an agreement dated April 22, 1954, with C. O. Patterson, et al, which agreement was amended December 6, 1954, to add certain claims. Both of these agreements recite that they depend upon the issuance of A.E.C. leases and, by express provision, require further assignments by the lessors of the A.E.C. leases, if and when issued to the lessors. However, it appears from notations on the Owner's-Consent-to-Lien forms, submitted subsequent to the application, that the lessors validated their mining locations under the provisions of P. L. 585.

In view of the foregoing, prior to the execution of the contract, we require:

1. A copy of a lease of the Paragon claims from Bullock to the Operator.

2. A copy of the lease of the remaining claims listed in Annex I of the contract, including the Patterson Fraction claim, from the Patterson group of lessors. The recording data concerning the Patterson Fraction claim should be inserted in the space provided in Annex I.

3. A consent to Lien covering the Patterson Fraction claim.

With respect to the Owners' Consents to Lien already submitted, the Patterson group of lessors consists of G. O. Patterson, Floyd B. Jenkins, Lyle Francis, Robert Jenkins, and Frank L. Seymour. The Owner's Consent to Lien submitted for the Red Rock group of claims omits the signature of Frank Seymour. The Owner's Consent to Lien for the White Rock group of claims omits the signatures of Lyle Francis and Frank Seymour. As the agreement dated April 22, 1954, makes no distinction as to ownership of the claims, the accuracy of the Owners' Consents to Lien should be verified prior to the execution of the contract. If the name of Frank Seymour is required as an addition to the Owners' Consents to Lien, his name also should be added to Article 2(c) of the contract form.

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments

Brutin

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

MAY 2 1955.

Memorandum

To: The Administrator, DMEA
Attention: Mr. E. W. Ellis

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3582, Walter Duncan Mining Company (Uranium)

Pursuant to Mr. Murphy's memorandum dated April 15, we have prepared the attached contract.

From the documents in the docket it appears that the land referred to in Article 2 is derived by the Operator from two sources--under an agreement dated May 7, 1954, with Q. S. Bullock, and under an agreement dated April 22, 1954, with C. O. Patterson, et al, which agreement was amended December 6, 1954, to add certain claims. Both of these agreements recite that they depend upon the issuance of A.E.C. leases and, by express provision, require further assignments by the lessors of the A.E.C. leases, if and when issued to the lessors. However, it appears from notations on the Owner's-Consent-to-Lien forms, submitted subsequent to the application, that the lessors validated their mining locations under the provisions of P. L. 585.

In view of the foregoing, prior to the execution of the contract, we require:

1. A copy of a lease of the Paragon claims from Bullock to the Operator.

2. A copy of the lease of the remaining claims listed in Annex I of the contract, including the Patterson Fraction claim, from the Patterson group of lessors. The recording data concerning the Patterson Fraction claim should be inserted in the space provided in Annex I.

3. A consent to Lien covering the Patterson Fraction claim.

With respect to the Owners' Consents to Lien already submitted, the Patterson group of lessors consists of G. O. Patterson, Floyd B. Jenkins, Lyle Francis, Robert Jenkins, and Frank L. Seymour. The Owner's Consent to Lien submitted for the Red Rock group of claims omits the signature of Frank Seymour. The Owner's Consent to Lien for the White Rock group of claims omits the signatures of Lyle Francis and Frank Seymour. As the agreement dated April 22, 1954, makes no distinction as to ownership of the claims, the accuracy of the Owners' Consents to Lien should be verified prior to the execution of the contract. If the name of Frank Seymour is required as an addition to the Owners' Consents to Lien, his name also should be added to Article 2(c) of the contract form.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments

HCRubin/emd
Copy to: DMEA Docket
Solicitor's Docket
E. W. Ellis (3)
J. L. Hofflund
H. C. Rubin
chron.

Surname 700

Murphy
Ellis

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

April 15, 1955

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Fred M. Murphy, Mining Engineer
Rare and Miscellaneous Metals Division

Subject: Proposed Contract
Docket No. DMEA-3582 (Uranium)
J. Walter Duncan, Jr.
Red Rock claims, et al.
San Juan County, Utah

INTERIOR DEPT.
APR 15 1955
SOLICITOR

Will you kindly prepare a short-form contract with the subject Applicant in accordance with the attached draft.

The documents and maps concerning property rights, etc., are hereto attached.

You will note in Annex I the claim "Patterson Fraction" is shown without book or page number, furthermore, it is not covered by the Owner's Consent to Lien submitted. This is probably due to an oversight, therefore, in order to expedite the processing of the proposed contract, it can be made subject to filling in this data in Annex I and adding the claim to the submitted Owner's Consent to Lien forms, at the time the Operator signs the contract.

F. M. Murphy

Attachments

FMMurphy:am
cc to: Docket
Code 700
Mr. Murphy

4/14/55 gla

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

APR 14 1955

224 New Customhouse
Denver 2, Colorado

April 8, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket DMEA-3582 (Uranium), J. Walter Duncan, Jr. (Red Rock claims, et al.), San Juan County, Utah

This replies to your letter of March 23, 1955 on the subject docket concerning estimated costs for drilling.

Enclosed are the original and three copies of a memorandum on a cost revision. We believe that the estimated costs in this memorandum are fair to both the Operator and the Government, and recommend that a short form contract be prepared using these unit costs.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd.
APR 7 1955

BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
April 6, 1955

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 14 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw, Supervising Mining Engineer

Subject: Docket DMEA 3582 (Uranium), J. Walter Duncan, Jr., Red Rock claims, et al., San Juan County, Utah

Enclosed are the original and seven copies of a memorandum which was prepared by M. H. Salsbury in accordance with a request in a letter from the Chairman of the Operating Committee to the Executive Officer, Region III, dated March 23, 1955.

The revised costs per foot for plug-bit drilling are 38 cents higher than those recommended by the Chairman of the Operating Committee and the revised costs per foot for core drilling are 9 cents higher. The estimated direct costs of drilling as used by the engineer in the original report are those which were submitted by the applicant. These costs are considerably lower than the costs of other contracts in force on the Plateau and are considerably less than the prices quoted by an independent contractor. We believe that the estimated costs in this memorandum are fair to both the operator and the Government and recommend that a short form contract be prepared using these unit costs.

John F. Shaw

John F. Shaw

Enclosures

cc 7
DMEA 3582
DMEA Chron

JFS/cm

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Bureau of Minerals Administration
RECEIVED
APR 14 1955

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
April 5, 1955

Memorandum

To: John F. Shaw, Supervising Mining Engineer

From: M. H. Salsbury

Subject: Docket DMEA 3582 (Uranium), J. Walter Duncan, Jr., Red Rock claims et al, San Juan County, Utah -- Supplemental Report on Cost Figures.

The cost estimate in the engineering report on the subject DMEA application was arrived at by using the applicant's estimated direct drilling costs which amounted to $2.63 per foot. Slight revision, including elimination of a charge for insurance on the drill rig, brought the total direct cost to $61,325.10 for 1,784 feet of core and 23,716 feet of non-core drilling or an average for both types of $2.40 per foot. This compared favorably with drilling costs for the same depth holes and proportions of core and non-core drilling, computed at the contract rates in effect at two current Geological Survey projects and considerably less than a bid made the applicant by Minerals Engineering Co.

Comparative Cost of Drilling Holes Averaging 608* Feet Deep

Minerals Engineering Co. Bid	USGS Beaver Mesa	USGS Slick Rock	Applicant's estimate	Bureau of Mines estimate
$3.09	2.70	2.44	2.63	2.40

* non-core depth 565 feet, cored depth 43 feet.

The applicant's cost figures were discussed with his manager, Charles Butler, who stated that the estimate for drilling supplies which would be subject to wear and consumption, was based on past experience with their own rig, and the costs used represented the expected consumption on that basis. That is, during the course of drilling 25,500 feet, the equivalent of 160 10-foot drill rods, 2 diamond drill bits, and so on, would be worn out, but more than this amount would actually be purchased.

The only figure available in the office for estimating diamond bit cost is one of $0.50 per foot, used in an estimate in drilling BX size hole through Dakota and Morrison sediments on another project. The applicant uses a figure of $2,000.00 for diamond bits for 1,784 feet of core drilling in a hole with an outside diameter of 4-1/4 inches or $1.12 per foot. This is probably not excessive, for this size hole, but we do not have data for comparison. The same applies to the cost of $9,000.00 for rock-bits and Hawthorne blades for 23,716 feet of non-core drilling, or $0.38 per foot.

Inasmuch, as the average unit cost per foot as calculated in the Bureau of Mines estimate, based for the most part on the applicant's figures, is less than actual comparable contract prices and also less than the Minerals Engineering Company's bid, the Bureau engineer believes that the applicant's estimate on direct drilling costs are reasonable, with the item for insurance eliminated.

Other items of expense in the applicant's estimate such as geological services and supervision for 18 months, a surveyor and helper for a total of 5 months, and excessive accounting charges were also reduced in the Bureau of Mines estimate. A further reduction can be effected by eliminating the surveyor and helper, and the allowance for contingencies, as suggested by the Washington office.

After consideration, it is believed that the suggested revision on these items is justified. The applicant employs a surveying crew, but no extra charge need be made for their services because the amount allowed for supervision probably more than covers the actual amount of supervision required. As the costs were figured on a 15-month basis or 1,700 feet per month, perhaps the allowance for contingencies is not necessary as drilling rates of up to 2,000 feet per month per rig are common when the major portion of the drilling is non-core. In the revised estimate which follows, the costs figures used originally in the engineering reports are included, except the charges for surveyor and helper, and contingencies:

Revised Cost Estimate for
DMEA 3528
J. Walter Duncan, Jr.
(not segregated as to phases)
Distribution

Item	Non-core drilling (23,716 feet) 93% Direct	Non-core drilling (23,716 feet) 93% Other	Core drilling (1,784 feet) 7% Direct	Core drilling (1,784 feet) 7% Other	Total 25,500 feet Direct	Total 25,500 feet Other
Independent contracts (bull dozing)		$2,153.88		$162.12		$2,316.00

Item	Non-core drilling (23,716 feet) 93% Direct	Non-core drilling (23,716 feet) 93% Other	Core drilling (1,784 feet) 7% Direct	Core drilling (1,784 feet) 7% Other	Total 25,500 feet Direct	Total 25,500 feet Other
Labor	$19,747.62		1,486.38		21,234.00	
Supervision and technical services		8,523.45		641.55		9,165.00
Drilling supplies	15,751.75		4,088.25		19,840.00	
Other supplies	7,543.46	771.90	567.79	58.10	8,111.25	830.00
Operating equipment	7,319.06	418.50	550.90	31.50	7,869.96	450.00
Miscellaneous (less analyses)						
Repairs to equipment	1,873.95		141.05		2,015.00	
Accounting		1,395.00		105.00		1,500.00
Payroll taxes (8.5%)	1,678.55	724.49	126.34	54.53	1,804.89	779.02
Total	53,914.39	13,987.22	6,960.71	1,052.80	60,875.10	15,040.02

Calculated Cost Per Foot

Non-core drilling (direct)	$53,914.39 / 23,716	$2.27
Non-core drilling (other)	$13,987.22 / 23,716	.59
Total non-core drilling		$2.86
Core drilling (direct)	$6,960.71 / 1,784	$3.90
Core drilling (other)	$1,052.80 / 1,784	.59
Total core drilling		$4.49

Average cost all drilling per foot

Direct cost	$60,875.10 / 25,500	$2.39
Other cost	$15,040.02 / 25,500	$ .59
Total average cost		$2.98

Summary of Estimated Costs

Plug drilling
23,716 feet at $2.86 per foot $67,895.59

Core drilling	
1,784 feet at $4.49 per foot	$8,010.16
Chemical analysis 50 samples at $5.00 each	250.00
Total estimated cost	$76,155.75
Government participation at 75 percent	57,116.81

The revised unit cost of $4.49 per foot for core drilling is only $.09 higher than that suggested by the Washington DMEA office, but the unit cost of $2.86 per foot for non-core drilling is $0.38 higher. If it is Washington's opinion that the revised unit costs quoted are still too high to protect the Government's interest, perhaps a contract similar to the one approved for DMEA 3397, Contract Idm-E722, Ray Ryan, should be considered, unless the applicant will agree to the Washington figures.

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

cc WMTraver (orig/7 copies)
DMEA 3582
Chron

MHS/cm

4/4/55 gla

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

224 New Customhouse
Denver 2, Colorado

April 1, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3582 (Uranium), J. Walter Duncan, Jr. (Red Rock claims, et al.), San Juan County, Utah

Enclosed are three sets in sextuplicate of form MF-203, Owner's Consent to Lien, on the White Rock, Red Rock, and Paragon groups of claims requested in your letter of December 10, 1954.

W.M. Traver

W.M. Traver

Enclosures

3/25/55 gla

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

March 24, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Field Examination, DMEA Docket 3582,
Walter Duncan Mining Co., Red Rock Claims,
San Juan County, Utah

I have reviewed the field team report of examination of the Red Rock claims, Walter Duncan Mining Company, DMEA Docket 3582. Joseph O. Hosted, Washington representative of the Atomic Energy Commission, has also reviewed the field team report, and we have discussed its contents.

Mr. Hosted and I concur with the field team that some exploration assistance should be granted the Walter Duncan Mining Company. We suggest that the Phase I drilling plan, as presented, be allowed. Should results of Phase I drilling be favorable, then consideration could be given to additional exploration work.

We are forwarding the field team report of examination to the Chief, Division of Minerals in accordance with the routing slip attached thereto.

John E. Crawford
John E. Crawford

Copy to: Division of Minerals
Branch of Rare & Precious Metals
J. O. Hosted (2)
J. E. Crawford (2)

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

March 24, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Field Examination, DMEA Docket 3582,
Walter Duncan Mining Co., Red Rock Claims,
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John E. Crawford

Copy to: Division of Minerals
Branch of Rare & Precious Metals
J. O. Hosted (2)
J. E. Crawford (2)

3/25/55 Angela

IN REPLY REFER TO:

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

March 23, 1955

Re: DMEA-3582
Walter Duncan Mining Company
Red Rock claims et al.
San Juan County, Utah
$92,200(?) - 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 a 3 stage plug and core drilling program for the subject claims. All drill holes would collar in the Wingate sandstone and would penetrate the Wingate and Chinle formations. The target bed is a sandstone unit (Mossback?), generally 10 to 30 feet thick, that occurs near or at the base of the Chinle.

Primary justification for the project is its proximity to the Continental and other large ore bodies, and the fact that the subject property crosses the trend of these ore bodies. In addition, small deposits are known to the northeast of the property, where the ore bearing zone crops out. Available data suggest that the ore bearing zone increases in thickness (and therefore favorability to ore) to the southwest, where it underlies the subject property.

From a geologic viewpoint the proposed exploration is justified and I recommend that a loan be granted.

I assume that Government assistance can be withdrawn at the conclusion of any stage in the drilling, if earlier results warrant.

RD Trace

R. D. Trace

IN REPLY REFER TO:

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

March 23, 1955

Re: DMEA-3582
Walter Duncan Mining Company
Red Rock claims et al.
San Juan County, Utah
$92,200(?) - Uranium

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

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Primary justification for the project is its proximity to the Continental and other large ore bodies, and the fact that the subject property crosses the trend of these ore bodies. In addition, small deposits are known to the northeast of the property, where the ore bearing zone crops out. Available data suggest that the ore bearing zone increases in thickness (and therefore favorability to ore) to the southwest, where it underlies the subject property.

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I assume that Government assistance can be withdrawn at the conclusion of any stage in the drilling, if earlier results warrant.

R. D. Trace

RDTrace:hlm
G-3/23/55

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

IN REPLY REFER TO:

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

March 23, 1955

Re: DMEA-3582
Walter Duncan Mining Company
Red Rock claims et al.
San Juan County, Utah
$92,200(?) - Uranium

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

Subject: Review of Field Team report

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Primary justification for the project is its proximity to the Continental and other large ore bodies, and the fact that the subject property crosses the trend of these ore bodies. In addition, small deposits are known to the northeast of the property, where the ore bearing zone crops out. Available data suggest that the ore bearing zone increases in thickness (and therefore favorability to ore) to the southeast, where it underlies the subject property.

From a geologic viewpoint the proposed exploration is justified and I recommend that a loan be granted.

I assume that Government assistance can be withdrawn at the conclusion of any stage in the drilling, if earlier results warrant.

R. D. Trace

RDTrace:hlm
G-3/23/55

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

Surname 700

Murphy
Ellis
Selfridge
Johnson
Mattendorf

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

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

MAR 23 1955

Re: Docket No. DMEA-3582 (Uranium)
J. Walter Duncan, Jr.
Red Rock claims, et al.
San Juan County, Utah

Dear Mr. Traver:

This is in reference to the "Report of Examination by Field Team," dated March 2, 1955, covering the captioned application. The report was submitted to this office with your memorandum dated March 11.

The subject report is well prepared. However, in reviewing the estimated cost figures, we find it difficult to justify some of the costs for individual items; especially since you are recommending a short-form contract.

Under drilling supplies, many of the items mentioned will have a salvage value at the end of the proposed contract. Also, we believe the project supervisor could do any surveying and mapping required for the project.

In our opinion, the footage advance assumed as a basis in calculating the estimated costs should take care of any contingencies. Therefore, this item could be eliminated.

Allowing for a 50 percent salvage value of materials and supplies, also, eliminating the surveyor's salary and the sum set aside for contingencies, we find the following approximate cost per foot of drill-hole advance:

	Drilling direct costs	All other costs except analyses	Total
Plug	$1.92	$0.56	$2.48
Core	$3.84	$0.56	$4.40

We would appreciate your and the Operator's opinion in regard to the above. In order to recommend a contract based on the estimates in the subject report, the long-form (actual cost contract) would have to be used to protect the Government's interest.

R.C.J.

In regard to the Owner's Consent to Lien forms required, we note that you will forward the signed copies when you receive them.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JHB)
Member, Geological Survey

FMMurphy:am
3-22-55

cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. C. Hosted, Rm. 3210, GSA
Code 700
Mr. Murphy

3/21/55 gba

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

224 New Customhouse
Denver 2, Colorado

March 15, 1955

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
Post Office Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

Dear Mr. Butler:

Receipt is acknowledged of your letter dated March 12 in answer to our letter of March 11 and returning forms MF-203, Owner's Consent to Lien, and furnishing recording data requested.

We have added the additional claims to the forms you returned and are returning to you two sets in sextuplicate of forms MF-203 for execution.

Please have all copies of the form signed and return them to this office.

Very truly yours,

W. M. Traver

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

Enclosures

RDB:sr

cc Chairman, Op. Comm. (2)
Harshman
Shaw
Townsend
Berk
Subject
Chron

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

224 New Customhouse
Denver 2, Colorado

March 15, 1955

Mr. Charles R. Butler, Manager
Walter Duncan Mining Company
Post Office Box 1468
Cortez, Colorado

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Very truly yours,

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

Enclosures

RDB:sr

cc Chairman, Op. Comm. (2)
Harshman
Shaw
Townsend
Berk
Subject
Chron

3/15/55 gla

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

224 New Customhouse
Denver 2, Colorado

March 11, 1955

Defense Minerals Administration
RECEIVED
MAR 14 1955

Mr. J. Walter Duncan, Jr.
P. O. Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

Dear Mr. Duncan:

Enclosed are three sets in sextuplicate of Form MF-203, Owner's Consent to Lien, on the Red Rock claims 1 to 6 inclusive, White Rock claims 1 to 3 inclusive, and the Paragon 5, 7, and 8 claims. Please have the owners sign all copies and return them to this office.

The following additional information is also required so that we may prepare another Owner's Consent to Lien on three fractional claims as follows:

1. Please furnish the location and recording data on the Red Rock 1 West Extension.

2. Your application states that the fractional claim which lies between White Rock 2 and White Rock 3 is named Red Rock 2 East Extension. The map submitted with your application labels this claim as White Rock 2 East Extension. Will you please advise which name is correct and advise us of the location and recording data.

3. A fractional part of a claim of triangular shape is described by metes and bounds in the DMEA block but we are unable to ascertain the name of this claim which lies south of the Red Rock 3 claim. Please advise the name, the location and recording data on this claim.

Upon receipt of the above information we will continue to process the application.

Very truly yours,

W. M. Traver

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

cc Administrator (2)

Enclosures

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

224 New Customhouse
Denver 2, Colorado

March 11, 1955

RECEIVED
MAR 14 1955

Mr. J. Walter Duncan, Jr.
P. O. Box 1468
Cortez, Colorado

Re: DMEA Docket 3582

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Upon receipt of the above information we will continue to process the application.

Very truly yours,

W. M. Traver

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

cc Administrator (2)

Enclosures

3/21/55 rgla

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

224 New Customhouse
Denver 2, Colorado

March 11, 1955

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: DMEA Field Team, Region III

Subject: Report of Examination, DMEA Docket 3582 (Uranium) J. Walter Duncan, Jr., dba Walter Duncan Mining Co., Red Rock claims et al., San Juan County, Utah

Enclosed are the original and three copies of the report pertaining to the above application.

We concur in the recommendations of the field examiners for an exploration project at a total cost of $81,738.46.

Nine copies each of Figures 1, 2, and 3 are attached for possible use in the contract.

In accordance with your letter of December 10, 1954, Owner's Consent to Lien forms will be forwarded the applicant for signatures of the owners. We will forward the signed copies to you when we receive them.

W. M. Traver

W. M. Traver

for D. R. Macharen

E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
3-18-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Info Dept
MAR 1 1 1955
BUREAU OF MINES

Region III

TRANSMITTED

MAR 1 1 1955

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
March 9, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw, Project Supervisor

Subject: Examination Report, Docket No. DMEA 3582 (Uranium), J. Walter Duncan, Jr., (Red Rock, White Rock, and Paragon claims), San Juan County, Utah.

Enclosed are the original and ten copies of a joint "Summary, Conclusions, and Recommendations" by M. H. Salsbury, mining engineer, and T. E. Mullens, geologist. Also enclosed are the original and ten copies of an engineering report by M. H. Salsbury.

The applicant requested exploration assistance consisting of 25,500 feet of diamond drilling and 45 holes at an estimated cost of $92,200.00. At the suggestion of the examining team, the applicant submitted a revised project consisting of 23,716 feet of plug-bit and 1,784 feet of core drilling at an estimated cost of $81,738.46, Government participation at 75 percent amounts to $61,303.85.

The examining team concluded that a significant amount of uranium would be disclosed as a result of the proposed exploration. It is recommended that the Government enter into a contract with the applicant on the basis of the revised application. The contract would consist of three phases of plug-bit and core drilling. The total amount of the contract would be $81,738.46, and the amount of Government participation at 75 percent would be $61,303.85.

W H King

W. H. King, for
John F. Shaw

Enclosures

cc 10
DMEA 3582
Chron

JFS/cm

Reviewed by
DMEA OPERATING COMMITTEE
3-18-55
(Date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 14 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3582, Red Rock, White Rock, and Paragon Claims

J. Walter Duncan, Jr.

San Juan County, Utah

Uranium

M. H. Salsbury, Mining Engineer
Bureau of Mines

T. E. Mullens, Geologist
Geological Survey

March 2, 1955

Reviewed by
DMEA OPERATING COMMITTEE
3-18-55

DMEA 3582

RED ROCK, WHITE ROCK, AND PARAGON CLAIMS
J. WALTER DUNCAN, JR.
SAN JUAN COUNTY, UTAH

Summary, Conclusions, and Recommendations

By M. H. Salsbury
Mining Engineer
Bureau of Mines

T. E. Mullens
Geologist
Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE
3-18-55
(date)

DMEA 3582

RED ROCK, WHITE ROCK,
AND PARAGON CLAIMS
J. WALTER DUNCAN, JR.
SAN JUAN COUNTY, UTAH

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By M. H. Salsbury and T. E. Mullens

An application has been made to the Defense Minerals Exploration Administration for Government assistance in exploration of uranium claims in San Juan County, Utah, which are under lease to J. Walter Duncan, Jr., doing business as the Walter Duncan Mining Company, Box 1468, Cortez, Colorado. Plug-bit and core drilling exploration is proposed at an estimated cost of $92,200.00, for 25,500 feet of drilling in 45 holes averaging 566 feet in depth. Government participation at 75 percent would be $69,150.00.

A field examination was made on January 25, 1955, and an additional visit was made earlier by Geological Survey personnel.

The claims are on a mesa south of and overlooking Lisbon Valley, 44 miles by road from Monticello, Utah. They consist of two groups leased from different owners. Ownership, based on locations, appears to be valid, subject to agreements effected or to be effected on several claim conflicts.

The property is on the southwest or upthrow side of the Lisbon Valley fault. The basal 50 to 200 feet of the Wingate sandstone is exposed on the claims. This is underlain by the Chinle formation of upper Triassic age which is exposed a few hundred feet north of the property. The Chinle is about 400 feet thick and rests unconformably on the Cutler formation of Permian age.

The known ore deposits of the area are contained in an ill-defined basal member of the Chinle that is probably equivalent to the Moss Back member of the Chinle to the west. This member has been explored by rim workings north and northwest of the property, and by drilling in two areas east of the property where two substantial ore bodies have been outlined. One of these, at the Continental Uranium Company's mine just east of the applicant's claims currently is producing an estimated 1,000 tons a month.

While the basal part of the Chinle is not known to contain ore on the applicant's property, significant ore deposits are known to exist on nearby properties, and projection of known ore trends suggests that it merits exploration.

A revised plug-bit and core drilling program in three phases has been submitted by the applicant as the result of a field conference, and the examining team recommends approval of a short-form contract calling for 23,716 feet of plug-bit and 1,784 feet of core drilling at an estimated cost of $81,738.46. Government participation at 75 percent will be $61,303.85.

A small additional acreage known at the Patterson fraction, now controlled by the applicant, should be included in the application to protect the Government's interest.

DMEA 3582

RED ROCK, WHITE ROCK, AND PARAGON CLAIMS
J. WALTER DUNCAN, JR.
SAN JUAN COUNTY, UTAH

Engineering Report

By M. H. Salsbury
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
3-18-55
(0380)

DMEA 3582

RED ROCK, WHITE ROCK,
AND PARAGON CLAIMS
J. WALTER DUNCAN, JR.
SAN JUAN COUNTY, UTAH

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ILLUSTRATIONS

Figure — Follows page

1. Location Map, J. Walter Duncan, Jr., Red Rock, White Rock, and Paragon claims, (Uranium) San Juan County, Utah..... 2
2. Map showing geologic setting of the Walter Duncan Company mining claims, Lisbon Valley area, San Juan County, Utah..... *
3. Claim Map showing location of proposed drill holes on the Walter Duncan Company mining claims, Lisbon Valley area, San Juan County, Utah..... *

* See figure with geologic report.

DMEA 3582

RED ROCK, WHITE ROCK, AND PARAGON CLAIMS J. WALTER DUNCAN, JR. SAN JUAN COUNTY, UTAH

ENGINEERING REPORT

By M. H. Salsbury

INTRODUCTION

Application has been made to the Defense Minerals Exploration Administration for Government assistance in exploration of uranium claims in San Juan County, Utah, under lease to J. Walter Duncan, Jr., doing business as the Walter Duncan Mining Company, Box 1468, Cortez, Colorado. The applicant proposed a plug-bit and core drilling program at an estimated cost of $92,200.00 for 25,500 feet of drilling in 45 holes averaging 566 feet in depth. Government participation at 75 percent would be $69,150.00.

A field examination was made on January 25, 1955 by M. H. Salsbury representing the Bureau of Mines, accompanied by W. P. Williams of the Geological Survey, and Charles R. Butler, the applicant's manager. The property had been visited previously by field personnel of the Geological Survey.

ACKNOWLEDGEMENTS

Data on the property was furnished by the applicant and information on the area was available from Geological Survey sources. Ivan Fisk, field geologist for the Atomic Energy Commission, was consulted by Geological Survey representatives. Production figures on nearby properties were obtained from Commission records.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Red Rock, White Rock, and Paragon claims are in secs. 34 and 35, T. 30 S., R. 25 E., Salt Lake meridian, San Juan County, Utah, (figure 1). The property is at an elevation of about 7,200 feet, occupying a dip-slope surface 300 to 400 feet southwest of an escarpment over looking Lisbon Valley. Erosion has formed only a shallow drainage pattern and most of the claim area is easily accessible.

The climate of the region is hot in summer and moderately severe in winter with low total precipitation, but subject to severe storms of short duration at any season. Year around operations are feasible both underground and on the surface, although surface conditions are not favorable continuously through the winter and early spring.

The property is 22 miles by a good access road running southwest from a road junction with Utah State Highway 160, 22 miles north of Monticello, Utah, or 35 miles south of Moab, Utah, the nearest towns. It is 170 miles over surfaced highways from Grand Junction, Colorado, the nearest major source of mining supplies. There is a uranium ore buying station and treatment plant at Monticello.

There is an ample supply of firewood for domestic use in the pinon-pine cover on the property, and limited supplies of domestic and drilling water are developed in Lisbon Valley within 5 miles of the claims. In dry seasons water must be hauled as much as 15 miles. There are no sources of electric power in the area, and gasoline or diesel-powered equipment is used.

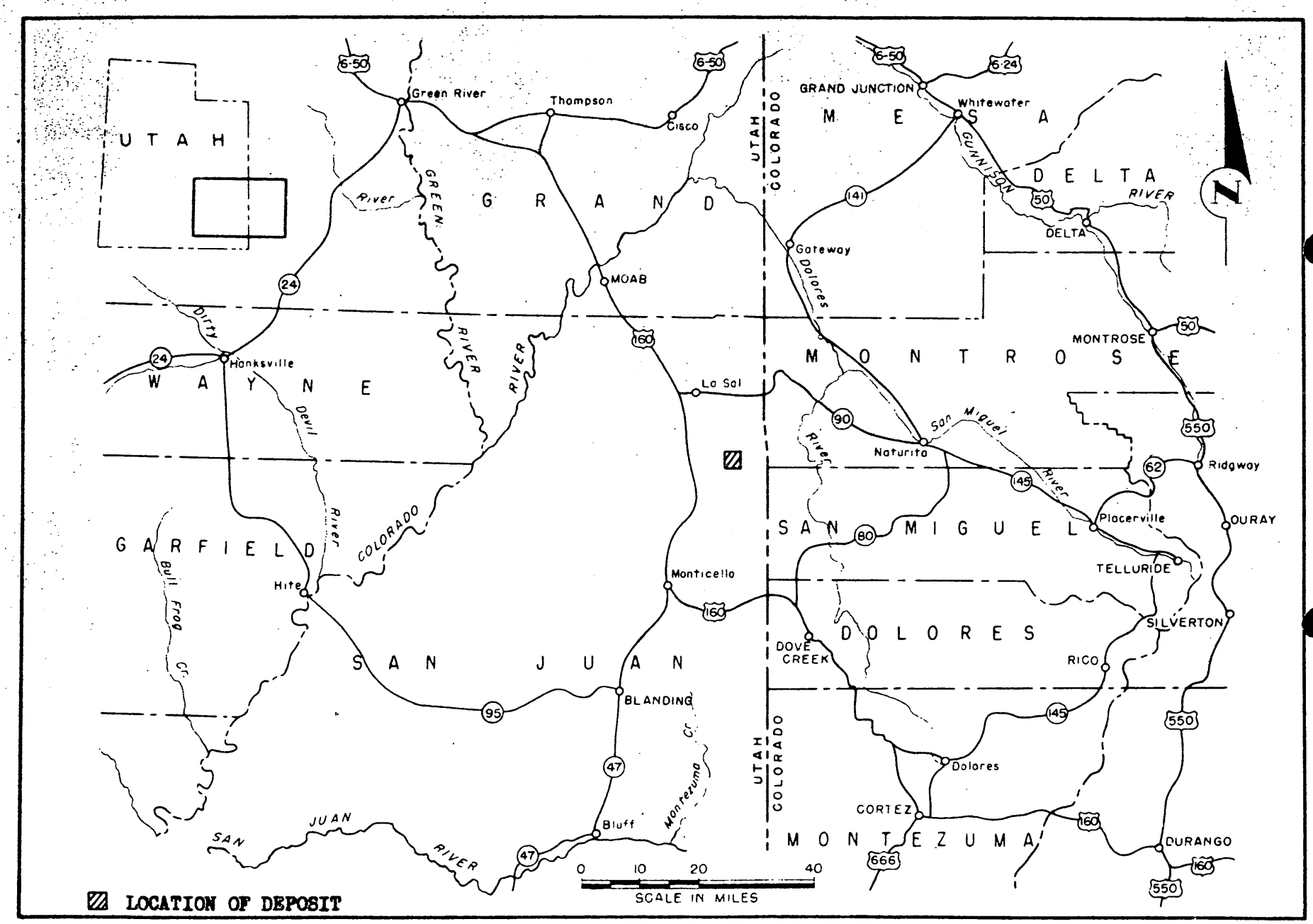

FIGURE 1 - LOCATION MAP, J. WALTER DUNCAN, JR., RED ROCK, WHITE ROCK AND PARAGON CLAIMS (URANIUM), SAN JUAN COUNTY, UTAH. (DMEA 3582)

LABOR AND LIVING CONDITIONS

The district is too remote for personnel to commute conveniently from the nearest towns and house trailers and cabins are provided for employees. There is one cabin on the claims now occupied by a drilling crew, and a house trailer in Lisbon Valley is available for supervisory personnel.

HISTORY, PRODUCTION, AND OWNERSHIP

The Chinle outcrops on the southwest side of Dry Valley were found after World War II, and mining operations were carried on here at the Divide and Service Berry claims. Activity was limited until drilling exploration by the Continental Uranium Company disclosed a substantial ore body below the valley floor, and a mining operation was started which is currently producing about 1,000 tons of ore averaging 0.49 percent U_3O_8 and 0.64 percent V_2O_5 per month. Most of the claims in the area were located in 1953. There has been no recent mining activity in the immediate vicinity other than the Continental Uranium Company's operation.

Production figures on nearby properties were furnished by the Atomic Energy Commission, covering the period 1948 through November 1954 and are as follows:

Mine	Dry tons	U_3O_8 percent	V_2O_5 percent	U_3O_8 pounds	V_2O_5 pounds
Service Berry	395.42	0.25	0.60	2,002.04	4,740.12
Divide and Divide No.1	112.77	0.23	0.77	524.62	1,747.28
Continental Uranium Co.	5,515.35	0.49	0.64	53,711.58	70,971.64

The property which is included in the application consists of 15 claims in secs. 34 and 35, T. 30 S., R. 25 E., Salt Lake meridian,

(figs. 2 and 3 with the geologic report). They are on ground covered by oil and gas leases. Three claims, Paragon Nos. 5, 7 and 8, are part of a group which was located by Quentin S. Bullock, Box 322, Bryan, Texas and date from August 18 and November 6, 1953, when the original locations were made. Lease applications under the Domestic Uranium Program Circular No. 7 were posted on the claims and filed, later withdrawn, and amended locations under Public Law 585 were recorded on November 4, 1954, in Book 223, pages 517 and 518. All location and recording procedures appear to have been in order.

The Walter Duncan Mining Company has a lease from Bullock providing for a 15 percent royalty on all returns except production and haulage allowances, with a payment of $50.00 per acre advance royalty required. The lessees are required to drill at least 1 hole per 15 acres in the first year dating from validation by the Atomic Energy Commission, and do $100.00 per claim assessment work yearly for the life of the lease, which is to run for the period of an Atomic Energy Commission lease under Circular No. 7. A further provision is that all parties agree to execute instruments to achieve full intent of the lease, if validation under Circular No. 7 is not completed.

The remaining twelve claims are part of a larger group which have been leased from G. O. Patterson, Lyle Francis, and Rupert Jenkins of Moab, Utah, and Floyd B. Jenkins and Frank L. Seymour of Grand Junction, Colorado. Mr. Seymour has acted for the other partners in certain matters and it is assumed he has power of attorney from them. However, no statement to this effect has been made.

The locations on the six Red Rock claims, Nos. 1 to 6, date from March 19, 1954 and are recorded in Book 23, pages 26 to 29. The four White Rock claims date from February 18, 1954, when they were recorded in Book 55, pages 493 and 494. The four Red Rock extension claims were located later to cover small areas of open ground which were discovered during a survey of the property. Mr. Butler states that afterwards, it was found that one of the extension claims, Red Rock No. 3 east extension, had not been necessary because there was no open ground where it was staked. The effective acreage of the other three is small.

The lease on the Red Rock and White Rock claims held by the applicants, dates from April 22, 1954, runs for the period of an Atomic Energy Commission lease under Circular No. 7 and is somewhat similar to the lease on the Paragon group. The royalty rate is 15 percent of all payments except haulage and development allowances, and provides for $6,333.33 advance royalty on execution of the lease, and a total advance royalty of $1,000.00 per acre due when the claims are validated by the Atomic Energy Commission. All parties agree to execute instruments to achieve full intent of the lease if validation by the Atomic Energy Commission is not required.

All location and recording procedures on the Red Rock and White Rock claims appear to have been in order, including withdrawals of Atomic Energy Commission lease applications, recorded on December 4, 1954 in Book 243, page 254, and amended locations under Public Law 585, recorded on December 8, 1954, in Book 247, pages 441 to 446, and pages 458 to 460.

All of the claims listed in the DMEA application, as well as a number of other claims, are included in the two leases with the exception of the Red Rock No. 6, and the Red Rock extension claims, which were left out of the original lease from Patterson. Mr. Butler has forwarded to the Bureau of Mines an unsigned copy of an amendment of this lease covering these claims, and states that four copies had been sent to the DMEA Washington office. In the lease from Bullock on the Paragon claims, one claim necessary to the DMEA project, Paragon No. 8, was added later to "Exhibit A" attached to the lease, making six claims in all, but in the body of the lease, the number of claims is stated as five. An amendment to cover this may be advisable.

Agreements to make the provisions of the leases effective are, of course, necessary because dates for fulfilling exploration requirements are tied to the dates of validation of Atomic Energy Commission leases which were never issued. The applicant has forwarded to the DMEA Field Team, Region III, copies of an agreement dated February 2, 1955 and signed by Frank L. Seymour, representing the owners of the Red Rock and White Rock claims, which makes the final date for fulfilling exploration requirements January 1, 1956. A similar agreement by the owner of the Paragon claims has not been made to date, so far as the examining engineer is aware.

There are a number of claim conflicts on the property. Prior locations in the area adjoining the applicant's property on the north, are also owned by Patterson et al, but are leased to another company, The Apache Uranium Corporation. These claims cover the rim exposures of the potential ore horizon.

Patterson has an interest in other ground south and east of the DMEA block which is in partial conflict with claims owned by the National Lead Company. These conflicts are in process of being resolved by compromise, according to Mr. Butler, but do not affect the DMEA block except for a strip of about 13 acres along the south boundary of White Rock Nos. 2 and 3, that, under the proposed agreement, will be relinquished to Patterson, et al. Mr. Butler expects that an agreement to this effect will be signed soon and he will forward the details.

Because of the various conflicts, and inaccurate surveys at the time of location, none of the claims in the proposed project are full size and the effective acreage is, roughly, 100 acres. The area has been resurveyed recently, and a revised description of the proposed project block by metes and bounds, is attached to this report (exhibit A).

It was not feasible to make a comprehensive check of claim locations. Several claim corners and discovery monuments were examined and locations appear to conform with requirements of the Utah mining laws as currently interpreted on the Colorado Plateau.

The priority relationship of the various groups of claims appears to be as follows, listing the oldest locations first:

(1) Pitchblende and Yellowjacket claims north and east of DMEA block (owned by G. O. Patterson, et al, and leased to the Apache Mining Corporation).

(2) Red Rock claims in DMEA block (located March 19, 1953, owned by Patterson, et al).

(3) Western Mines South claims, east of DMEA block (located March 22, 1953, owned by Continental Uranium Corporation). Claims are not shown on map, but conflict with applicant's ground in part and with school section No. 2. Butler states conflict was settled by compromise.

(4) National Lead Company claims south of DMEA block.

(5) Paragon claims in DMEA block (located August 18, 1953 and November 6, 1953, owned by Quentin S. Bullock). Overlap of Paragon No. 7 claim in school section No. 2 is not valid.

(6) White Rock claims in DMEA block (located February 8, 1954, owned by Patterson, et al). Section No. 2, on which Paragon No. 7 and Red Rock No. 6 claims overlap, is a Utah school section under lease to Continental Uranium Company.

Mr. Patterson was contacted at his home in Dry Valley and verified the location of the boundary between the claims leased to the applicant and those leased to the Apache Mining Company, as shown on the applicant's map. He also stated that the applicant was not in default on lease requirements in any respect.

Title to the proposed exploration area appears to be satisfactory, subject to the following requirements:

(1) Verification of an agreement with the National Lead Company.

(2) A statement that the Apache Mining Corporation recognized the boundary between their lease from Patterson and the applicant's lease.

(3) A statement from the Continental Uranium Company on compromise agreements involving the applicant's leases.

A small block of open ground north of the Red Rock No. 6 was recently covered by a new location, the Patterson Fraction claim which has been leased to the applicant, according to a letter dated February 2, 1955, signed by Frank L. Seymour. It has not been included in the proposed exploration block, but it would be advisable to do so to protect exploration planned in the corner of Red Rock No. 6 claim.

Both leases covering the proposed exploration area provide that the lessors will sign Consents to Lien.

DESCRIPTION OF THE DEPOSITS

The known uranium deposits of the area occur in the basal Chinle formation on the southwest flank of the Lisbon Valley anticline and near the Lisbon Valley fault on the southwest or upthrown side (fig. 2 with the geologic report). These characteristics appear to be common to most Lisbon Valley ore bodies, including the Continental Uranium Company operation immediately east of the applicant's property.

The ore occurs in lenticular sandstones and mudstone conglomerates containing an abundance of pyrite and carbonaceous matter, which are found in the basal 40 feet of the Triassic Chinle formation immediately overlying the Cutler formation.

Two substantial deposits elongated along an eastwest trend, have been outlined by drilling, and are being mined on the Continental Uranium Company property in section 36, east of the applicant's ground. One of those is 750 feet by 150 feet in lateral dimension, averaging about 3 feet thick. The average content of ore mined to date is 0.49 percent U_3O_8 and 0.64 percent V_2O_5. The western limit of the second ore body has not been defined yet. The logical projection of this ore body would approach the Paragon and Red Rock claims.

One of the two small deposits on the Chinle outcrop north of the applicant's claims, the Service Berry mine, was visited by the examining team. Narrow ore leads a few inches thick and not over drift-width have been followed as far as 100 feet before pinching out. In one tunnel, two small exposures left near the face of the longest drift showed substantial radioactivity, but were not of mineable size. These minor occurrences are not necessarily on a continuation of the Continental Uranium ore trend. They may mark marginal mineralization along the north boundary of an ore trend.

Another deposit has recently been partially blocked out east of the Continental Uranium Company mine. This is on the Williams-Noble claims and is reported to contain in excess of 10,000 tons of ore averaging more than .20 percent U_3O_8. No ore has been mined here to date.

MINEABLE ORE RESERVES

No ore reserves have been developed on the property, or around the Service Berry and Divide workings to the north. The ore reserve of the Continental Uranium Company is reported as being in excess of 75,000 tons which is entirely possible, based on the size of the ore bodies as outlined to date.

PRESENT STATUS

Exploration and Development

No work has been done on the DMEA project block. The applicants have drilled hole BI-1 on ground they control west of the White Rock No. 1, hole BI-4 just north of the Red Rock No. 3, and hole D-5 on school section 2 just south of Paragon No. 7 claim (fig. 3 with the geologic report). No mineralization was encountered in any hole, but the core of hole BI-1 inspected by the examining team, showed 12 feet of favorable sandstone at the bottom, and hole D-5, drilled for Continental Uranium Company, cut 20 feet of favorable sandstone. Specimens of this rock having abundant carbonaceous content were shown to the examining team.

Eight other holes were drilled east and south of the applicant's property by the Continental Uranium Company in an irregular pattern

presumably on the possible extension of their westerly ore body (fig. 3 with the geologic report). Mr. Butler does not have detailed information on them, but states that, so far as he knows, they were barren. The drill pattern used was not adequate and, if the holes are barren, they would appear to establish only that the possible ore trend is north of the drilled area.

Mining and Milling Equipment and other Facilities

There is a cabin on the property suitable for living quarters for two or three men, which is occupied by the applicant's drill crew. A company-owned house trailer is also available.

The applicant owns a Mayhew drill-rig which can be used for rotary dry or wet drilling, or for diamond core drilling. Service trucks and auxiliary equipment are available, and other mining equipment is now in service at properties being operated by the Walter Duncan Mining Company.

PROJECT PROPOSALS WITH COSTS

The applicant originally proposed a drilling program in two phases calling for 42 holes and 25,500 feet of plug-bit and core drilling at an estimated cost of $92,200.00. Government participation at 75 percent would be $69,150.00. At a field conference with the DMEA examining team, it was pointed out that the proposed drilling was actually in three phases because the applicant's first phase was divided in two parts, the second of which was based on drilling results in the first.

A revised proposal has been submitted superseding paragraph 5(B) of form MF-103, Application for Aid as follows:

Phase 1---Drill 14 exploratory test holes as shown on Plate 2. (Marked "A"). These holes are approximately 400' apart on lines perpendicular to the assumed ore trend. The lines are about 2000' apart. All holes in Phase 1 will be drilled with plug-bits and will be cored for the bottom 40'. Total footage for Phase 1 is 8,650'.

Phase 2---Drill 11 exploratory test holes as shown on Plate 2. (Marked "B"). These holes are approximately 400' apart and will serve to cut the drill lines to 1,000' distances. The location of Phase 2 holes will be subject to changes based on an evaluation of Phase 1 drilling. Total footage for Phase 2 is 6,350'.

Phase 3---Drill approximately 17 offset holes to further explore favorable areas delineated by Phase 1 and Phase 2 drilling. The locations of these holes will be determined by a geologic evaluation of the Phase 1 and 2 drilling. Total footage for Phase 3 is estimated at 10,500'.

On the applicant's revised Plate 2, the hole locations have been moved, so that no hole is closer than 100 feet to any property boundary. Recalculated depths to the potential ore horizon reduced the number of holes in Phase III from 20 to 17, the total drilling footage remaining the same.

The examining team concurs in the revised plan, with the stipulation that Phases II and III will be dependent on the results of Phase I drilling, and will require prior written authorization by the DMEA Field Team, Region III.

The actual drilling costs in the applicant's estimate are reasonable, but many of the other items are out of proportion. The estimated cost of $2.63 per foot for actual drilling compares well with current Geological Survey contracts, and is somewhat less than the figure used in some recent DMEA contracts, and the bid made by Minerals Engineering Company for the work. Geological services and supervision were computed on an 18-month basis, while actual drilling time was only 13 months. The additional services for surveying estimated to be required for the equivalent of 5 months appear to be excessive.

The applicant plans to use his own equipment, drill crew, and technical personnel. Mr. Butler is a competent geologist, and may devote full time to the project, acting as both geologist and supervisor. This does not affect the cost figures, however, because allowance is made for a geologist and a supervisor each on a half-time basis.

The estimated time for completion is 15 months, or at the rate of about 1,700 feet of drilling per month. An allowance for contingencies is made to cover unforeseen costs in the proposed work. In the case of a project where the drilling is to be done by a contractor, this is not usually done, as it is assumed that the contract price will include this item. Following is a detailed estimate:

Phase I

(estimated time for completion - 5 months)

Independent contracts			
Move in and move out bulldozer	$ 100.00		
Bulldozing access roads and 14 drill sites - 56 hours at $12.00 per hour	672.00		
Total independent contracts			$ 772.00
Labor, supervision, and technical services			
Labor			
Driller, wages and footage bonus - 5 months at $750.00 per month	3,750.00		
Driller's helper at $1.50 per hour, time and one-half over 40 hours per week - 21 weeks at $78.00 per week	1,638.00		
Water truck driver - 21 weeks at $78.00 per week	1,638.00		
Total labor		7,026.00	
Supervision			
Project supervisor, one-half time - 5 months at $622.00 per month	1,555.00		
Total supervision		1,555.00	
Technical services			
Geologist, one-half time - 5 months at $600.00 per month	1,500.00		

Surveyor, equivalent of one month - at $600.00 per month	$ 600.00		
Surveyor's helper equivalent of one month at $300.00 per month	300.00		
Total technical services		2,400.00	
Total labor, supervision and technical services			$10,981.00

Operating materials and supplies

Drilling supplies as follows estimated for entire project (list in applicant's estimate)			
160 - 2 3/8" OD by 10-foot drill pipe - at $37.50 per foot	6,000.00		
2 - 4 1/4" diamond drill bits	2,000.00		
3 - 4 3/4" Hawthorne adopters	175.00		
3 - 4 3/4" rock-bit adopters	90.00		
75 - 4 3/4" Hawthorne blades	1,000.00		
150 - 4 3/4" rock-bits	8,000.00		
3 - core barrel assemblies	1,600.00		
150 sacks silvocel at $4.00	600.00		
150 sacks drilling mud at $2.50	375.00		
33.33 per cent of	19,840.00	= 6,613.33	
Fuel			
Gasoline, oil and replacements on water truck - 125 days at $10.00 per day	1,250.00		
Gasoline and oil for drilling - 125 days at $8.00 per day	1,000.00		
Gasoline and oil for 3-KVA generator plant - 5 months at $40.00 per month	200.00		
Gas, oil, and repairs on 1/2-ton pickup - 5 months at $50.00 per month	250.00		
Gas, oil, and repairs on 3/4-ton pickup - 5 months at $50.00 per month	250.00		
Butane for heating - 5 months	66.66		
Total operating materials and supplies			9,629.99

Operating equipment

Purchased - none
Rented - none
Depreciation - on 60-month basis

Item	New cost
1954 - R192 International truck	5,497.79
Mayhew model 1000 drill-rig	16,283.55
Diamond drill-bit handling tools	540.00
1954 - F750 Ford truck with tank	5,223.42
1952 - 3/4-ton pickup	1,700.00
1954 - 1/2-ton pickup	1,800.00
O'Keefe and Merrit 3-KVA generator set	535.00
House trailer	950.00

600 - A Babbel counter	$ 350.00		
2 700-foot probes	400.00		
Total cost equipment	33,279.76		
Depreciation per month - 60-month basis	554.66		
Depreciation for 5 months		2,773.30	
Total operating equipment			$ 2,773.30

Initial rehabilitation and repairs

None
(proposed repairs to cabin have already been done).

New buildings and improvements

None

Miscellaneous

Repairs to equipment			
Welding materials for drill rig maintenance	115.00		
One-third of cost of drill equipment maintenance as per applicant's list - 1/3 of $2,015.00	671.67		
Total repairs to equipment		786.67	
Sampling and analysis			
50 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ at $5.00 each	250.00		
Total sampling and analyses		250.00	
Accounting			
5 months at $100.00 per month	500.00		
Total accounting		500.00	
Payroll taxes and insurance at 8.5 percent of $10,981.00	933.38		
Total payroll taxes and insurance		933.38	
Total miscellaneous			2,470.05

Contingencies

Delays caused by weather or breakdowns, possible expense caused by loss of drill rods, bits, or casing, etc. - 5 percent of $26,626.34	1,331.32		
Total contingencies		1,331.32	1,331.32
Total Phase I			$27,957.66

Distribution of Phase I costs

Plug drilling (8,045 feet)	24,832.18		
Core drilling (605 feet)	2,875.48		
Chemical analyses (50 samples)	250.00		$27,957.66
Calculated cost per foot - plug drilling	24,832.18 / 8,045	or $3.09	
Calculated cost per foot - core drilling	2,875.48 / 605	or $4.75	

Phase II

(estimated time for completion - 3 3/4 months)

Independent contracts			
Move in and move out bulldozer	$ 100.00		
Bulldozing 11 drill sites - 44 hours at $12.00 per hour	528.00		
Total independent contracts			$ 628.00
Labor, supervision and technical services			
Labor - at rates in phase I			
Driller - 3 3/4 months at $750.00 per month	2,812.50		
Driller's helper - 16 weeks at $78.00 per week	1,248.00		
Water truck driver - 16 weeks at $78.00 per week	1,248.00		
Total labor		5,308.50	
Supervision			
Project supervisor - one-half time - 3 3/4 months at $622.00 per month	1,166.25		
Total supervision		1,166.25	
Technical services			
Geologist - one-half time - 3 3/4 months at $600.00 per month	1,125.00		
Surveyor, equivalent of 3/4 month - at $600.00 per month	450.00		
Surveyor's helper, equivalent of 3/4 month - at $300.00 per month	225.00		
Total technical services		1,800.00	
Total labor, supervision, and technical services			8,274.75
Operating materials and supplies			
Drilling supplies - 25 percent of total listed supplies in phase I - 25 percent of $19,840.00	4,960.00		
Fuel			
Gasoline, oil, and replacements on water truck for 94 days at $10.00 per day	940.00		
Gasoline and oil for 3-KVA generator plant - 3 3/4 months at $40.00 per month	161.25		
Gasoline and oil for drill rig - 94 days at $8.00 per day	752.00		
Gas, oil, and replacements on 1 3/4-ton pickup - 3 3/4 months at $50.00 per month and also for 1 1/2-ton pickup	375.00		
Butane for heating - 3 3/4 months	50.00		
Total operating materials and supplies			7,238.25

Operating equipment

Purchased - none			
Rental - none			
Depreciation			
Depreciation for 3 3/4 months at $554.66 per month as per list in Phase I	2,079.98		
Total operating equipment			$ 2,079.98

Initial rehabilitation and repairs

None

New buildings and improvements

None

Miscellaneous

Repairs to equipment			
Welding materials for drill rig maintenance	75.00		
Pro-rata share of cost of services and supplies for maintenance of drilling equipment as per applicant's estimate 25 percent of $2,015.00	503.75		
Total repairs to equipment		578.75	
Sampling and analysis			
36 chemcial analysis for U_3O_8, V_2O_5, and $CaCO_3$ at $5.00 each	180.00		
Total sampling and analysis		180.00	
Accounting			
3 3/4 months at $100.00 per month	375.00		
Total accounting		375.00	
Payroll taxes and insurance at 8.5 percent of $8,274.75	703.35		
Total payroll taxes and insurance		703.35	
Total miscellaneous			1,837.10

Contingencies

Delays caused by weather or breakdowns, extra expense caused by loss of drill rods, bits, or casing, etc., 5 percent of $20,058.08	1,002.90		
Total contingencies			1,002.90
Total Phase II			$21,060.98

Distribution of Phase II costs

Plug drilling (5,906 feet)	18,700.70		
Core drilling (444 feet)	2,180.28		
Chemical analyses (36 samples)	180.00		$21,060.98
Calculated cost per foot - plug drilling	18,700.70 / 5,906	or $3.17	
Calculated cost per foot - core drilling	2,180.28 / 444	or $4.91	

Phase III

(estimated time for completion - 6 1/4 months)

Independent contracts			
Move in and move out bulldozer	$ 100.00		
Bulldozing 17 drill sites - 68 hours at $12.00 per hour	816.00		
Total independent contracts			$ 916.00
Labor, supervision, and technical services			
Labor - at rates in previous phases			
Driller - 6 1/4 months at $750.00 per month	4,687.50		
Driller's helper - 27 weeks at $78.00 per week	2,106.00		
Water truck driver - 27 weeks at $78.00 per week	2,106.00		
Total labor		8,899.50	
Supervision			
Project supervisor, one-half time - 6 1/4 months at $622.00 per month	1,943.75		
Total supervision		1,943.75	
Technical services			
Geologist, one-half time - 6 1/4 months at $600.00 per month	1,875.00		
Surveyor, equivalent of 1 1/4 months - at $600.00 per month	750.00		
Surveyor's helper, equivalent of 1 1/4 months at $300.00 per month	325.00		
Total technical services		2,950.00	
Total labor, supervision, and technical services			$11,849.50
Operating materials and supplies			
Drilling supplies - 41.67 percent of cost of list of supplies in phase I -- 41.67 percent of $19,840.00	8,267.33		
Fuel			
Gasoline, oil and replacements on water truck - 156 days at $10.00 per day	1,560.00		
Gasoline and oil for drill rig - 156 days at $8.00 per day	1,248.00		
Gasoline and oil for 3-KVA generator plant - 6 1/4 months at $40.00 per month	250.00		
Gas, oil, and replacements on 1 1/2-ton pickup and 1 3/4-ton pickup for 6 1/4 months at $40.00 per month each	625.00		
Butane for heating - 6 1/4 months	88.34		
Total operating materials and supplies			$12,038.67

Operating equipment

Purchased - none			
Rented - none			
Depreciation			
Depreciation of equipment listed in Phase I for 6 1/4 months at $554.66 per month	$ 3,466.33		
Total depreciation		3,466.33	
Total operating equipment			$ 3,466.33

Initial rehabilitation and repairs

None

New buildings and improvements

None

Miscellaneous

Repairs to equipment			
Welding materials for drill maintenance	110.00		
Pro-rata share of cost of services and supplies for maintenance of drilling equipment as per applicant's estimate - 41.67 percent of $2,015.00	839.65		
Total repairs to equipment		949.65	
Sampling and analysis			
60 chemical analyses for U_3O_8, V_2O_5, and $CaCO_3$ at $5.00 each	300.00		
Total sampling and analysis		300.00	
Accounting			
6 1/4 months at $100.00 per month	625.00		
Total accounting		625.00	
Payroll taxes and insurance 8.5 percent of $11,849.50	1,007.21		
Total payroll taxes and insurance		1,007.21	
Total miscellaneous			2,881.86

Contingencies

Delays caused by weather or breakdowns, extra expense caused by loss of drill rods, bits, casing, etc., 5 percent of $31,152.36	1,557.62	
Total contingencies		1,557.62
Total Phase III		$32,709.98

Distribution of Phase III costs

Plug drilling (9,765 feet)	$28,943.60		
Core drilling (735 feet)	3,466.38		
Chemical analyses (60 samples)	300.00		$32,709.98
Calculated cost per foot - plug drilling	$\frac{28,943.60}{9,765}$	or $2.96	
Calculated cost per foot - core drilling	$\frac{3,466.38}{735}$	or $4.72	

SUMMARY OF ESTIMATED COSTS

Distribution - Phases

Item	Phase I drilling Plug 93 percent 8,045 feet	Phase I drilling Core 7 percent 605 feet	Phase II drilling Plug 93 percent 5,906 feet	Phase II drilling Core 7 percent 444 feet	Phase III drilling Plug 93 percent 9,765 feet	Phase III drilling Core 7 percent 735 feet	Totals
1. Independent contracts	$ 717.96	54.04	584.04	43.96	851.88	64.12	2,3[illegible]00
2. Labor, supervision and technical services	10,212.33	768.67	7,695.52	579.23	11,020.04	829.46	31,105.25
3. Operating materials and supplies (general)	4,967.74	373.92	3,740.46	281.54	6,210.77	467.48	
plug drilling supplies	3,030.30		2,272.50		3,787.50		
core drilling supplies		1,258.33		943.75		1,572.92	
4. Operating equipment	2,579.17	194.13	1,934.38	145.60	3,223.69	242.64	8,319.61
5. Miscellaneous (less chemical analyses)	2,086.85	133.20	1,541.10	116.00	2,401.13	180.73	6,459.01
6. Contingencies	1,238.13	93.19	932.70	70.20	1,448.59	109.03	3,891.84
Totals	$24,832.18	2,875.48	18,700.70	2,180.28	28,943.60	3,466.38	81,728.62

	Phase I Plug	Phase I Core	Phase II Plug	Phase II Core	Phase III Plug	Phase III Core
Calculated cost per foot - (less chemical analyses)	$3.09	$4.75	$3.17	$4.91	$2.96	$4.72

Total cost based on calculated footage costs:

Phase I

8,045 feet plug drilling at $3.09 per foot -	$24,859.05	
605 feet core drilling at $4.75 per foot -	2,873.75	
Chemical analyses - 50 samples at $5.00 each	250.00	
Total Phase I		$28,904.40

Phase II

5,906 feet plug drilling at $3.17 per foot -	$18,722.02	
444 feet core drilling at $4.91 per foot -	2,180.04	
Chemical analyses - 36 samples at $5.00 each	180.00	
Total Phase II		21,082.06

Phase III

9,765 feet plug drilling at $2.96 per foot -	$28,904.40	
735 feet core drilling at $4.72 per foot -	3,469.20	
Chemical analyses - 60 samples at $5.00 each	300.00	
Total Phase III		32,673.60
Total for project		81,738.46
Government participation at 75 percent		$61,303.85

PROPOSED FINANCING

The applicant proposed to furnish his share of the exploration cost in equipment, services, and cash. He offers financial statements for the Walter Duncan Mining Company and the Walter Duncan Drilling Company as proof of financial worth and gives three bank references.

CONCLUSIONS

The proposed exploration project is well located on a possible westerly extension of an ore trend that has been established by exploration and development of a substantial ore body, the western limit of which, as determined so far by drilling, is 1,200 feet from the project boundary. The possible occurrence of significant ore bodies on the applicant's property is based on this relationship. Ore bodies of

the type mined on the rim to the north are not of sufficient size or grade to justify the required exploration.

The applicant has an excellent operating record and performance under a previous DMEA contract was completely satisfactory.

A visit to the applicant's drill rig, which was in use on an adjoining property, left a very favorable impression of a very satisfactory operation with the examining team and the applicant's personnel are believed to be fully competent.

The estimated cost of the project, if carried through to completion, amounts to about $6,300.00 per claim, not counting the smaller fractional claims. This figure is high, inasmuch as none of the claims are full size, but not out of line, considering the depth to the ore horizon.

Following is an estimate of the production which would be necessary to return the cost of exploration and development, based on figures furnished by the Atomic Energy Commission. An operator could mine an ore body here through a 600-foot shaft, or through an incline driven from the rim, which would be a minimum of 1,000 feet long to reach the boundary of the property, and would require a right-of-way through other property. The following costs are based on a shaft operation:

Estimated return from ore averaging 0.40 percent U_3O_8 and 0.50 percent V_2O_5.

Gross return, not including initial production bonus or haulage allowance per ton		- $38.10
Costs	Per ton	
Mining charge	$22.00	
DMEA royalty	1.95	
Owner's royalty	5.12	
Total		29.07
Balance to apply to investment (rounded to)		$ 9.00

Initial investment:

Camp	$ 6,000.00
Machinery	10,000.00
Hoist, headframe, and ore bin	14,000.00
Shaft sinking (600 feet) at $175.00 per foot	105,000.00
Ventilation drill holes	20,000.00
Applicant's share of exploration cost rounded to	20,000.00
Total	$175,000.00
Initial production bonus on one group of claims (less royalties)	28,000.00
Balance to be paid from other ore returns	$147,000.00

Tonnage to return operator's investment - $\frac{\$147,000.00}{9.00}$ or 16,333 tons

Government's share of exploration cost rounded to	$ 61,500.00
Royalty on initial production bonus	1,750.00
Balance to be paid from royalty on other ore returns at the rate of $1.95 per ton	$ 59,750.00

Tonnage to return Government's expenditure - $\frac{\$59,750.00}{1.95}$ or 30,641 tons

There is a reasonable possibility of finding this tonnage on the applicant's property.

Because of the shape and position of the project block, it is possible that a large part of the ore which might be found by Government-assisted exploration would extend into adjoining ground in which the Government has no interest. Another possibility is that the ore trend might miss the project block completely. For these reasons, inclusion of adjoining ground in the project would be advantageous both to the applicant and the Government. Mr. Butler states that they have considered making such an arrangement with the National Lead Company and the Apache Mining Company, but were deterred by the concessions which would have been

necessary to make. While addition of the adjoining ground, at least, would enhance the value of the project, it is not absolutely essential, except for the Patterson fraction which should be added.

RECOMMENDATIONS

On the assumption that only the Patterson fraction will be added to the DMEA block, it is recommended that a short-form contract calling for 23,716 feet of plug-bit drilling and 1,784 feet of core drilling in three phases be approved at a total estimated cost of $81,738.46. Government participation at 75 percent would be $61,303.85. Although the applicant's estimate did not segregate plug-bit and core drilling costs, a summary giving them separately is included in this report for use in preparing a contract if desired.

It is recommended that the following provisions be made part of the contract:

Description of the Work

(Refer to figure 3 with the geologic report which is suggested for attachment to the contract).

Phase I - A maximum of 14 holes and 8,650 feet of plug-bit and and core drilling in fences 2,000 feet apart at locations marked "A" shown on figure 3. Holes are to be on a minimum of 400-foot centers and no hole is to be drilled closer than 150 feet to any hole previously drilled on the adjoining property.

Phase II - A maximum of 11 holes and 6,350 feet of plug-bit and core drilling in fences to be located at intermediate points between rows of holes in Stage I. Holes are to be on a minimum of 400-foot centers and no hole is to be closer than 400 feet to any previously drilled hole. The tentative locations of the holes are marked "B" on figure 3. Hole locations will be based on the results of Stage I, must be satisfactory to the Government and require prior written authorization by the DMEA Field Team, Region III.

Phase III - A maximum of 17 holes and 10,500 feet of plug-bit and core drilling in offset holes to explore further any

mineralization or favorable geologic conditions found in Stages I or II. Holes are to be on a minimum of 100-foot centers and no hole is to be closer than 100 feet to any previously drilled hole. Hole locations are to be satisfactory to the Government and prior written authorization by the DMEA Field Team, Region III will be required.

Drilling Summary

Computed Drilling Depths

Phase I

Hole location coordinates N	E	Depth of hole (in feet) plugged	cored	Total
59,770	137,635	643	40	683
59,750	136,135	703	40	743
60,055	136,280	645	40	685
60,355	136,425	587	40	627
60,655	136,555	523	40	563
61,240	134,625	590	40	630
61,480	134,750	543	40	583
61,730	134,880	514	40	554
61,290	132,420	635	40	675
61,590	132,600	590	40	630
61,870	132,780	530	40	570
62,130	132,940	480	40	520
61,830	130,690	535	40	575
62,115	130,900	465	40	505
Estimated footage 14 holes		7,983	560	8,543
Maximum (figure for contract)		8,045	605	8,650
Average depth		$\frac{8,543}{14}$ = 610.2 feet		

Phase II

59,775	137,050	661	40	701
60,100	137,255	590	40	630
61,015	135,585	589	40	629
61,250	135,755	501	40	541
61,265	133,550	567	40	607
61,530	133,685	518	40	558
61,795	133,815	475	40	515
62,065	133,950	450	40	490
61,505	131,380	540	40	580
61,860	131,520	485	40	525
62,115	131,900	470	40	510
Estimated footage 11 holes		5,846	440	6,286
Maximum footages for contract		5,906	444	6,350
Average depth		$\frac{6,286}{11}$ = 571.5 feet		

Phase III

Seventeen holes averaging 617.5 feet deep or a total of 9,765 feet of plug-bit drilling and 735 feet of core drilling.

Note: Estimated drilling depths in this summary are based on a transit survey by the applicant, using accurate collar elevations, and drilling depths computed on the basis of the best available information on the depth and attitude of the potential ore horizon. Actual drilling depths may vary, and the maximum footage allowed provides for 171 feet more than the calculated total.

Holes will be plug drilled to a point approximately 40 feet above the base of the Chinle formation and cored the remaining distance through the Chinle formation, holes being bottomed in and penetrating a maximum of 5 feet of the underlying Cutler formation.

Cutting samples representing 10-foot plug-bit drilling intervals, or sludge samples from core drilling corresponding to each coring interval, will be taken, if required by the Geological Survey representative, but may be discarded after inspection by him, except that sludge samples corresponding to any coring interval in which core recovery was unsatisfactory will be retained.

All core will be marked and stored in core boxes until it can be examined and released by a DMEA representative, after which all but mineralized portions may be discarded.

Sections of the core in which uranium and/or vanadium mineralization is indicated radiometrically or visually will be split and one-half sampled in intervals representing not more than 1 foot of core, to be analyzed chemically for U_3O_8 and V_2O_5 and $CaCO_3$. The other half will

be delivered to the nearest Geological Survey office for the use of the Government. Analysis of 50 samples in Stage I, 36 samples in Stage II, and 60 samples in Stage III will be allowed.

A project engineer-geologist and a supervisor-geologist will be employed, while drilling is in progress, each on a half-time basis. Their services will include daily examination and logging of the drill core, hole probing with company-owned instruments, determination of drilling depths, and preparation of progress reports and maps.

A surveyor and helper will be employed a maximum of 3 months total time for necessary surveying, including location of drill sites.

No uncompleted holes will be paid for, and no hole should be started unless there remains enough footage to complete it without exceeding contract maximums.

Claims for reimbursement will be supported by certified drill and geologic logs, and certified copies of analytical returns.

While inclusion of additional ground in the project would be desirable, it appears that to do so would involve complications into which the applicant is reluctant to enter. The small acreage covered by the Patterson fraction can and should be added to the project. This would not require any changes in Phase I drilling plans.

Copies of some or all of the following instruments may be considered necessary by the DMEA legal division.

(1) Statement from Quentin S. Bullock setting a definite date for completion of required exploration. (Similar statement has been received from Patterson, et al).

(2) Consents to Lien for both groups of claims.

(3) Statement including effective acreage of Patterson fraction in the DMEA project.

(4) Power of Attorney's from other owners of the Red Rock and White Rock claims designating Frank L. Seymour as their agent. (This may have been forwarded).

(5) Copies of compromise agreements or statements otherwise recognizing the applicant's boundaries from the National Lead Company, Apache Uranium Corporation, and the Continental Uranium Company.

EXHIBIT "A"

Amended Legal Description of DMEA Block

This block is in Sections 34 and 35, T. 30 S., R. 25 E., SLM, San Juan County, Utah.

Beginning at a point 1200' West of the SE corner of Section 35, thence N1°E155' to the NE corner of Red Rock #6, thence N49°W1185' to the NE corner of Red Rock #5, thence 290'N57°32'W to the SE corner of Pitchblende Extension #5, thence N53°42'W 1275', thence N56°53'W360' to the SE corner of Pitchblende Extension #4, thence N70°13'W 1330' to the SE corner of Pitchblende Extension #3, thence N84°30'W900' to the SE corner of Pitchblende Extension #2, thence 1500' West to the SE corner of Pitchblende Extension #1, thence 742' West, thence S68°14'W425' to the SW corner of Service Berry #3, thence S17°31'E350', thence N87°43'E 428' to the SE corner of White Rock #1, thence S5°57'W252' to the SW corner of White Rock #2, thence S77°16'E1611' to the SW corner of White Rock #3, thence N88°46'E1464' to the SW corner of White Rock #4, thence East 50', thence south 20', thence West 1060', thence S59°30'E710', thence S87°30'W260' to the NW corner of Paragon #8, thence S49°15'E590' to the SW corner of Paragon #8, thence S6°15'E748' along the west end lines of Paragon 5 and Paragon 7 to the Section Line between Section 35 and Section 2, thence East 1700' to point of beginning.

IN REPLY REFER

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

TRANSMITTED

MAR 11 1955

Defense Minerals Exploration Administration

March 4, 1955

DMEA
Date Rec'd.
MAR 7
BUREAU
Denver

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3582 (uranium), Walter Duncan Mining Company, Red Rock claims, et al, San Juan County, Utah

Enclosed are 10 copies of a geologic report by G. W. Weir, T. E. Mullens, and W. F. Williams, U. S. Geological Survey, covering the above subject application.

The property is located on the southwestern flank of the Lisbon Valley anticline about one-half mile southwest of the Lisbon Valley fault. Recent exploration in the area has resulted in the discovery of very significant deposits of uranium ore in the basal part of the Chinle formation. These deposits are described in the geologic report.

Although no outcrops of the ore bearing horizon exist on the property, very convincing evidence is presented in the report to support the conclusion that exploration is warranted on the subject property.

The program recommended by the field examiners is the same as the revised program submitted by the applicant; it appears to be well adapted to the known geologic conditions. Many of the proposed holes are located within 100 feet of the boundaries of the area included in the application. Should this distance be considered too small to adequately protect the Government's interest in any ore discovered by drilling, the proposed locations of these holes can be changed slightly without, effecting adversely the character of the proposed exploration program.

Nine extra copies of each of three illustrations from the geologic report are enclosed also.

The Survey copy of the brochure will be forwarded when received from the field.

E. N. Harkman

E. N. Harkman
Member, Field Team

Enclosures (37)

MINERAL DEPOSITS
DMEA
RECEIVED
MAR 4 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

TRANSMITTED
MAR 11 1955

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COLORADO PLATEAU DISTRICT
P. O. BOX 360
GRAND JUNCTION, COLORADO

March 2, 1955

Memorandum

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

From: W. P. Williams

Subject: DMEA 3582, Walter Duncan Mining Company, Red Rock claims, et al, San Juan County, Utah

Enclosed are 11 copies of a geologic report and accompanying maps by G. W. Weir, T. E. Mullens, and W. P. Williams, covering the subject application. The brochure is enclosed herewith.

As the property is adjacent to known mineralized and ore-bearing ground in an area of large uranium deposits, and because projected trends of known ore-bearing ground suggest that much of the property may be favorable for ore, the examining geologists recommend that a DMEA loan to explore the property be granted. The exploration program recommended by the examining geologists is the same as the revised program submitted by the applicant.

I concur with the recommendation submitted in the geologic report.

The application was discussed with Mr. Ivan Fisk, AEC field geologist in the Lisbon Valley area, and Mr. Fisk concurs with the recommendation made in the geologic report.

We are enclosing 9 extra copies of the maps accompanying the report.

W P Williams
W. P. Williams

Enclosures

UNITED STATES DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3582, Walter Duncan Mining Company, Red Rock claims, et al
San Juan County, Utah

Uranium

Geologic report

by

G. W. Weir, T. E. Mullens, and W. P. Williams
U. S. Geological Survey

March 1, 1955

Reviewed by
DMEA OPERATING COMMITTEE
(date)

DMEA 3582

INTRODUCTION AND SUMMARY

The Walter Duncan Mining Company, Cortez, Colo., has applied to the Defense Minerals Exploration Administration for a loan to explore the basal part of the Chinle formation on the Red Rock, Red Rock Extension, White Rock and Paragon claims in secs. 34 and 35, T. 30 S., R. 25 E., San Juan County, Utah (fig. 1). The property was examined on January 25, 1955, by Mr. M. H. Salsbury, U. S. Bureau of Mines, and W. P. Williams, U. S. Geological Survey, accompanied by Mr. C. H. Butler, acting for the applicants. The application was discussed with Mr. Ivan Fisk, field geologist of the Atomic Energy Commission.

The applicant proposes a drilling program in three stages (amended from original proposal. See memorandum from W. P. Williams to E. N. Harshman dated February 10, 1955). Stage 1 consists of 14 holes about 400 feet apart in fences about 2,000 feet apart, for a total of 8,650 feet. Stage 2 drilling will total 6,350 feet in 11 holes spaced about 400 feet apart and will be drilled midway between stage 1 fences. The exact location of stage 2 holes is dependent on evaluation of stage 1 drilling. Stage 3 drilling will consist of about 10,500 feet in 17 holes to further delineate any favorable ground found in stages 1 and 2. The applicants complete program is estimated to require about 25,5000 feet of drilling in 42 holes at a cost of $92,200.

The ore-bearing bed is not exposed on the property and the operator has not demonstrated that any part of the property is underlain by mineralized ground. However, because the property is adjacent to known mineralized and ore-bearing ground in an area of known large uranium deposits and because projected trends of known ore-bearing ground suggest that much of the property may be favorable for ore, the examining team recommends that a loan be granted for exploration of the property. The examining team recommends that the applicant's exploration program be approved. Mr. Salsbury, Bureau of Mines, will submit a separate report on the engineering and cost aspects of the proposed program.

GEOLOGY

The general geologic setting of the Walter Duncan Mining Company claims is shown in figure 2.

Stratigraphy.-- Only the basal 50 to 200 feet of the Wingate sandstone of Upper Triassic age is exposed on the property. The Wingate is a massive cross-bedded, fine-grained, orange sandstone. Both younger and older rocks are exposed on nearby claims. A generalized stratigraphic section of the Lisbon Valley area is given in table 1.

The Chinle formation of Upper Triassic age is the chief ore-bearing formation in the Lisbon Valley mining area. It is exposed a few hundred feet northeast of the property. The Chinle is

about 400 feet thick and rests unconformably on the Cutler formation of Permian age. It consists of red and green mudstone and red and gray sandstone, siltstone, and conglomeratic sandstone. Uranium ore deposits are known to occur in an ill-defined basal member of the Chinle that is probably equivalent to the Moss Back member of the Chinle to the west. The basal member consists of gray and greenish-gray sandstone, sandy siltstone and conglomeratic sandstone with green mudstone. The basal member, here called the lower Chinle, ranges from a knife-edge to more than 30 feet along the outcrop near the company claims. The Chinle formation and especially the basal member are believed to thicken southwesterly away from the Lisbon Valley salt anticline.

The Cutler formation of Permian age, which underlies the Chinle, consists mainly of red, purple, and brown mudstone and red, purple and white sandstone and conglomerate. The Chinle-Cutler contact can generally be recognized in drill core by the first appearance of these lithologic characteristics below the contrasting green mudstone and gray sandstone of the lower Chinle.

Structure.--The company claims lie on the southwest flank of the Lisbon Valley anticline about one-half mile southwest of the Lisbon Valley fault. The Lisbon Valley anticline is believed to be underlain by a thickened roll of salt in the Paradox member of the Hermosa formation of Pennsylvanian age. The anticline probably existed as a structural and topographic high since the late Paleozoic; probably all Mesozoic formations are thinner near the axis of the structure. The beds on the property are estimated to strike about N. 85° W and dip about 10° SW.

The Lisbon Valley fault is a normal fault and has a stratigraphic throw of more than 4,000 feet. Northeast and east of the property the Lisbon Valley fault splits into a number of smaller faults. No faults are known to exist on the company claims, but the Wingate sandstone shows a well-developed set of vertical joints that trends about N. 75° W., about parallel with the trend of the structural contours of the claim area.

ORE DEPOSITS

The basal part of the Chinle formation that the applicant proposes to explore is not known to contain mineralized material on the company property. Significant ore deposits known to exist on nearby properties (see figs. 2 and 3), however, suggest that the Walter Duncan Mining Company claims merit exploration. These neighboring deposits include the original producing properties in the Chinle formation in the Lisbon Valley area - the recently developed Continental Uranium School Section 36 mine, and the recently discovered Williams-Noble deposit. Because the Walter Duncan property must be evaluated on the basis of neighboring properties, these deposits are described briefly below.

The divide claims were mined as early as 1943. The workings consist of a few small trenches and open cuts. The ore consists of sandstone impregnated with gray vanadium mica and a yellow uranium mineral, probably of the carnotite group. The lower Chinle is here only about 10 feet thick and consists of cross-bedded brownish gray sandstone and conglomeratic sandstone. Total production is small, probably less than 200 tons with an average grade of about 0.2 percent U_3O_8. The property is now idle and has no significant reserves.

The Service Berry mine was developed in 1948. The workings consist of several small open cuts and three adits with small side stopes and rooms. The ore is similar to that of the Divide claims, except that vanadium minerals appear less abundant and thus the mineralized rock is difficult to outline visually. The lower Chinle is about 15 to 20 feet thick. Total production is small, not exceeding 500 tons with an average grade of about 0.2 percent U_3O_8. The property is now idle and has no significant reserves.

The School Section 36 deposit was found by drilling in 1953. (The ore-bearing beds are not exposed on the property.) The incline and underground workings at present aggregate more than 1,000 feet. The ore differs from that of the Service Berry and Divide deposits; it is unoxidized and consists of black vanadium and uranium minerals. The lower Chinle is about 30 feet or more thick and consists of conglomerate, coarse to fine and silty sandstone, and claystone. The ore is mainly in sandstone. Production is currently more than 1,000 tons monthly. Reserves are estimated by the Atomic Energy Commission to total several tens of thousands of tons of ore with an average grade of more than 0.3 percent U_3O_8. The deposit as presently outlined by drilling and mining has an average thickness of about 4 feet, a maximum width of about 300 feet and an average width of about 150 feet. The deposit is more than 1,000 feet long and although apparently discontinuous, shows a well developed elongation trending about due west.

The Williams-Noble deposit was discovered by drilling in 1954. Assay data is incomplete, but estimates based on preliminary data suggest that the deposit is larger than 10,000 tons and that the ore averages more than 0.2 percent U_3O_8. The deposit is undeveloped and only partly outlined by exploratory drilling. The Chinle formation does not crop out on the property and data on the ore-bearing zone are not available to the writer.

Inferences may be drawn from the features of these deposits that are helpful in evaluating the Walter Duncan Mining Company claims. (1) The general area is favorable for mineralization because it contains minable deposits ranging in size from small to large. (2) The Walter Duncan Mining Company claims are probably underlain by a thicker lower Chinle more favorable for large ore deposits than the Divide or Service Berry properties, because outcrops and drilling suggest that the ore-bearing lower Chinle thickens southerly away from the axis of the Lisbon Valley anticline. Further, the School Section 36 deposit suggests that the thicker lower Chinle is more favorable for large deposits. (3) The projected trend of the School Section 36 deposit suggests that the southern part of the company property should be most favorable for ore. (4) The company property should not be regarded as unfavorable for ore or as an unduly high risk for exploration merely because the ore-bearing rock is not exposed on the property. All large uranium deposits of the Lisbon Valley-Big Indian Wash mining area have been found by drilling; none has been found at the outcrop.

As a matter of fact, the Divide and Service Berry properties are the largest deposits known from natural exposures. (5) The area of the company claims, Lisbon Valley, is similar, perhaps nearly identical geologically with the area of large deposits along Big Indian Wash about 5 miles northwest. The Big Indian Wash area contains many large deposits, including C. A. Steen's Mi Vida deposit, and ranks as a leading uranium producing area in the United States. Although the writer believes that there is probably a real difference in the uranium potential of the two areas, a large part of the difference may be attributed to the fact that the Lisbon Valley area is relatively unexplored.

PROPOSED EXPLORATION

The applicant's proposed program consists of about 25,500 feet of drilling in 42 holes at an estimated cost of $92,200. The drilling is divided into 3 stages with stage 2 dependent on results of stage 1 and stage 3 dependent on results of stage 2.

Stage I

A maximum of 14 holes and 8,650 feet of plug and core drilling in fences 2,000 feet apart at location marked "A" shown on figure 3. Holes are to be on a minimum of 400-foot centers.

Stage II

A maximum of 11 holes and 6,350 feet of plug and core drilling in fences to be located at intermediate points between rows of holes in stage 1. Holes are to be on a minimum of 400-foot centers. Hole locations shown on figure 3, marked "B" will be used unless revised locations satisfactory to the Government are made as a result of stage I drilling and written authorization by the DMEA Field Team, Region III, is obtained.

Stage III

A maximum of 17 holes and 10,500 feet of plug core drilling in offset holes to explore further any mineralization or favorable geologic conditions found in stages I and II. Holes are to be on a minimum of 100-foot centers and no hole is to be closer than 100 feet to any previously drilled hole. Hole locations are to be satisfactory to the Government and written authorization by the DMEA Field Team, Region III, will be required.

The applicant's proposed drilling program seems logical to the examining team. All holes should be cored the bottom 40 feet.

SUMMARY AND RECOMMENDATIONS

The authors recommend that a loan be granted for exploration of the property. Although no uranium ore is known on the property, the property is adjacent to known mineralized and ore-bearing ground and projected stratigraphic information and trends at ore-bearing suggest that the property may be favorable for ore. We recommend that a DMEA contract be approved to provide for an exploration program as outlined above. The above exploration program is the same as the revised program submitted by the applicant.

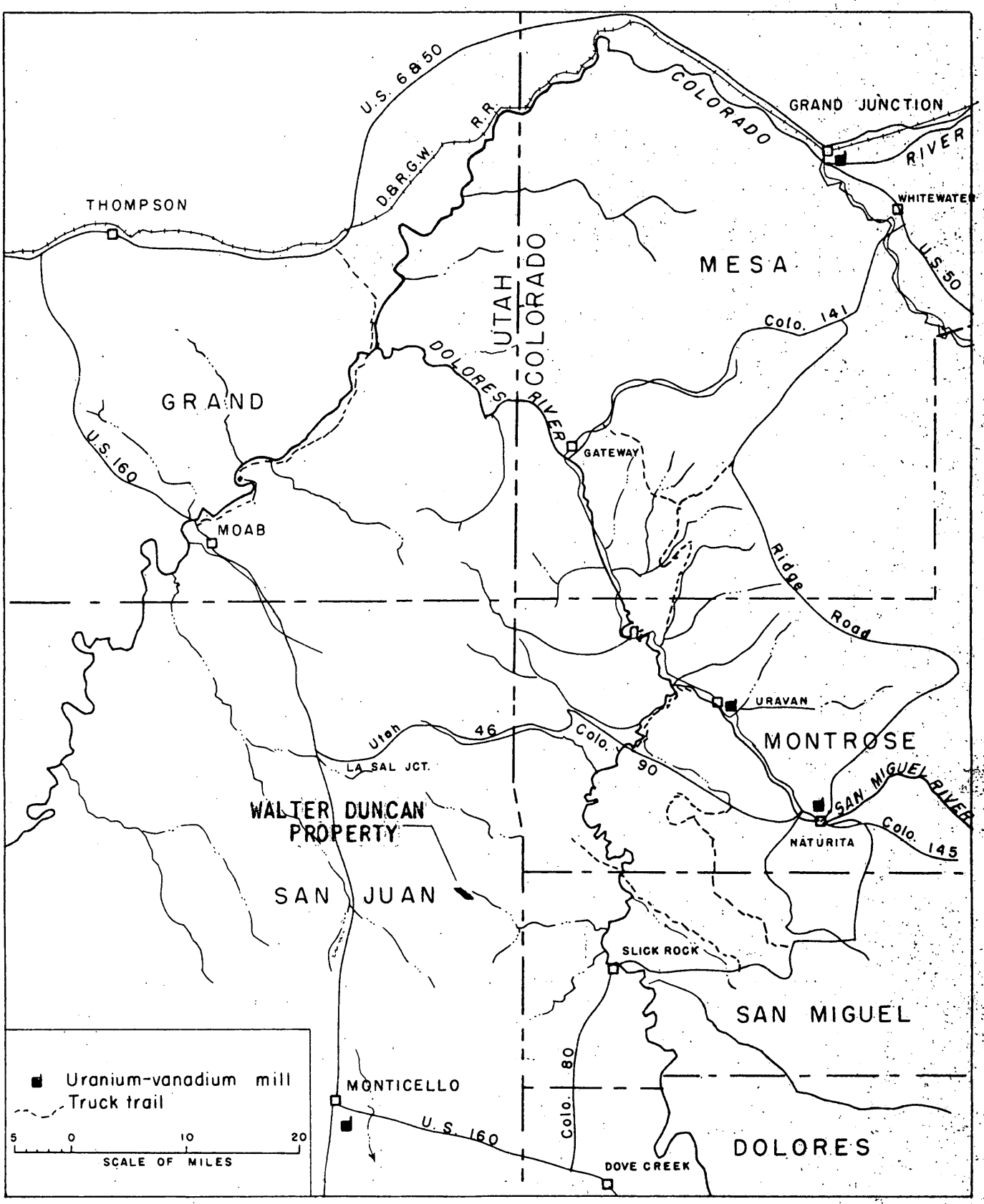

Figure 1. INDEX MAP OF PART OF THE COLORADO PLATEAU SHOWING LOCATION OF WALTER DUNCAN MINING CO. CLAIMS, LISBON VALLEY AREA SAN JUAN COUNTY, UTAH

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 3582

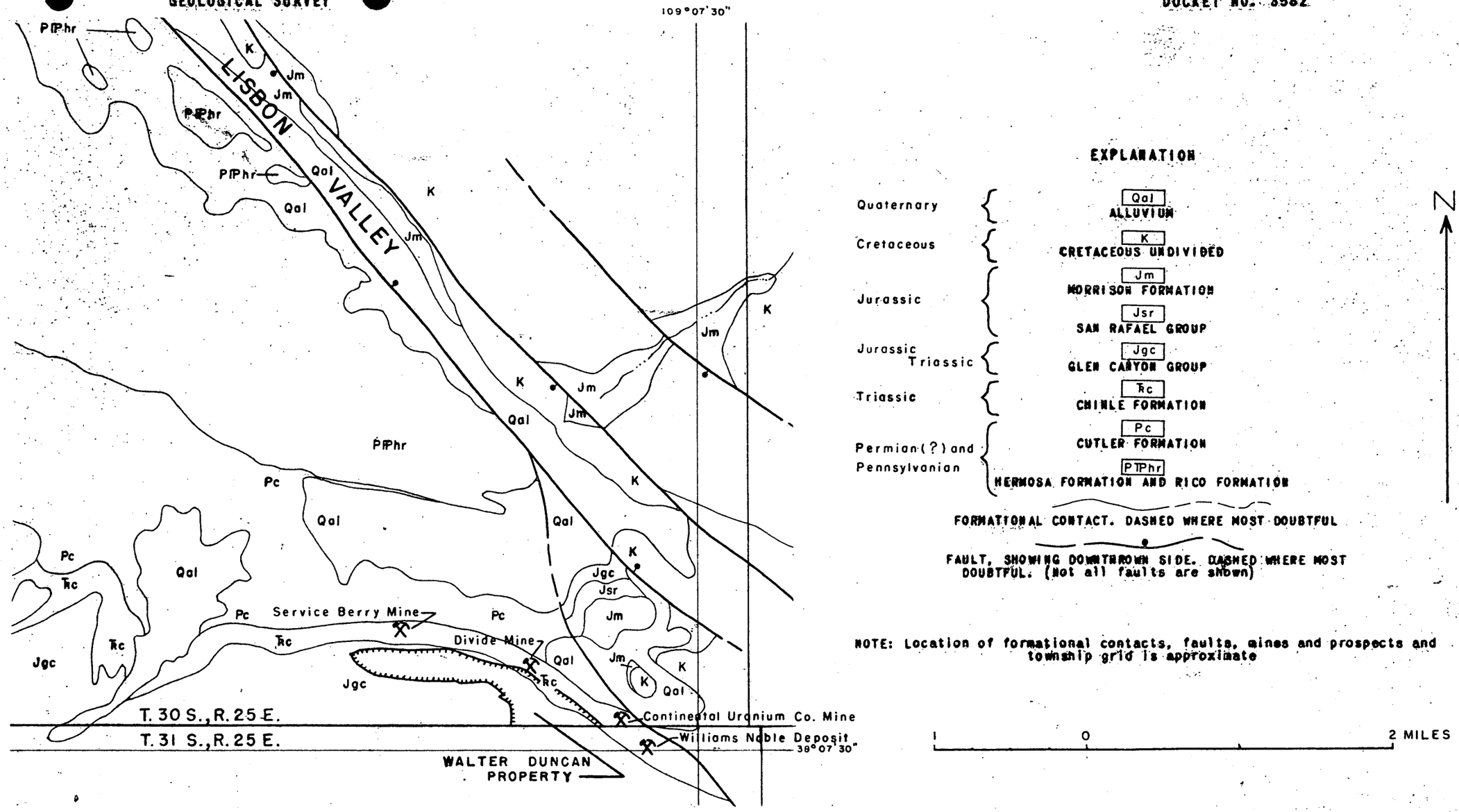

Figure 2. MAP SHOWING GEOLOGIC SETTING OF THE WALTER DUNCAN CO. MINING CLAIMS, LISBON VALLEY AREA, SAN JUAN COUNTY, UTAH

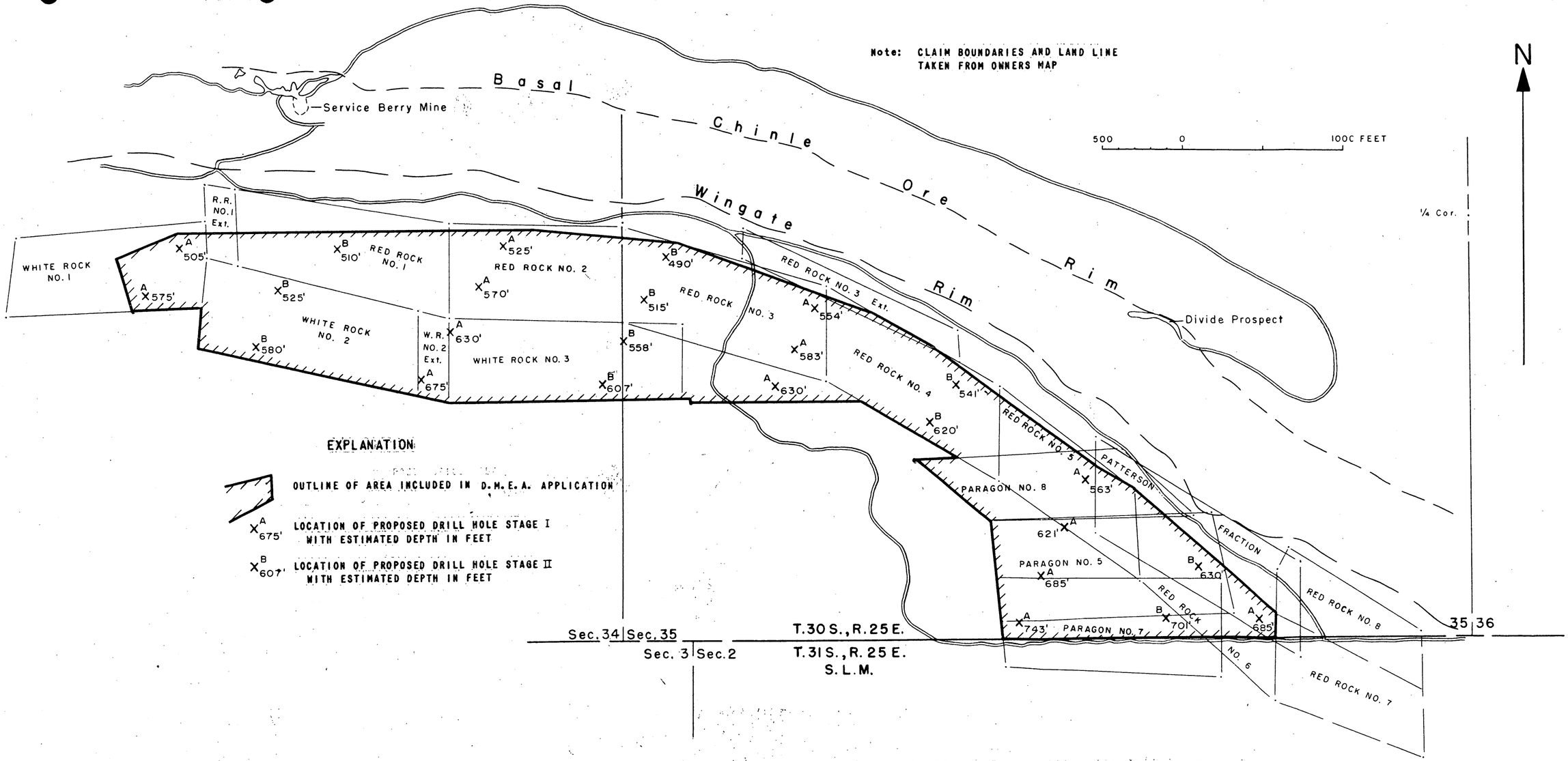

Figure 3. CLAIM MAP SHOWING LOCATION OF PROPOSED DRILL HOLES ON WALTER DUNCAN MINING CO. CLAIMS, LISBON VALLEY AREA, SAN JUAN COUNTY, UTAH

Table 1.-- Generalized stratigraphic section of rocks exposed in and near Big Indian Wash, Lisbon Valley area, Colorado-Utah

System or series	Group	Formation	Estimated thickness (feet)	Character of rocks
Quaternary		Alluvium	0-50	Sandy and silty material in part cemented in streams and valleys
		Gravel	0-50	Boulders, cobbles, and pebbles in sandy matrix, unconsolidated.
Upper Cretaceous		Mancos shale	200	Gray marine shale, fossiliferous at base; covers parts of mesas. Upper part removed by erosion.
Upper Cretaceous		Dakota sandstone	50-100	Gray and brown sandstone, brown carbonaceous shale and impure coal.
Lower Cretaceous		Burro Canyon	160-250	Brown conglomerate and sandstone and bright green and reddish shale and mudstone; commonly silicified to a dense quartzite in the Lisbon Valley faults zone.
Upper Jurassic		Morrison	300-420	Brushy Basin member; varicolored mudstone; some sandstone and conglomerate lenses commonly near base.
			300-375	Salt Wash member; light colored sandstone and red and gray mudstone.

System or series	Group	Formation	Estimated thickness (feet)	Character of rocks
	San Rafael group	Summerville	65-90	Red sandy mudstone.
		Entrada sandstone	175-225	Massive cross-bedded medium-grained sandstone; forms rounded cliffs. May include lateral equivalent of Moab tongue of Entrada.
		Carmel	30-75	Irregularly-bedded red sandstone and mudstone.
Jurassic		Navajo sandstone	180-250	Massive cross-stratified buff medium-grained sandstone; forms cliff.
Jurassic (?)	Glen Canyon group	Kayenta formation	200-300	Irregularly bedded fine- to coarse-grained red sandstone, red conglomerate, and red mudstone. Transitional contacts above and below.
Upper Triassic		Wingate sandstone	250-350	Massive cross-stratified red fine-grained sandstone; forms cliff.
		Chinle	390-420	Red mudstone and irregularly bedded sandstone above. Light colored sandstone and green mudstone below. (Moss Back member?); ore-bearing.
Lower and Middle Triassic		Moenkopi	Unknown *	Chocolate brown mudstone and sandstone, commonly ripple-marked (*does not crop out in Big Indian Wash but may be encountered in deep drill holes away from Big Indian Wash rim).

System or series	Group	Formation	Estimated thickness (feet)	Character of rocks
Permian		Cutler	900	Buff, red, white, and purple sandstone and red and gray mudstone.
Permian (?) and Pennsylvanian		Rico	600(?)	Buff arkosic sandstone, gray shale, and marine(?) limestone. Contacts poorly understood.
Pennsylvanian		Hermosa	1,000+	Fossiliferous marine limestone and buff arkosic sandstone and gray sandstone. Base not exposed.

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DENVER, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COLORADO PLATEAU DISTRICT
P. O. BOX 360
GRAND JUNCTION, COLORADO

February 10, 1955

RECEIVED

Memorandum

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

From: W. P. Williams

Subject: DMEA 3582, Walter Duncan Mining Company, Red Rock claims, et al
San Juan County, Utah

After a field examination of the above-referenced property on January 25, the applicant offered to submit a revised proposal concerning exploration drilling on the subject property.

The operator has submitted his revised proposal accompanied by revised maps, four copies of which we are forwarding to you under separate cover. Applicant has also submitted to us four copies of an amended legal description of the property involved and an amendment of section 5B of MF-103. We are forwarding you herewith three copies each, retaining one copy each for our files.

We concur with the applicant's revised proposal and our report of field examination, now in preparation, will recommend approval of the applicant's revised proposal.

WWilliams

W. P. Williams
Geologist

WPW/mlr

Enclosures

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

Amended Legal Description of DMEA Block

This block is in Sections 34 and 35, T30S, R25E SLM, San Juan County, Utah.

Begining at a point 1200' West of the SE corner of Section 35, thence N1°E155' to the NE corner of Red Rock #6, thence N49°W1185' to the NE corner of Red Rock #5, thence 290'N57°32'W to the SE corner of Pitchblende Extension #5, thence N53°42'W 1275', thence N56°53'W360' to the SE corner of Pitchblende Extension #4, thence N70°13'W 1330' to the SE corner of Pitchblende Extension #3, thence N84°30'W900' to the SE corner of Pitchblende Extension #2, thence 1500' West to the SE corner of Pitchblende Extension #1, thence 742' West, thence S68°14'W425' to the SW corner of Service Berry #3, thence S17°31'E350', thence N87°43'E 428' to the SE corner of White Rock #1, thence S5°57'W252' to the SW corner of White Rock #2, thence S77°16'E1611' to the SW corner of White Rock #3, thence N88°46'E1464' to the SW corner of White Rock #4, thence East 50', thence south 20', thence West 1060', thence S59°30'E710', thence S87°30'W260' to the NW corner of Paragon #8, thence S49°15'E590' to the SW corner of Paragon #8, thence S6°15'E748' along the west end lines of Paragon 5 and Paragon 7 to the Section Line between Section 35 and Section 2, thence East 1700' to point of begining.

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

5. (b) Amended

Plate 2 shows a plan view and cross section of the property, along with the proposed locations of the Phase 1 and Phase 2 drill holes.

The proposed work is as follows:

Phase 1---Drill 14 exploratory test holes as shown on Plate 2. (Marked "A"). These holes are approximately 400' apart on lines perpendicular to the assumed ore trend. The lines are about 2000' apart. All holes in Phase 1 will be drilled with plug bits, and will be cored for the bottom 40'. Total footage for Phase 1 is 8650'

Phase 2---Drill 11 exploratory test holes as shown on Plate 2. (Marked "B"). These holes are approximately 400' apart and will serve to cut the drill lines to 1000' distances. The location of Phase 2 holes will be subject to changes based on an evaluation of Phase 1 drilling. Total footage for Phase 2 is 6350'.

Phase 3---Drill approximately 17 offset holes to further explore favorable areas delineated by Phase 1 and Phase 2 drilling. The locations of these holes will be determined by a geologic evaluation of the Phase 1 and 2 drilling. Total footage for Phase 3 is estimated at 10,500:

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
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FEB 24 1955

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We concur with the applicant's revised proposal and our report of field examination, now in preparation, will recommend approval of the applicant's revised proposal.

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WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

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Phase 2---Drill 11 exploratory test holes as shown on Plate 2. (Marked "B"). These holes are approximately 400' apart and will serve to cut the drill lines to 1000' distances. The location of Phase 2 holes will be subject to changes based on an evaluation of Phase 1 drilling. Total footage for Phase 2 is 6350'.

Phase 3---Drill approximately 17 offset holes to further explore favorable areas delineated by Phase 1 and Phase 2 drilling. The locations of these holes will be determined by a geologic evaluation of the Phase 1 and 2 drilling. Total footage for Phase 3 is estimated at 10,500:

2/24/55 gla

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

DEPARTMENT OF THE INTERIOR
Bureau of Mines / Publications
FEB 24 1955

224 New Customhouse
Denver 2, Colorado

February 21, 1955

Memorandum

To: Administrator, Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3582 (Uranium), Walter Duncan Mining Co., Red Rock claims et al., San Juan County, Utah

Enclosed are three copies of a revised exploration program submitted by the applicant together with amended legal description of property to be explored. One copy is being retained in this office.

Also enclosed are two copies of two letters relative to property rights.

W. M. Traver

W. M. Traver

Encls.

see map in packet.

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DEFENSE MINERALS EXPLORATION ADMINISTRATION
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Encls.

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

February 2, 1955

Walter Duncan Mining Company
P. O. Box 1468
Cortez, Colorado

Attention: Mr. Charles R. Butler, Manager

Gentlemen:

The writer is a party to that certain contract entered into on April 22, 1954 between G. O. Patterson and others, and Walter Duncan Mining Company, and the writer also represents the other parties known as assignors in the above mentioned agreement.

Please let this letter serve as notice to you that the assignors in said agreement agree that the one year period mentioned in paragraph 4a of said agreement is to commence on January 1, 1955 because of the fact that Circular Seven of the Atomic Energy Commission was superceded by Public Law 585 and that the claims involved were not perfected under that law until December of 1954. Furthermore, a conflict arose as to title to a portion of the claims with Continental Uranium and this was not resolved until late in January of 1955.

Furthermore, the assignors in said agreement, represented by the writer, also agree that any drilling which has been done by Walter Duncan Mining Company heretofore on the premises involved in the above mentioned agreement is to be credited towards the work requirements of paragraph 4a in said agreement.

Sincerely,

Frank L. Seymour

Frank L. Seymour

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

February 2, 1955

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P. O. Box 1468
Cortez, Colorado

Attention: Mr. Charles R. Butler, Manager

Gentlemen:

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dh

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MINERAL DEPOSITS
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GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COLORADO PLATEAU DISTRICT
P. O. BOX 360
GRAND JUNCTION, COLORADO

February 10, 1955

FEB 24 1955

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P. O. BOX 1468
CORTEZ, COLORADO

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12/16/54 gla

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 15 1954

December 14, 1954
Subject: DMEA-3582

Rare and Miscellaneous Metals Division
Defense Minerals Exploration Administration
Washington 25, D.C.

Dear Sirs,

I am enclosing herewith four (4) copies of an Ammendment to Agreement concerning certain claims covered by our application for DMEA assistance.

Please attach these documents to our application which is now pending.

This Amendment covers Red Rock #6, a claim which was inadvertently left out of the original agreement, and also several small fraction claims which were staked recently to cover possible fractions in the DMEA block.

Very truly yours,

Charles R Butler

Charles R. Butler, Manager
Walter Duncan Mining Co.

addresses

B. O. Patterson

R. F. Jenkins

F. B. Jenkins

Lyle Francis

DNEA 3582

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

AMENDMENT TO AGREEMENT

THIS AGREEMENT, Made and entered into this 6th day of December, 1954, by and between G. O. PATTERSON, of Moab, Utah, FLOYD B. JENKINS, of Grand Junction, Colorado, LYLE FRANCIS, of Moab, Utah, RUPERT JENKINS, of Moab, Utah, and FRANK L. SEYMOUR, of Grand Junction, Colorado, (hereinafter referred to as the "Assignors") and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahom City, Oklahoma, (hereinafter referred to as the "Assignee"),

W I T N E S S E T H :

WHEREAS, The parties hereto entered into an agreement on the 22nd day of April, 1954, wherein the Assignors agreed to lease unto the Assignee certain unpatented mining claims described in Exhibit "A" attached to said agreement, and

WHEREAS, By oversight or clerical error the Red Rock No. 6 claim was omitted from said Exhibit "A", but that it was the intention of the parties that such claim should be included in the lease agreement unto Assignee, and

WHEREAS, Certain other claims have been staked by Assignee pursuant to the provisions of said agreement for the purpose of covering fractional tracts of land, and the parties wish to include such claims within said lease agreement,

NOW, THEREFORE, IT IS AGREED Between the parties that the following claims be added to and considered a part of the claims covered by that certain agreement executed between the parties hereto on the 22nd day of April, 1954, a copy of which is attached hereto, to-wit:

Claim Name	Location Notice Recorded San Juan County, Utah Book	Page
Red Rock No. 6	23	29
Red Rock No. 3 North Extension		
Red Rock No. 3 East Extension		
Red Rock No. 1 West Extension		
White Rock No. 1 East Extension		

IT IS AGREED Between the parties that the above described claims shall be subject to all the terms and conditions set forth in the attached agreement and except for the addition of the above described claims, all of the terms and conditions of said agreement shall remain unchanged and in full force and effect.

THIS AGREEMENT shall be binding upon and shall inure to the benefit of the parties hereto, their legal representatives, heirs and assigns.

IN WITNESS WHEREOF, The parties hereto have executed this agreement in quadruplicate at Montrose, Colorado, the day and year first above written.

G. O. Patterson (SEAL)
G. O. PATTERSON

Floyd B Jenkins (SEAL)
FLOYD B. JENKINS

Lyle Francis (SEAL)
LYLE FRANCIS

Rupert F. Jenkins (SEAL)
RUPERT JENKINS

Frank L Seymour (SEAL)
FRANK L. SEYMOUR

Assignors

(SEAL)
J. WALTER DUNCAN, JR.

Assignee

STATE OF COLORADO)
) ss.
COUNTY OF)

Before me, a notary public, personally appeared G. O. Patterson, Floyd B. Jenkins, Lyle Francis, Rupert F. Jenkins, Frank L. Seymour and acknowledged that they signed their names to the foregoing instrument as their free and voluntary act for the intention and purposes therein expressed.

Witness my hand and notarial seal this 6th day of December, 1954.

My commission expires: January 31, 1955

Bonnie L. Rasso
Notary Public

DME A 3582

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

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(SEAL)
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Assignee

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DMEA-3582

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P. O. BOX 1468 — CORTEZ, COLORADO

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FRANK L. SEYMOUR

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(SEAL)
J. WALTER DUNCAN, JR.

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STATE OF COLORADO)
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My commission expires: January 31, 1955

Bonnie L. Cisco
Notary Public

DMEA - 3582

WALTER DUNCAN MINING CO.
P. O. BOX 1408 — CORTEZ, COLORADO

AMENDMENT TO AGREEMENT

THIS AGREEMENT, Made and entered into this 6th day of December, 1954, by and between G. O. PATTERSON, of Moab, Utah, FLOYD B. JENKINS, of Grand Junction, Colorado, LYLE FRANCIS, of Moab, Utah, RUPERT JENKINS, of Moab, Utah, and FRANK L. SEYMOUR, of Grand Junction, Colorado, (hereinafter referred to as the "Assignors") and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahom City, Oklahoma, (hereinafter referred to as the "Assignee"),

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My commission expires: January 31, 1955

Donna L. Rasso
Notary Public

Surname 700

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

DEC 1 0 1954

Ellis
Kilsgaard
Johnson
Martin
Johnson

Mr. J. Walter Duncan, Jr.
d/b/a Walter Duncan Mining Co.
P. O. Box 1468
Cortez, Colorado

Re: Docket No. DMEA-3582 (Uranium)
Red Rock claims, et al
San Juan County, Utah

Dear Mr. Duncan:

The application for assistance in exploring your property in San Juan County, Utah, under the above-captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region IV at the following address:

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

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

... J. Mittendorf

Administrator

EWEllis:am
12-9-54
cc to: Admb. Reading File
Docket
Code 700
DMEA Field Team, Region IV(2)

Surname 700

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

DEC 10 1954

Ellis
Martin
Johnson

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

Re: Docket No. DMEA-3582 (Uranium)
J. Walter Duncan, Jr.
d/b/a Walter Duncan Mining Company
Red Rock claims, et al
San Juan County, Utah

Dear Mr. King:

The captioned application is referred to Region IV Field Team for a field examination if warranted, and recommendation. A copy of the application was forwarded to your office on November 29, 1954.

Enclosed are copies of memoranda from John E. Crawford, dated December 3, and E. L. Newcomb, dated December 7, 1954, Bureau of Mines and Geological Survey Uranium Commodity Committee members respectively.

While the application makes no mention of uranium mineralization on the proposed project claims, in view of the nearness of Applicant's property to a development of good ore, mineralization on adjoining claims, and the geologic trend of the ore-bearing formation it was deemed advisable to refer subject application to the field.

If a project is recommended, it is suggested that Applicant be requested to supply executed Owner's Consent to Lien forms in septuplicate. Obtaining these papers in advance of a contract, if one is approved, may save considerable time.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (SHB)

Enclosures

APPROVED:

C. H. JOHNSON
Member, Bureau of Mines (SHB)

Thor H. Kiilsgaard
Member, Geological Survey (SHB)

EWEllis:am
12-9-54
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
Code 700

12/8/54 gla

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
DEC 7 1954

December 7, 1954

Re: DMEA-3582
Walter Duncan Mining Co.
(Red Rock Claim Groups)
San Juan County, Utah
$92,200 - Uranium

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The applicant has proposed a two-stage program of drilling to explore the Red Rock, White Rock, Paragon and Red Rock Extension claims.

The applicant's claims are located in an area which is underlain by the Wingate, Chinle and Cutler-Rico formations. However, none of the Chinle and Cutler-Rico outcrops on the property. No direct evidence of uranium mineralization is reported to be present; however the claims appear to be well located with relation to known ore occurrences on the north, east and west.

I recommend the application be referred to the Field Team for their review and recommendations.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

December 7, 1954

Re: DMEA-3582
Walter Duncan Mining Co.
(Red Rock Claim Groups)
San Juan County, Utah
$92,200 - Uranium

Memorandum

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

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I recommend the application be referred to the Field Team for their review and recommendations.

E. L. Newcomb

ELNewcomb:hlm
G-12/7/54

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

12/3/54 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC - 3 1954

December 3, 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: DMEA Docket 3582, J. Walter Duncan, Jr., Walter Duncan Mining Company, P. O. Box 1468, Cortez, Colo.

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

The application does not make mention of uranium mineralization on the claims, and there is no evidence that the applicant has made a preliminary radioactivity reconnaissance of the property. The application is based on the fact that the subject claims are within 1,200 feet of a proven ore body developed by Continental Mines, Inc., reported to contain 75,000 tons of uranium ore. Geologic data presented in the application support the supposition of the applicant that a continuation of the ore deposit being mined by Continental Mines, Inc., may occur on the claims which the applicant proposes to explore.

I am reluctant to suggest approval of an application based on geologic criteria alone; but owing to the fact that the Walter Duncan Mining Co. has successfully mined significant quantities of uranium-bearing material for sale to the AEC and is a reliable, apparently well-equipped organization, Mr. Hosted suggests that the application be referred to the field team and that the field team consult Ernest R. Gordon, Atomic Energy Commission, Grand Junction, Colo., about the feasibility of the proposed project. Because of the circumstances peculiar to this application, I concur with the suggestion of Mr. Hosted.

John E. Crawford

John E. Crawford

Attachment

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

November 29, 1954
Subject: DMEA-3582
Re: Exploration Assistance

Mr. J. Walter Duncan, Jr.
P. O. Box 1468
Cortez, Colorado

Dear Sir:

The receipt of your application dated November 22, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3582 and referred to the Rare and Miscellaneous Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

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

RECEIVED
NOV 26 1954

Not to be filled in by applicant

Docket No. 3582
Metal or Mineral Uranium
Date Received
Estimated Cost $92,200
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: J. Walter Duncan Jr. dba Walter Duncan Mining Company
P.O. Box 1468
Cortez, Colorado

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

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

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

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

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

(*b*) State any mine name by which the property is known. Not applicable

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

(*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. See photo copies of lease agreement.

(*e*) If you own the land, describe any liens or encumbrances on it Not applicable

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

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

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

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

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

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

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 60 days and be completed within 18 months from the date of an exploration project contract.

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

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

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

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

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

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

None (*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 [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated November 22, 1954

J Walter Duncan, Jr.
(Applicant)

By _____

_____

_____

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

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

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

3 (a) Legal Description of DMCA Block

This Block is in Sections 34 and 35, T30S, R25E, SLM, San Juan County, Utah.

Beginning at a point 1200' West of the SE Corner of Section 35, thence N1°E 155' to the NE Corner of Red Rock #6, thence N49°W 1185' to the NE Corner of Red Rock #5, thence 310' N57°32'W to the SE Corner of Pitchblende Extension #5, thence N53°42'W 1560' to the SE Corner of Pitchblende Extension #4, thence N70°13'W 1407' to the SE Corner of Pitchblende Extension #3, thence N84°30'W 900' to the SE Corner of Pitchblende Extension #2, thence 1500' West to the SE Corner of Pitchblende Extension #1, thence 742' west, thence S68°14'W 425' to the SW Corner of Service Berry #3, thence S17°31'E 350', thence N87°43'E 428' to the SE Corner of White Rock #1, thence S5°57'W 252' to the SW Corner of White Rock #2, thence S77°13'E 1611' to the SW Corner of White Rock #3, thence N88°45'E 1464' to the SW Corner of White Rock #4, thence West 50', thence south 20', thence West 1010', thence S64°22'E 425' to the SE Corner of Red Rock #3, thence S58°30'E 335', thence S 87°30'W 260' to the NW Corner of Paragon #8, thence S49°15'E 590' to the SW Corner of Paragon #8, thence S 6°15'E 748' along the west end lines of Paragon 5 and Paragon 7 to the Section Line between Section 35 and Section 2, thence East 1700' to point of beginning.

WALTER DUNCAN MINING CO.
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CORTEZ, COLORADO

3 (f)

Claim Name		Located	Book	Page
Red Rock	#1	March 1[illegible], 1953	23	26
	2	"	23	27
	3	"	23	27
	4	"	23	28
	5	"	23	28
	6	"	23	29
White Rock	1	Feb. 8, 1954	55	493
	2	"	55	493
	3	"	55	494
	4	"	55	494
Paragon	5	Aug. 10, 1953	35	107
	7	Nov. 6, 1953	37	85
	8	Nov. 6, 1953	37	85
Red Rock #3 North Extension ?				
Red Rock #3 East Extension ?		Nov. 9, 1954		
Red Rock #1 West Extension ✓		"		
Red Rock #2 East Extension ✓		"		

4 (a) No mining operations have ever been conducted on the lands included in this application. However, the following operations on adjoining properties are significant in evaluating the application.

1. Divide claims--see Plate 2.
   Some mining has been done on rim showings of the basal Chinle, although total production has probably not exceeded 200 tons. The workings are accessible.
2. Service Berry Claims--see Plate 2.
   Some mining has been done on rim showings of the basal Chinle. These workings consist of four seperate drifts from 50 to 150 feet in length. Total production has probably not exceeded 500 tons. The workings are accessible.
3. School Section 36. (Utah State Lease)
   The Continental Mines Inc. Company has drilled out an ore body in the SW Corner of Section 36. This ore body is purported to be in excess of 75,000 tons. Mining operations are now in progress, and the mine is accessible for examination.

(b) None

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4 (c) Plate 2 shows the location of the proposed project in relation to the geology of the surrounding area and to nearby significant known ore deposits and mineralized rim showings.
Plate 1 shows the location of the proposed project in relation to the regional geology and to the main ore deposits in the Lisbon Valley--Big Indian area.

As shown in Plate 1, the project claims are in an area that has already proven itself as a major uranium producing district. Large ore bodies have been found in the basal Chinle formation on the Southwest flank of the Lisbon Valley anticline. The significance of the main structural features is not fully understood, but the actual presence of large ore bodies within one to four miles of a major fault and on the flanks of an anticline seems to be ample evidence that, whatever the significance, the area is a favorable one for locating new ore bodies.

Exploration in adjoining areas has shown that the ore occurs in medium to course grained sandstones and mudstone conglomerates containing an abundance of carbonaceous matterand pyrites. These favorable host rock sandstones are usually elongate and lenticular, and are probably channel or swamp bed deposits. Mineralized portions of these sandstones and mudstones are usually underlain and overlain by shales or fine grained mudstones.

As shown in Plate 2, the west end of the project is within 1,200' of a proven ore body. (Marked A on map) This ore body was developed by Continental Mines, Inc., and is reputed to contain in excess of 75,000 tons of commercial grade ore. Drilling to date indicates that the trend of the ore body is in an east-westerly direction. A projection of this trend will cross cut the proposed project claims.

Mineralized lenticular sandstones of the basal Chinle formation crop out on the Divide (marked B on map) and the Service Berry (marked C on map) claims. The Divide outcrop is 200 feet wide and varies in thickness from 0 to 15 feet.

The Service Berry outcrop is 600 feet wide and varies in thickness from 0 to 30 feet.

The trend of the Continental Mines ore body, plus the outcrop on Divide and Service Berry claims suggest that a continuation of the favorable host rock sandstone of the Continental Mines is in a westerly or northwesterly direction. The purpose of the proposed project is to test this theory by drilling an area between the known ore and the mineralized outcrops.

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4 (d)

Project area is easily accessible by roads, and is approximately 35 miles by road from Monticello, Utah. Plate 3, a highway map of part of San Juan County, Utah, shows the access roads in this area. Several drill roads have been constructed in the past few months on the project grounds.

Other distances to shipping, supply and residence points are as follows:

Cortez, Colorado- - - - - - - - 70 miles
Moab, Utah- - - - - - - - - - - 50 miles
Dove Creek, Colorado- - - - - 35 miles

(e) The project area is well within the main uranium producing area of the Colorado Plateau, and manpower, supplies and equipment are readily available from Cortez, Dove Creek, Moab and Monticello.

Water will be supplied from a Company reservoir five miles from the project and from a government well about 15 miles from the project. Drinking water will be hauled from one of the aforementioned towns.

Power must be supplied at the site by gasoline and deisel units. Fuel will be hauled from Monticello or Dove Creek.

5. (a) Uranium
(b)

Plate 2 shows a plan view and cross section of the property, along with the proposed locations of the Phase 1 drill holes.

The Proposed Work is as follows:

Phase 1--Drill approximately 25 exploratory test holes as shown on Plate 2. These holes are to be approximately 400' apart on lines perpendicular to the assumed ore trend, and 1,000' apart parallel to the assumed ore trend. The lines of holes marked A will be drilled first, and the location of the lines of holes marked B will be subject to changes based on an evaluation of the A holes. All holes in Phase 1 will be drilled with plug bits, and will be cored for the bottom 40'. Total footage for Phase 1 is estimated at 13,500.

Phase 2--Drill approximately 20 offset holes to further explore favorable areas delineated by Phase 1 drilling. The locations of these holes will be determined by a geologic evaluation of Phase 1 drilling. Total footage for Phase 2 is estimated at 12,000

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5. (c)
The work will start within 60 days and be completed within 18 months from the date of an exploration project contract.

(d)
Mr. J. Walter Duncan Jr. dba the Walter Duncan Mining Company has had over four years experience in the exploration, development and mining phases of the uranium business. The company operates producing mines in the Lukachukai mining district of Northeastern Arizona and in the Oak Springs mining district of Northwestern New Mexico. Total production from these mines has averaged about 1,000 tons per month for the past two years. The Company has drilled over 20,000 feet of exploratory and development holes on its own leases in 1954, so is familiar with the planning and execution of drilling programs.

The project will be directed by Charles R. Butler, General Manager of the Walter Duncan Mining Co. Butler has a Masters Degree in Geology from the University of Colorado, worked for the US Geological Survey in uranium exploration in 1950, and has been associated with the Duncan organization since September, 1950.

He has directed exploration and development programs for the Duncan Mining Company in the White Canyon, Gypsum Valley, Lukachukai Mtns., and Grants, New Mexico areas, and has a wide range of experience in uranium exploration. He was in charge of the "Jacob's Chair" DMEA project in 1952, so is familar with the regulations and procedures of working with the DMEA officials.

The drilling will be under the direct supervision of Mr. C.A. Hammond. Mr. Hammond was formerly with the Walker-Hammond drilling Company of Dallas, Texas and Moab, Utah, and is now associated with the Walter Duncan Drilling Company. Mr. Hammond has had several years experience on a Mayhew drill rig, and has done considerable drilling near Lisbon Valley about 10 miles north of the project area.

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6. Estimate of Costs

The Company proposes to negotiate a Unit Cost Contract based on drill hole footage. The foregoing estimates are supporting figures for determining a fair unit cost.

A summation of the costs estimates are as follows; Costs per foot are on a basis of 25,500.

	Costs Per Foot	Total Cost
Drilling Costs	2.63	67175.00
Other Costs (Supervision, geology, bulldozing, sampling, surveying, etc.)	.98	25025.00
Total Project Costs	3.61	92200.00

Drilling will be done by the Walter Duncan Drilling Company. This is a seperate entity from the Walter Duncan Mining Company. However, the equity interests of the two organizations are very similar, and for purposes of the application, the two organizations can be considered as all part of the Walter Duncan Mining Company.

If the Duncan drill is not available for all of this work because of previous commitments or other unforseen circumstances, the additional drilling will be contracted. A bid by Minerals Engineering Company for drilling on the project area is herewith submitted.

In defense of the figures given below in support of the Duncan proposal, it might be pointed out that the total cost of the drilling--if done entirely by Minerals Engineering Company on the basis of the submitted bid--would be about $77,500, or $10,000 higher than the Duncan proposal.

(a) Independent Contracts
Bulldozing to prepare drill sites
200 hours @ $12.00/hr. 2400.00

(b) Labor, Supervision, Consultants
Driller (Wages plus footage bonus)
13 months @ $750/month 9750.00

Drillers helper
13 months. $1.50/hour
plus o.t. @ 50 hours/week 4620.00

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6 (b) (Cont.)

Water truck driver 13 months. $1.50/hour plus o.t. @ 50 hours/week	4620.00	
Total Drilling Labor		18990.00
Project supervisor 18 months @ ½ time @ 622/mo.	5600.00	
Project geologist 18 months @ ½ time @ 600/mo.	5400.00	
Surveyor 5 months @ 600/mo	3000.00	
Surveyors helper 5 months @ 300/mo.	1500.00	
Total non-drilling labor		15500.00
Allowable field expenses for personnel.		3450.00
(c) Operating Materials and Supplies 160 - 2 3/8" ODx10' Drill Pipe @ $37.50/jt.		6000.00
2 - 4 1/4" Diamond Drill Bits	2000.00	
3 - 4 3/4" Hawthorne adopters	175.00	
3 - 4 3/4" Rock bit adopters	90.00	
75 - 4 3/4" sets Hawthorne blades	1000.00	
150 - 4 3/4" Rock bits	8000.00	
3 core barrel assemblies	1600.00	
		12365.00
150 sacks silvogel	600.00	
150 sacks drilling mud	375.00	
		975.00
Power - None		
Fuel		
Water truck - 40 gal. gas/day	3150.00	
14 cases oil	110.00	
Drill truck - 30 gal. gas/day	2370.00	
16 cases oil	125.00	

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6 (c) (Cont.)

3 KVA generator - gas	500.00	
1/2 ton supply pick-up gas and oil	500.00	
3/4 ton pick-up gas and oil	500.00	
Butane for camp	200.00	
		7455.00

(d) Operating Equipment

Unit	Aquisition Cost	Allowance
1954 R-192 Int. Truck	5497.79	1/60/mo. for 15 months
Mathew Model 1000 Drill Rig	16283.55	"
Diamond Drill Bit Handling Tools	540.00	"
1954 F 750 Ford Truck with Water Tank	5223.42	"
1952 3/4 ton pick-up	1700.00	"
1954 1/2 ton pick-up	1800.00	"
O'Keefe Merrit 3 KVA Camp Generator	535.50	
600-A Babbel Counter	350.00	
2-700 probes	400.00	
	32330.23	7005.00
Equipment Insurance (est.)		2000.00
		9005.00

(e) Rehabilitation and Repairs
Rehabilitate Company Housing facilities now on property. Winterize cabin and equip with stove, lights etc. 300.00

(f) Installations
Company owned trailer to be used for Drillers quarters. @ 13/60 cost 200.00

(g) Miscellaneous
1. Repairs and Maintenience of Operating Equipment

Drill Rig
Welding
Materials for maintenience of drill 300.00

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6 (g) (Cont.) (Materials for maintenience of drill)

Rod lubricators for 5x6 Pump	15.00	
2 grease guns w/extension hose	17.00	
ARO Grease Dispenser	20.00	
300 lb. Tool Jt. Compound	63.00	
Lubriplate @ 6.50/35lb	50.00	
5 Dope Brushes	10.00	
3 Boxes lube sticks	4.00	
Rod packing @ 1.50/lb	15.00	
Valve rubbers @ 1.10 each	50.00	
Grease fittings @ .10	3.00	
3 Golden Rod Oilers	8.00	
Wing guide valves	300.00	
2 pressure hoses and wash out pipe	150.00	
1 suction hose	50.00	
Pull down chains replacement	150.00	
3 sets pump rods	100.00	
		1015.00
Mechanics materials and fees		1000.00
2. Analytical work		
Sampling and assaying		1000.00
3. Accounting		
To be contracted from Cooper-McGaughey CPA firm @ 250.00/mo.		4500.00
Workmans Compensation @ 3.302%	1138.03	
Employers liability insurance @ 0.206%	71.05	
Payroll taxes		
FICA @ 2.0% up to 3500		
State UCI @ 2.7% up to 3000		
Federal UCI @ 0.3% up to 3000		
Estimated	1035.09	
		2245.00

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6 (h) Contingencies
Unforseen equipment failures, lost drill pipe and probing equipment due to cored holes, etc. 5000.00

Total Project Costs 92,200.00

7. (a) Yes
(b) We propose to furnish our share of the costs through the use of Company owned equipment plus whatever additional money may be required. A copy of the June Balance Sheet for the Walter Duncan Mining Company and the Walter Duncan Drilling Company is included here to show the financial status of the organization. If additional monies are required for completion of the project, they will be supplied by Walter Duncan Jr.

WALTER DUNCAN MINING CO
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WALTER DUNCAN DRILLING COMPANY
BALANCE SHEET
June 30, 1954

Assets

Current assets		
Cash in bank		$30,000.00
Accounts receivable - trade		281.89
Accounts receivable - capital contributions		20,100.00
Total current assets		$50,381.89
Fixed assets		
Equipment	$28,515.17	
Less reserve for depreciation	335.85	
Net fixed assets		28,179.32
Other assets		
Prepaid insurance		208.37
Total assets		$78,769.58

Liabilities

Accounts payable - trade		$31,928.31
Accounts payable - other		20,100.00
Accrued F.I.C.A. tax		25.65
Accrued Federal withholding tax		75.60
Accrued unemployment compensation taxes		18.33
Accrued payroll		340.20
Accrued payroll insurance		58.04
Total current liabilities		$52,546.13

Capital

Capital investment		
Walter Duncan	$ 9,900.00	
J. Walter Duncan, Jr.	12,000.00	
Vincent J. Duncan	4,500.00	
Raymond T. Duncan	2,100.00	
Charles R. Butler	1,500.00	
Total capital contributions	$30,000.00	
Net (loss) - month of June 1954	(3,776.55)	
Net capital		26,223.45
Total liabilities and capital		$78,769.58

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

WALTER DUNCAN MINING COMPANY
BALANCE SHEET
June 30, 1954

Assets

Current assets		
Cash in bank		$ 21,935.90
Notes receivable		3,610.53
Accounts receivable		
Ore sales	$23,091.23	
Employees	312.10	
Other	340.00	23,743.33
Inventories		
Explosives	$ 3,282.71	
Employee supplies	156.48	3,439.19
Prepaid insurance		5,042.61
Prepaid royalty - King Tutt		200.00
Total current assets		$ 57,971.56
Fixed assets		
Cost	$83,216.61	
Less reserve for depreciation	24,089.39	59,127.22
Other assets		
Deferred road construction costs	$ 6,000.00	
Less reserve for amortization	2,490.47	3,509.53
Leaseholds		14,119.37
Deposits		289.00
Total assets		$135,016.68

Liabilities

Current liabilities		
Accounts payable		$ 8,512.05
Accrued payroll		3,840.53
Accrued F.I.C.A. taxes		1,031.98
Accrued U.C.I. taxes		878.08
Accrued withholding tax		1,313.49
Accrued royalty payable		405.91
Accrued hospitalization payable		42.30
Accrued payroll insurance payable		1,867.66
Total liabilities		$ 17,892.00
Investments		
Walter Duncan Oil Properties		
Net investment, January 1, 1954	$131,859.30	
Net (decrease) in investment, January 1, 1954 to June 30, 1954	(44,249.72)	
	$ 87,609.58	
Profit - year to date	29,515.10	
Total investment		117,124.68
Total liabilities and investment		$135,016.68

MINERALS ENGINEERING COMPANY
P. O. BOX 957
GRAND JUNCTION, COLORADO

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

November 5, 1954

Walter Duncan Mining Company
P.O. Box #1468
Cortez, Colorado

Attention: Mr. Charles R. Butler

Dear Sir:

In reply to your letter of Nov. 3, 1954, and my telephone conversation with you this morning, please accept the following quotations as our bid for a minimum of 2500 feet of Diamond Drilling in Lisbon Valley Area, to a maximum depth of 800 feet with coring on the last 40 feet in each hole:

Depth	Price per foot	
	Plug Bit	BX Core
0-200 feet	$2.35	$2.60
200-400 feet	$2.85	3.35
400-600 feet	$3.85	4.85
600-800 feet	$4.35	6.75

We also submit our bid on coring only the holes which you would plug, supply, set and pull casing.

We would expect 40 feet of BX Coring in each hole at depths averaging 550 feet, but could be to a depth of 800 feet.

Depth	Price per foot
400-600 feet	$6.50
600-800 feet	$7.75

We have a charge for drill Standby Time of $12.00 per hour. This is time standing by for probing holes, waiting for drill sites, etc.

It will be a pleasure to hear from you concerning this bid.

Very truly yours,

MINERALS ENGINEERING COMPANY

Edson Foster

Edson Foster
Assistant Drill Superintendent

EF/brd.

Walter Duncan
Oil Properties
2212 First National Building
Oklahoma City, Oklahoma

November 22, 1954

STATEMENT OF FINANCIAL POSITION OF
J. WALTER DUNCAN, JR.

In addition to the material furnished herewith, including a statement of the financial condition of the Walter Duncan Mining Company, I would like to give The First National Bank of Oklahoma City, The La Salle State Bank of La Salle, Illinois, and The First National Bank of Dallas, Texas as references.

The applicant for this loan is worth in excess of $250,000.00.

Very truly yours,

J Walter Duncan, Jr.

J. Walter Duncan, Jr.

WD:DB

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

A G R E E M E N T

THIS AGREEMENT, made and entered into this 7th day of May, 1954, by and between QUENTON S. BULLOCK, of Bryan, Texas, (hereinafter referred to as the Assignor), and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the Assignee),

W I T N E S S E T H :

WHEREAS, Assignor is the locator of certain five (5) unpatented mining claims more fully described on Exhibit "A" attached hereto, which claims are believed to have been located on lands subject to prior federal oil and gas leases; and

WHEREAS, Assignor is making an application to the Atomic Energy Commission under Circular 7 for a validating lease on all of said unpatented mining claims, and Assignor desires to assign such lease and his interest in said mining claims unto Assignee;

NOW, THEREFORE, THESE PRESENTS:

1. Assignment:

(a) For and in consideration of the sum of One Dollar ($1.00) and of the royalties hereinafter reserved and the payments, covenants and agreements herein contained to be paid, kept and performed by Assignee, the Assignor hereby agrees that at such time as the said validating lease is granted by the Atomic Energy Commission, he will assign and transfer such lease and his interest in the claims described on Exhibit "A" unto Assignee upon the terms and conditions hereinafter set forth and take all necessary action to obtain approval of such assignment from the Atomic Energy Commission.

(b) TO HAVE AND TO HOLD unto Assignee, his successors, heirs and assigns, from the date of the assignment of such lease and extending for the full term of such lease, including any extensions or renewals thereof, which may be granted by the Atomic Energy Commission, unless these presents be sooner surrendered, forfeited or terminated as hereinafter provided.

2. Advance Royalty:

(a) There shall be paid unto Assignor an advance royalty of Fifty Dollars ($50.00) per acre of land which is actually covered and validated by the said lease executed by the Atomic Energy Commission.

WALTER DUNCAN MINING CO.
P. O. BOX 1468 - CORTEZ, C

(b) The advance royalty as specified above shall be paid as follows: The sum of Five Hundred Dollars ($500.00) shall be paid upon the execution of these presents, receipt whereof is hereby acknowledged by the Assignor; the balance shall be determined according to the provisions of 2(a) above at such time as the aforementioned validating lease is executed and approved for assignment unto Assignee by the Atomic Energy Commission. Within ten (10) days of such approval of assignment, the Assignee shall pay the balance of such advance royalty or shall surrender and release unto Assignor all of his rights and interest created hereunder in said mining claims, in which event these presents shall terminate and Assignor shall retain all of said initial payment of $500.00.

3. Royalty:

(a) Any assignment of the above specified validating lease made to Assignee hereunder shall specifically reserve unto Assignor a royalty of fifteen per cent (15%) of the gross returns received from ores mined and removed from the property covered by said validating lease, such royalty to be calculated by excluding transportation and development allowances but including any discovery and production bonuses.

(b) The Assignee shall be entitled to deduct and retain one-third (1/3) of the royalty above reserved to Assignor until he has recovered in full all sums paid as advance royalty pursuant to paragraph two (2) above.

4. Work Requirement:

(a) Within one (1) year after approval of assignment of said lease unto Assignee, Assignee shall either complete one (1) exploratory drill hole penetrating the ore horizon for each fifteen (15) acres included within the said validating lease, or shall surrender unto Assignor all of his rights hereunder and reassign said lease unto Assignor.

(b) Subsequent to one (1) year after approval of Assignment of said validating lease, in the event Assignee elects to continue operations hereunder, Assignee shall with reasonable diligence and continuity conduct exploration, mining or development activities on the property.

(c) During the term of this agreement as specified in paragraph 1(b) hereof, unless sooner terminated or surrendered, Assignee shall perform

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or render all work, reports and acts incumbent upon the Lessee by the terms of the assigned validating lease, and in addition, in the event that some of the claims covered by this agreement are not subject to prior federal oil and gas leases, Assignee shall perform at least One Hundred Dollars ($100.00) worth of work per year upon or with respect to each of such claims and shall file an affidavit attesting to such work with the County Recorder of San Juan County, Utah; such work shall be completed and such affidavit shall be filed not later than June 1 of each year. It is understood, however, that the work requirement specified in this subsection (c) is not an additional requirement but may be a part of the requirements above specified.

(d) Assignee shall perform all of the work incumbent upon him under the terms hereof in good faith and in accordance with good mining practice and in full compliance with all applicable health and safety laws and regulations of federal, state and local governmental authorities. Assignee agrees to hold Assignor harmless from any liability directly resulting from Assignee's operations hereunder.

5. Validation of Titles:

(a) Assignor specifically represents that he has not knowingly alienated or encumbered any interest in the property covered hereby.

(b) The parties hereto understand that Assignee may make application for a Defense Minerals Exploration Administration loan to cover a portion of the exploratory expense incurred by Assignee in connection with the claims covered by these presents, in which event Assignor agrees to execute such papers, including consent to lien, as may be required by the governmental lending agency in connection with such loan. It is specifically understood and agreed, however, that repayment of any such loan shall in no manner decrease or effect the royalties reserved unto Assignor by paragraph three (3) hereof.

(c) In the event of the passage of subsequent legislation affecting the title to the claims covered hereby or in the event that certain of such claims are found to be not subject to federal oil and gas leases, the parties agree that they will, in good faith, jointly and severally, take such

Bullock's
address

WALTER DUNCAN MINING CO.
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actions and steps and execute such further instruments as may be necessary to effectuate and achieve the full intents and purposes of this agreement.

6. Right of Surrender:

(a) Notwithstanding anything to the contrary herein contained, Assignee shall have the option at any time, upon thirty (30) days written notice to Assignor, to terminate this Agreement and reassign said validating lease to Assignor. In the event of any such termination or reassignment, Assignee shall perform all work then due under the terms and provisions of this Agreement or under said lease or assignment, and thereafter the parties hereto shall be relieved of any further duties, liabilities or responsibilities under this Agreement or under said lease or the assignment thereof.

7. Forfeiture:

(a) In the event that Assignee shall fail to perform any of the covenants or duties incumbent upon him by the terms of this Agreement, or under said validating lease or assignment thereof, the Assignor shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a period of thirty (30) days from service thereof, cure or correct such failure to perform. In the event that Assignee shall fail or refuse within said thirty (30) day period to enter in good faith upon the correction of such default in performance and to carry out such correction to completion thereafter with due diligence, then Assignor shall have the privilege, at his option, of declaring this Agreement and said assignment forfeited and null and void.

8. Notices:

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

Quenton S. Bullock
P. O. Box 322
Bryan, Texas

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

Notice directed to Assignee shall bear the following address:

Walter Duncan
2212 First National Building
Oklahoma City, Oklahoma

9. Assignor's Right to Access and Information:

(a) Assignor reserves the right at all reasonable times to enter upon the property covered hereby for the purpose of inspection. In addition, Assignee agrees to furnish Assignor from time to time as compiled and prepared, upon request of Assignor, copies of all maps, drill logs, reports and other data resulting from the investigation, exploration and mining activities of Assignee hereunder.

10. Benefit:

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

IN WITNESS WHEREOF, the parties hereto have executed the within Agreement the day and year first above written.

Quentin S. Bullock
Assignor

_____
Assignee

STATE OF UTAH)
) ss.
COUNTY OF SAN JUAN)

Before me, a Notary Public within and for the County and State aforesaid, personally appeared Quenton S. Bullock and acknowledged that he executed the foregoing Agreement as his free and voluntary act and deed for the intents and purposes therein specified.

Witness my hand and notarial seal this 7th day of May, 1954.

My commission expires Jan. 20, 1955.

Pearl Butt
Notary Public

WALTER DUNCAN MINING CO.
BITUMINOUS 146 — CORTEZ, COLORADO

STATE OF OKLAHOMA)
) ss.
COUNTY OF OKLAHOMA)

Before me, a Notary Public within and for the County and State aforesaid, personally appeared J. Walter Duncan, Jr., and acknowledged that he executed the foregoing Agreement as his free and voluntary act and deed for the intents and purposes therein specified.

Witness my hand and notarial seal this _____ day of _____, 1954.

My commission expires _____.

_____
Notary Public

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

EXHIBIT A

The following described unpatented mining claims located in San Juan County, Utah, the location certificates of which appear of record in the office of the Recorder of said County and State, to-wit:

Claim Name	Location Book	Certificate Page	Notice of Lease Application Book	Page
Paragon #2	35	106	61	418
Paragon #4	35	107	61	418
Paragon #5	35	107	61	419
Paragon #6	37	84	61	419
Paragon #7	37	85	61	420
Paragon # 8	37	85		

AGREEMENT

THIS AGREEMENT made and entered into this 22nd day of April, 1954, by and between G. O. PATTERSON, of Moab, Utah, FLOYD B. JENKINS of Grand Junction, Colorado, LYLE FRANCIS, of Moab, Utah, RUPERT JENKINS, of Moab, Utah, and FRANK L. SEYMOUR, of Grand Junction, Colorado, (hereinafter referred to as the "Assignors") and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the "Assignee"), WITNESSETH:

WHEREAS, Assignors are all the locators of certain nineteen (19) unpatented mining claims more fully described on Exhibit "A" attached hereto, which claims are believed to have been located on lands subject to prior Federal Oil and Gas leases; and

WHEREAS, Assignors are making an application to the Atomic Energy Commission under Circular 7 for a validating lease on all of said unpatented mining claims, and Assignors desire to assign such lease and their interest in said mining claims unto Assignee:

NOW, THEREFORE, THESE PRESENTS:

1. Assignment:

(a) For and in consideration of the sum of One Dollar and of the royalties hereinafter reserved and the payments, covenants and agreements herein contained to be paid, kept and performed by Assignee, the Assignors hereby agree that at such time as the said validating lease is granted by the Atomic Energy Commission they will assign and transfer such lease and their interest in the claims described on Exhibit "A" unto Assignee upon the terms and conditions hereinafter set forth and take all necessary action to obtain approval of such assignment from the Atomic Energy Commission.

(b) TO HAVE AND TO HOLD unto Assignee, his successors, heirs and assigns, from the date of the assignment of such lease and extending for the full term of such lease including any extensions or renewals thereof which may be granted by the Atomic Energy Commission, unless these presents be sooner surrendered, forfeited or terminated as hereinafter provided.

2. Advance Royalty:

(a) There shall be paid unto Assignors an advance royalty of One Thousand Dollars ($1,000.00) per claim which are actually covered and validated by the said lease executed by the Atomic Energy Commission. It is understood, however, that for any of such claims containing less than 15 acres of area as validated such advance royalty shall be reduced to Seven Hundred Fifty Dollars ($750.00) and that for any such claims containing less than five (5) acres of area as validated no advance royalty shall be paid.

(b) The advance royalty as specified above shall be paid as follows: The sum of Six Thousand Three Hundred Thirty-three and 33/100 Dollars ($6,333.33) paid upon the execution of these presents, receipt whereof is hereby acknowledged by the Assignors. The balance shall be calculated according to the provisions of Paragraph 2 (a) above at such time as the aforementioned validating lease is executed and approved for assignment unto Assignee by the Atomic Energy Commission. Within ten (10) days of such approval of assignment, the Assignee shall pay the balance of such advance royalty or shall surrender and release unto Assignors all of his rights and interest created hereunder in said mining claims, in which event these presents shall terminate and Assignors shall retain all of said initial payment of $6,333.33, provided, that in the event the mining claims actually covered by said validating lease are entitled to a total advance royalty, as calculated under paragraph 2(a) above, of less than the said $6,333.33, then and in that event, the Assignors will repay to Assignee the difference between the total advance royalty as then calculated and the said $6,333.33 this day paid to said Assignors, whether or not Assignee elects to surrender his rights hereunder or take an assignment of such validating lease and proceed hereunder.

3. Royalty:

(a) Any assignment of the above specified validating lease made to Assignee hereunder shall specifically reserve unto Assignors a royalty of fifteen percent (15%) of the gross returns received from ores mined and removed from the property covered by said validating lease, such royalty to be calculated by excluding transportation and development allowances but including any discovery and production bonuses.

( ) The Assignee shall be entitled to deduct and retain one-third (1/3) of the royalty above reserved to Assignors until he has recovered in full all sums paid as advance royalty pursuant to paragraph two ( ) above.

4. Work Requirement:

(a) Within sixty ( ) days after approval of the assignment of the validating lease as herein provided, in the event Assignee has elected to proceed further under these presents, Assignee shall enter possession of the property covered by such lease and commence exploratory drilling or work directly incident thereto such as road building. Within one year after approval of assignment of said lease, Assignee shall either complete twenty thousand feet (20,000) of such exploratory drilling or encounter ore in commercial quantities and commence operations to develop, mine and remove such ore or shall surrender unto Assignors all of his rights hereunder and reassign said lease unto Assignors. Assignee shall not be entitled to commence actual drilling operations on the property included hereunder until Assignee has paid the total amount of advance royalty due as calculated under paragraph two (2) hereof.

(b) The drilling requirement specified in paragraph 4(a) above is based upon the assumption that nineteen (19) mining claims having an area of at least fifteen (15) acres each shall be validated by lease, or otherwise, and assigned to Assignee hereunder, and in the event that a less number of claims or total area than above contemplated is assigned hereunder, the said drilling requirement shall be reduced, in proportion to the decrease in acreage. It being understood that two hundred eighty five (285) acres is to be considered the total acreage hereunder contemplated for purposes of calculating the number of feet of drilling to be accomplished. In no instance is Assignee to be obligated to drill more than twenty thousand feet.

(c) During the ten month's period commencing sixty (60) days after approval of the assignment of said validating lease Assignee agrees to pay Assignors the sum of $500.00 cash for any calendar month during which no drilling is done nor work incidental thereto is accomplished on the premises covered hereby unless this agreement is sooner terminated pursuant to its terms and provisions.

(d) Subsequent to one year after the date of approval of assignment of said validating lease, in the event Assignee elects to continue operations hereunder, Assignee shall with reasonable diligence and continuity conduct exploration, mining or development activites on the property.

(e) During the term of this agreement as specified in Paragraph 1 (b) hereof, unless sooner terminated or terminated, Assignee shall perform or render all work, report and acts incumbent upon the Lessee by the terms of the assigned validating lease, and in addition, in the event that some of the claims covered by this agreement are not subject to prior Federal Oil and Gas Leases, Assignee shall perform at least $100.00 worth of work per year upon or with respect to each of such claims and shall file an affidavit attesting to such work with the County Recorder of San Juan County, Utah; such work shall be completed and such affidavit shall be filed not later than June 1st of each year. It is understood, however, that the work requirement specified in this subsection (d) is not an additional requirement but may be a part of the requirements above specified.

(f) Assignee shall perform all of the work incumbent upon him under the terms hereof in good faith and in accordance with good mining practice and in full compliance with all applicable health and safety laws and regulations of Federal, State and Local governmental authorities. Assignee agrees to hold Assignors harmless from any liability directly resulting from Assignee's operations hereunder.

5. Validation of Titles:

(a) The parties hereto agree severally and in cooperation to take such steps and actions as may be necessary to expedite the issuance and assignment of validating leases by the Atomic Energy Commission pursuant to Circular 7 covering such of said nineteen (19) claims as may come within the purview of such Circular. With respect to any of such claims as may be not subject to the provisions of said Circular 7, the parties agree to take such actions or steps as may be necessary to establish the titles of such claims.

(b) Assignors specifically warrant that they or any of them have not knowingly alienated or encumbered any interest in the property covered hereby and such Assignors hereby warrant the title as against all and every person or persons lawfully claiming or to claim the whole or any part of such property through or under said Assignors or any of them in the manner above stated.

(c) The parties hereto understand that Assignee may make application for a Defense Minerals Exploration Administration loan to cover a portion of the exploratory expense incurred by Assignee in connection with the claims covered by these presents, in which event Assignors agree to execute such papers, including consent to lien, as may be required by the governmental lending agency in connection with such loan. It is specifically understood and agreed, however, that repayment

of any such loan shall in no manner decrease or effect the royalties reserved unto Assignors by paragraph 3 hereof.

(d) In the event of the passage of subsequent legislation affecting the title to the claims covered hereby or in the event that certain of such claims are found to be not subject to Federal Oil and Gas Leases, the parties agree that they will, in good faith, jointly and severally, take such actions and steps and execute such further instruments as may be necessary to effectuate and achieve the full intents and purposes of this agreement.

6. Right of Surrender:

(a) Notwithstanding anything to the contrary herein contained, Assignee shall have the option at any time, upon thirty (30) days written notice to Assignors, to terminate this Agreement and reassign said validating lease to Assignors. In the event of any such termination or reassignment, Assignee shall perform all work then due under the terms and provisions of this Agreement or under said lease or assignment, and thereafter the parties hereto shall be relieved of any further duties, liabilities or responsibilities under this Agreement or under said lease or the Assignment thereof.

7. Forfeiture:

(a) In the event that Assignee shall fail to perform any of the covenants or duties incumbent upon him by the terms of this Agreement, or under said validating lease or assignment thereof, the Assignors shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a period of thirty (30)days from service thereof, cure or correct such failure to perform. In the event that Assignee shall fail or refuse within said thirty (30) day period to enter in good faith upon the correction of such default in performance and to carry out such correction to completion thereafter with due diligence, then Assignors shall have the privilege, at their option, of declaring this Agreement and said assignment forfeited and null and void.

8. Notices:

(a) Any written notice required under the terms of this Agreement or under the terms of said lease or assignment thereof, shall be deemed validly served and such service complete when the same has been deposited in the United States mail for transmittal by ordinary mail in a properly stamped and addressed

Seymour's
address

envelope. Notice directed to Assignors shall bear the following address:

Frank L. Seymour
217 Main Street
Grand Junction, Colorado

Notices directed to Assignee shall bear the following address:

Walter Duncan
211 First National Building
Oklahoma City, Oklahoma

9. Designation of Depository:

(a) The Assignors hereby designate the United States Bank of Grand Junction in Grand Junction, Colorado, as the depository for all payments and royalties hereafter which may be paid hereunder and such Assignors agree that payment to such bank or depository shall be deemed to be payment to the Assignors at the time that such payment is received by such bank.

10. Assignors Right to Access and Information:

(a) Assignors reserve the right at all reasonable times to enter upon the property covered hereby for the purpose of inspection. In addition Assignee agrees to furnish Assignors from time to time as compiled and prepared, upon request of Assignors, copies of all maps, drill logs, reports and other data resulting from the investigation, exploration and mining activities of Assignee hereunder.

Benefit

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

IN WITNESS WHEREOF the parties hereto have executed the within Agreement the day and year first above written.

Edward B. Jenkins

Assignors

Walter Duncan, Jr.

Assignee

RUPERT JENKINS, IRENE S. JENKINS, DAISY E. JENKINS, FLOYD JENKINS, FRANK L. SEYMOUR, DORIS SEYMOUR personally appeared before me this_____ day of April, 1954, and subscribed their names to the foregoing agreement.

Irene Martin
Notary Public

My commission expires August 19, 1957.

J. WALTER DUNCAN, JR. personally appeared before me this 22nd day of April, 1954, and subscribed his name to the foregoing agreement.

XXXXXXXXXXXXXXXXXXXXX
Notary Public

My commission expires August 8, 1957.

State of Utah }
County of [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

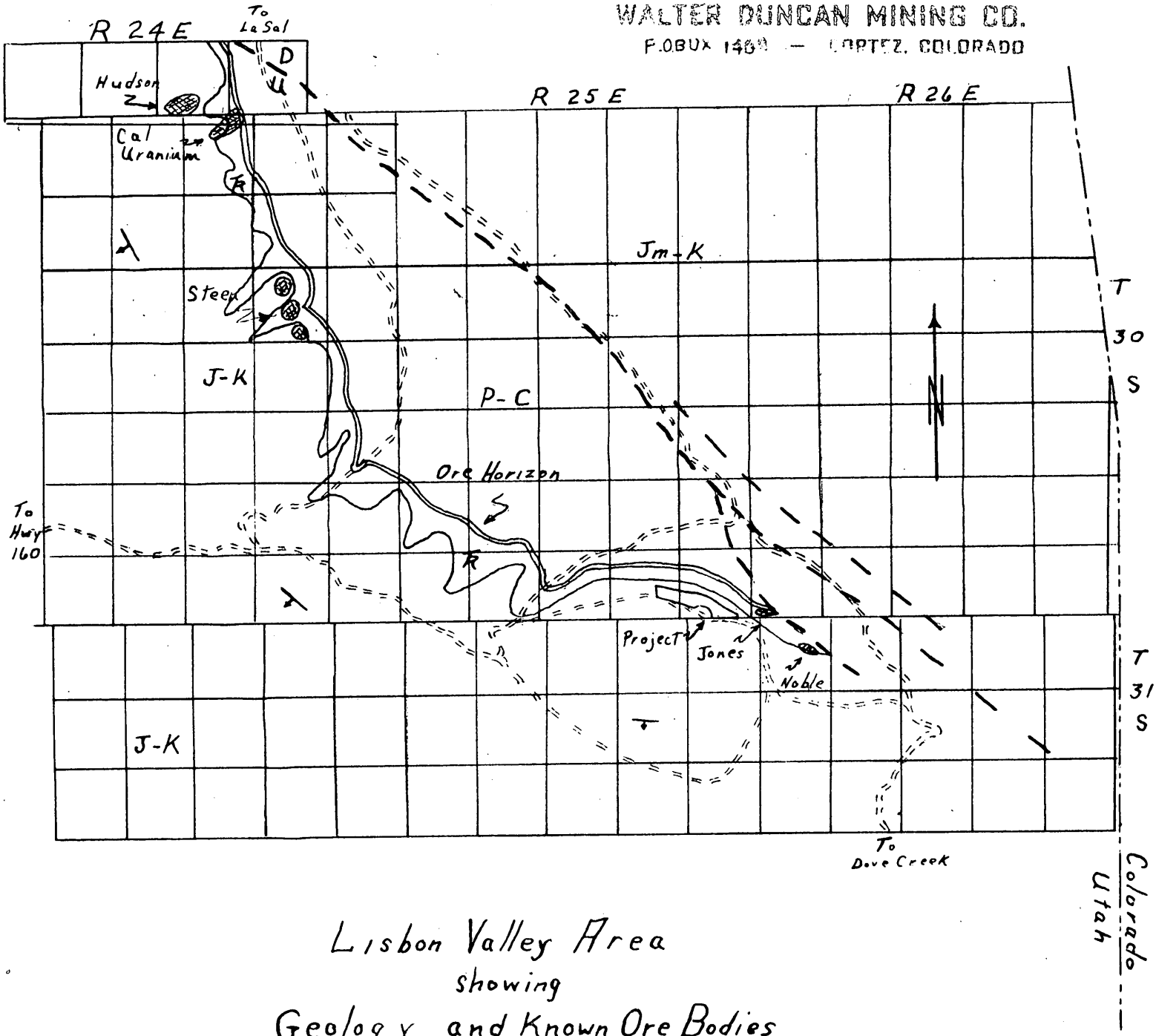
EXHIBIT A

The following described unpatented mining claims located in San Juan County, Utah, the location certificates of which appear of record in the office of the Recorder of said County and State, to-wit:

Claim Name	Book	Page
White Rock No. 1	55	493
White Rock No. 2	55	493
White Rock No. 3	55	494
White Rock No. 4	55	494
Red Rocks No. 1	23	26
Red Rocks No. 2	23	27
Red Rocks No. 3	23	27
Red Rocks No. 4	23	28
Red Rocks No. 5	23	28
Red Rocks No. 7	23	29
Black King No. 10	23	82
Black King No. 11	23	82
Sunney Brook	23	22
Four Roses No. 1	21	443
Hot Spot No. 1	51	390
Hot Spot No. 2	51	391
Hot Spot No. 3	51	391
Hot Spot No. 4	51	392
Hot Spot No. 5	51	392

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

WALTER DUNCAN MINING CO.
P.O.BOX 1460 — CORTEZ, COLORADO



Lisbon Valley Area
showing
Geology and Known Ore Bodies
1" = 2 miles

C - Pennsylvanian
P - Permian
Ꞧ - Triassic Chinle fm
J-K Jurassic + Cretaceous
— — Fault
Ore body

PLATE I

WALTER DUNCAN MINING COMPANY
P. O. BOX 1468
CORTEZ, COLORADO.

May 19, 1955

Mr. W. M. Traver
224 New Customs House
Denver 2, Colorado

Re: D.M.E.A. 3582

Dear Mr. Traver:

I am enclosing the following documents and data requested by you in your letter of May 13, 1955.

1. Copy of Bullock Lease,

2 &3 Copy of Red Rock, White Rock, et al., Leases,

4. Five Copies of the Patterson Fraction Agreement,

5. Data on Patterson Fraction (Recorded in Book 273, Page 204),

6. Consent to Lien Forms for Patterson Fraction, signed by Frank L. Seymour,

7&8. You requested additional Consent to Lien signatures for the White Rock and Red Rock Groups, however, the Consent to Lien papers you now have include all the owners of the particular Claims mentioned. Some confusion was caused in this matter by the fact that the ownerships of the various Claims are somewhat different, and the Lease Agreement submitted with the D.M.E.A., Application includes all the owners of all the Claims.

Very truly yours,

Charles R Butler

Charles R. Butler, Manager
WALTER DUNCAN MINING COMPANY

CRB:rfb
Enc.

WALTER DUNCAN MINING COMPANY
P. O. BOX 1468
CORTEZ, COLORADO.

May 19, 1955

Mr. W. M. Traver
224 New Customs House
Denver 2, Colorado

Re: D.M.E.A. 3582

Dear Mr. Traver:

I am enclosing the following documents and data requested by you in your letter of May 13, 1955.

1. Copy of Bullock Lease,

2 & 3 Copy of Red Rock, White Rock, et al., Leases,

4. Five Copies of the Patterson Fraction Agreement,

5. Data on Patterson Fraction (Recorded in Book 273, Page 204),

6. Consent to Lion Form for Patterson Fraction, signed by Frank L. Seymour,

7 & 8. You requested additional Consent to Lion signatures for the White Rock and Red Rock Groups, however, the Consent to Lion papers you now have include all the owners of the particular Claims mentioned. Some confusion was caused in this matter by the fact that the ownerships of the various Claims are somewhat different, and the Lease Agreement submitted with the D.M.E.A., Application includes all the owners of all the Claims.

Very truly yours,

Charles R. Butler

Charles R. Butler, Manager
WALTER DUNCAN MINING COMPANY

CRB:rm:fb
Enc.

(1)

Division of the Interior
Bureau of Mines
Minerals Administration
RECEIVED

A G R E E M E N T

THIS AGREEMENT, made and entered into this 7th day of May, 1954, by and between QUENTIN S. BULLOCK, of Bryan, Texas, (hereinafter referred to as the Assignor), and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the Assignee),

W I T N E S S E T H :

WHEREAS, Assignor is the locator of certain five (5) unpatented mining claims more fully described on Exhibit "A" attached hereto, which claims are believed to have been located on lands subject to prior federal oil and gas leases; and

WHEREAS, Assignor is making an application to the Atomic Energy Commission under Circular 7 for a validating lease on all of said unpatented mining claims, and Assignor desires to assign such lease and his interest in said mining claims unto Assignee;

NOW, THEREFORE, THESE PRESENTS:

1. Assignment:

(a) For and in consideration of the sum of One Dollar ($1.00) and of the royalties hereinafter reserved and the payments, covenants and agreements herein contained to be paid, kept and performed by Assignee, the Assignor hereby agrees that at such time as the said validating lease is granted by the Atomic Energy Commission, he will assign and transfer such lease and his interest in the claims described on Exhibit "A" unto Assignee upon the terms and conditions hereinafter set forth and take all necessary action to obtain approval of such assignment from the Atomic Energy Commission.

(b) TO HAVE AND TO HOLD unto Assignee, his successors, heirs and assigns, from the date of the assignment of such lease and extending for the full term of such lease, including any extensions or renewals thereof, which may be granted by the Atomic Energy Commission, unless these presents be sooner surrendered, forfeited or terminated as hereinafter provided.

2. Advance Royalty:

(a) There shall be paid unto Assignor an advance royalty of Fifty Dollars ($50.00) per acre of land which is actually covered and validated by the said lease executed by the Atomic Energy Commission.

(b) The advance royalty as specified above shall be paid as follows: The sum of Five Hundred Dollars ($500.00) shall be paid upon the execution of these presents, receipt whereof is hereby acknowledged by the Assignor; the balance shall be determined according to the provisions of 2(a) above at such time as the aforementioned validating lease is executed and approved for assignment unto Assignee by the Atomic Energy Commission. Within ten (10) days of such approval of assignment, the Assignee shall pay the balance of such advance royalty or shall surrender and release unto Assignor all of his rights and interest created hereunder in said mining claims, in which event these presents shall terminate and Assignor shall retain all of said initial payment of $500.00.

3. Royalty:

(a) Any assignment of the above specified validating lease made to Assignee hereunder shall specifically reserve unto Assignor a royalty of fifteen per cent (15%) of the gross returns received from ores mined and removed from the property covered by said validating lease, such royalty to be calculated by excluding transportation and development allowances but including any discovery and production bonuses.

(b) The Assignee shall be entitled to deduct and retain one-third (1/3) of the royalty above reserved to Assignor until he has recovered in full all sums paid as advance royalty pursuant to paragraph two (2) above.

4. Work Requirement:

(a) Within one (1) year after approval of assignment of said lease unto Assignee, Assignee shall either complete one (1) exploratory drill hole penetrating the ore horizon for each fifteen (15) acres included within the said validating lease, or shall surrender unto Assignor all of his rights hereunder and reassign said lease unto Assignor.

(b) Subsequent to one (1) year after approval of Assignment of said validating lease, in the event Assignee elects to continue operations hereunder, Assignee shall with reasonable diligence and continuity conduct exploration, mining or development activities on the property.

(c) During the term of this agreement as specified in paragraph 1(b) hereof, unless sooner terminated or surrendered, Assignee shall perform

or render all work, reports and acts incumbent upon the Lessee by the terms of the assigned validating lease, and in addition, in the event that some of the claims covered by this agreement are not subject to prior federal oil and gas leases, Assignee shall perform at least One Hundred Dollars ($100.00) worth of work per year upon or with respect to each of such claims and shall file an affidavit attesting to such work with the County Recorder of San Juan County, Utah; such work shall be completed and such affidavit shall be filed not later than June 1 of each year. It is understood, however, that the work requirement specified in this subsection (c) is not an additional requirement but may be a part of the requirements above specified.

(d) Assignee shall perform all of the work incumbent upon him under the terms hereof in good faith and in accordance with good mining practice and in full compliance with all applicable health and safety laws and regulations of federal, state and local governmental authorities. Assignee agrees to hold Assignor harmless from any liability directly resulting from Assignee's operations hereunder.

5. Validation of Titles:

(a) Assignor specifically represents that he has not knowingly alienated or encumbered any interest in the property covered hereby.

(b) The parties hereto understand that Assignee may make application for a Defense Minerals Exploration Administration loan to cover a portion of the exploratory expense incurred by Assignee in connection with the claims covered by these presents, in which event Assignor agrees to execute such papers, including consent to lien, as may be required by the governmental lending agency in connection with such loan. It is specifically understood and agreed, however, that repayment of any such loan shall in no manner decrease or effect the royalties reserved unto Assignor by paragraph three (3) hereof.

(c) In the event of the passage of subsequent legislation affecting the title to the claims covered hereby or in the event that certain of such claims are found to be not subject to federal oil and gas leases, the parties agree that they will, in good faith, jointly and severally, take such

actions and steps and execute such further instruments as may be necessary to effectuate and achieve the full intents and purposes of this agreement.

6. Right of Surrender:

(a) Notwithstanding anything to the contrary herein contained, Assignee shall have the option at any time, upon thirty (30) days written notice to Assignor, to terminate this Agreement and reassign said validating lease to Assignor. In the event of any such termination or reassignment, Assignee shall perform all work then due under the terms and provisions of this Agreement or under said lease or assignment, and thereafter the parties hereto shall be relieved of any further duties, liabilities or responsibilities under this Agreement or under said lease or the assignment thereof.

7. Forfeiture:

(a) In the event that Assignee shall fail to perform any of the covenants or duties incumbent upon him by the terms of this Agreement, or under said validating lease or assignment thereof, the Assignor shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a period of thirty (30) days from service thereof, cure or correct such failure to perform. In the event that Assignee shall fail or refuse within said thirty (30) day period to enter in good faith upon the correction of such default in performance and to carry out such correction to completion thereafter with due diligence, then Assignor shall have the privilege, at his option, of declaring this Agreement and said assignment forfeited and null and void.

8. Notices:

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

Quenton S. Bullock
P. O. Box 322
Bryan, Texas

Notice directed to Assignee shall bear the following address:

Walter Duncan
2212 First National Building
Oklahoma City, Oklahoma

9. Assignor's Right to Access and Information:

(a) Assignor reserves the right at all reasonable times to enter upon the property covered hereby for the purpose of inspection. In addition, Assignee agrees to furnish Assignor from time to time as compiled and prepared, upon request of Assignor, copies of all maps, drill logs, reports and other data resulting from the investigation, exploration and mining activities of Assignee hereunder.

10. Benefit:

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

IN WITNESS WHEREOF, the parties hereto have executed the within Agreement the day and year first above written.

Quentin S. Bullock
Assignor

Assignee

STATE OF UTAH)
) ss.
COUNTY OF SAN JUAN)

Before me, a Notary Public within and for the County and State aforesaid, personally appeared Quenton S. Bullock and acknowledged that he executed the foregoing Agreement as his free and voluntary act and deed for the intents and purposes therein specified.

Witness my hand and notarial seal this 7th day of May, 1954.

My commission expires Jan. 20, 1955.

Pearl Butt
Notary Public

STATE OF OKLAHOMA)
) ss.
COUNTY OF OKLAHOMA)

Before me, a Notary Public within and for the County and State aforesaid, personally appeared J. Walter Duncan, Jr., and acknowledged that he executed the foregoing Agreement as his free and voluntary act and deed for the intents and purposes therein specified.

Witness my hand and notarial seal this _____ day of _____, 1954.

My commission expires _____.

_____
Notary Public

EXHIBIT A

The following described unpatented mining claims located in San Juan County, Utah, the location certificates of which appear of record in the office of the Recorder of said County and State, to-wit:

Claim Name	Location Certificate Book	Location Certificate Page	Notice of Lease Application Book	Notice of Lease Application Page
Paragon #2	35	106	61	418
Paragon #4	35	107	61	418
Paragon #5	35	107	61	419
Paragon #6	37	84	61	419
Paragon #7	37	85	61	420
Paragon #8	37	85		

(2) + (3)

... of the ...
... Minerals Administration
RECEIVED

ASSIGNMENT

THIS ASSIGNMENT made and entered into this 22nd day of April, 1954, by and between C. C. PATTON, of Moab, Utah, FLOYD B. JENKINS of Grand Junction, Colorado, [illegible] FRANCIS, of Moab, Utah, HERBERT JENKINS, of Moab, Utah, and FRANK L. SEYMOUR, of Grand Junction, Colorado, (hereinafter referred to as the "Assignors") and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the "Assignee"),

WITNESSETH:

WHEREAS, Assignors are all the locators of certain nineteen (19) unpatented mining claims more fully described on Exhibit "A" attached hereto, which claims are believed to have been located on lands subject to prior Federal Oil and Gas leases; and

WHEREAS, Assignors are making an application to the Atomic Energy Commission under Circular 7 for a validating lease on all of said unpatented mining claims, and Assignors desire to assign such lease and their interest in said mining claims unto Assignee;

NOW, THEREFORE, THIS WITNESSETH:

1. Assignment:

(a) For and in consideration of the sum of One Dollar and of the royalties hereinafter reserved and the payments, covenants and agreements herein contained to be paid, kept and performed by Assignee, the Assignors hereby agree that at such time as the said validating lease is granted by the Atomic Energy Commission they will assign and transfer such lease and their interest in the claims described on Exhibit "A" unto Assignee upon the terms and conditions hereinafter set forth and take all necessary action to obtain approval of such assignment from the Atomic Energy Commission.

(b) TO HAVE AND TO HOLD unto Assignee, its successors, heirs and assigns, from the date of the assignment of such lease and extending for the full term of such lease including any extensions or renewals thereof which may be granted by the Atomic Energy Commission, unless terminated, forfeited or [illegible] as hereinafter provided.

2. Advance Royalty:

(a) There shall be paid upto Assignors an advance royalty of One Thousand Dollars ($1,000.00) per claim which are actually covered and validated by the said lease executed by the Atomic Energy Commission. It is understood, however, that for any of such claims containing less than 25 acres of area as validated such advance royalty shall be reduced to Seven Hundred Fifty Dollars ($750.00) and that for any such claims containing less than five (5) acres of area as validated no advance royalty shall be paid.

(b) The advance royalty as specified above shall be paid as follows: The sum of Six Thousand Three Hundred Thirty-three and 33/100 Dollars ($6,333.33) paid upon the execution of these presents, receipt thereof is hereby acknowledged by the Assignors. The balance shall be calculated according to the provisions of Paragraph 2 (a) above at such time as the aforementioned validating lease is executed and approved for assignment unto Assignee by the Atomic Energy Commission. Within ten (10) days of such approval of assignment, the Assignee shall pay the balance of such advance royalty or shall surrender and release unto Assignors all of his rights and interest created hereunder in said mining claims, in which event these presents shall terminate and Assignors shall retain all of said initial payment of $6,333.33, provided, that in the event the mining claims actually covered by said validating lease are entitled to a total advance royalty, as calculated under paragraph 2(a) above, of less than the said $6,333.33, then and in that event, the Assignors will repay to Assignee the difference between the total advance royalty as then calculated and the said $6,333.33 this day paid to said Assignors, whether or not Assignee elects to surrender his rights hereunder or take an assignment of such validating lease and proceed hereunder.

3. Royalty:

(a) Any assignment of the above specified validating lease made to Assignee hereunder shall specifically reserve unto Assignors a royalty of fifteen percent (15%) of the gross returns received from ores mined and removed from the property covered by said validating lease, such royalty to be calculated by excluding transportation and development allowances but including any discovery and production bonuses.

(b) The Assignee shall be entitled to deduct and retain one-third (1/3) of the royalty above reserved to Assignors until he has recovered in full all sums paid as advance royalty pursuant to paragraph two (2) above.

4. Work Requirement:

(a) Within sixty (60) days after approval of the assignment of the validating lease as herein provided, in the event Assignee has elected to proceed further under these presents, Assignee shall enter possession of the property covered by such lease and commence exploratory drilling or work directly incident thereto such as road building. Within one year after approval of assignment of said lease, Assignee shall either complete twenty thousand feet (20,000) of such exploratory drilling or encounter ore in commercial quantities and commence operations to develop, mine and remove such ore or shall surrender unto Assignors all of his rights hereunder and reassign said lease unto Assignors. Assignee shall not be entitled to commence actual drilling operations on the property included hereunder until Assignee has paid the total amount of advance royalty due as calculated under paragraph two (2) hereof.

(b) The drilling requirement specified in paragraph 4(a) above is based upon the assumption that nineteen (19) mining claims having an area of at least fifteen (15) acres each shall be validated by lease, or otherwise, and assigned to Assignee hereunder, and in the event that a less number of claims or total area than above contemplated is assigned hereunder, the said drilling requirement shall be reduced, in proportion to the decrease in acreage. It being understood that two hundred eighty five (285) acres is to be considered the total acreage hereunder contemplated for purposes of calculating the number of feet of drilling to be accomplished. In no instance is Assignee to be obligated to drill more than twenty thousand feet.

(c) During the ten month's period commencing sixty (60) days after approval of the assignment of said validating lease Assignee agrees to pay Assignors the sum of $500.00 each for any calendar month during which no drilling is done nor work incidental thereto is accomplished on the premises covered hereby unless this agreement is sooner terminated pursuant to its terms and provisions.

(d) Subsequent to one year after the date of approval of assignment of said validating lease, in the event Assignee elects to continue operations hereunder, Assignee shall with reasonable diligence and continuity conduct exploration, mining or development activities on the property.

(e) During the term of this agreement as specified in Paragraph 1 (b) hereof, unless sooner terminated or surrendered, Assignee shall perform or render all work, reports and acts incumbent upon the lessee by the terms of the assigned validating lease, and in addition, in the event that some of the claims covered by this agreement are not subject to prior Federal Oil and Gas Leases, Assignee shall perform at least $100.00 worth of work per year upon or with respect to each of such claims and shall file an affidavit attesting to such work with the County Recorder of San Juan County, Utah; such work shall be completed and such affidavit shall be filed not later than June 1st of each year. It is understood, however, that the work requirement specified in this subsection (d) is not an additional requirement but may be part of the requirements above specified.

(f) Assignee shall perform all of the work incumbent upon him under the terms hereof in good faith and in accordance with good mining practice and in full compliance with all applicable health and safety laws and regulations of Federal, State and Local governmental authorities. Assignee agrees to hold Assignors harmless from any liability directly resulting from Assignee's operations hereunder.

5. Validation of Titles:

(a) The parties hereto agree severally and in cooperation to take such steps and actions as may be necessary to expedite the issuance and assignment of validating leases by the Atomic Energy Commission pursuant to Circular 7 covering such of said nineteen (19) claims as may come within the purview of such Circular. With respect to any of such claims as may be not subject to the provisions of said Circular 7, the parties agree to take such actions or steps as may be necessary to establish the titles of such claims.

(b) Assignors specifically warrant that they or any of them have not knowingly alienated or encumbered any interest in the property covered hereby and such Assignors hereby warrant the title as against all and every person or persons lawfully claiming or to claim the whole or any part of such property through or under said Assignors or any of them in the manner above stated.

(c) The parties hereto understand that Assignee may make application for a Defense Minerals Exploration Administration loan to cover a portion of the exploratory expense incurred by Assignee in connection with the claims covered by these presents, in which event Assignors agree to execute such papers, including consent to lien, as may be required by the governmental lending agency in connection with such loan. It is specifically understood and agreed, however, that separate

of any such lease shall in no manner increase or affect the consideration reserved unto Assignors by paragraph 3 hereof.

(d) In the event of the passing of [illegible] legislation affecting the title to the claims covered hereby or in the event the validity of said claims are found to be not subject to federal [illegible] the parties upon that they will, in good faith, jointly and severally take such action and steps and execute such further instruments as may be necessary to effectuate and enforce the full intent and purpose of this agreement.

6. [illegible]

(a) Notwithstanding anything to the contrary herein contained, Assignee shall have the option at any time, upon thirty (30) days written notice to Assignors, to terminate this Agreement and surrender said validating lease to Assignors. In the event of any such termination or surrender, Assignee shall perform all work then due under the terms and provisions of this Agreement or under said lease or assignment, and thereafter the parties hereto shall be relieved of any further duties, liabilities or responsibilities under this Agreement or under said lease or the Assignment thereof.

7. Forfeiture:

(a) In the event that Assignee shall fail to perform any of the covenants or duties imposed upon him by the terms of this Agreement, or under said validating lease or assignment thereof, the Assignors shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a period of thirty (30) days from service thereof, cure or correct such failure to perform. In the event that Assignee shall fail or refuse within said thirty (30) day period to enter in good faith upon the correction of such default in performance and to carry out such correction to completion thereafter with due diligence, then Assignors shall have the privilege, at their option, of declaring this Agreement and said assignment forfeited and null and void.

8. Notices:

(a) Any written notice required under the terms of this Agreement or under the terms of said lease or assignment thereof, shall be deemed validly served and such service complete when the same has been deposited in the United States mail for transmittal by ordinary mail in a properly served and addressed

assignors, notices directed to Assignors shall bear the following address:

Frank L. Sayers
317 Main Street
Grand Junction, Colorado

Notices directed to Assignee shall bear the following address:

Walter Duncan
2212 First National Building
Oklahoma City, Oklahoma

9. Designation of Depository:

(a) The Assignors hereby designate the United States Bank of Grand Junction in Grand Junction, Colorado, as the depository for all payments and royalties hereafter which may be paid hereunder and such Assignors agree that payment to such bank or depository shall be deemed to be payment to the Assignors at the time that such payment is received by such bank.

10. Assignors Right to Access and Information:

(a) (Assignors) reserves the right at all reasonable times to enter upon the property covered hereby for the purpose of inspection. In addition (Assignee) agrees to furnish (Assignors) from time to time as compiled and prepared, upon request of (Assignors), copies of all maps, drill logs, reports and other data resulting from the investigation, exploration and mining activities of (Assignee) hereunder.

Benefit

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

IN WITNESS WHEREOF the parties hereto have executed the within Agreement the day and year first above written.

Daisy E. Jenkins — Forest B. Jenkins
Rose L. Jenkins — Robert Jenkins
his wife
Edna L. Patterson — J. O. Patterson
Clara Francis — Lyle E. Francis
Assignors

J. Walter Duncan Jr.
Assignee

RUPERT JENKINS, IRENE H. JENKINS, DAISY N. JENKINS, FLOYD JENKINS, FRANK L. SEYMOUR, DORIS SEYMOUR personally appeared before me this 22nd day of April, 1954, and subscribed their names to the foregoing agreement.

Irena Martin
Notary Public

My commission expires August 19, 1957.

J. WALTER DUNCAN, JR. personally appeared before me this 22nd day of April, 1954, and subscribed his name to the foregoing agreement.

Doris Barron
XXXXXXXXXXXXXXXXXXXX
Notary Public

My commission expires August 8, 1957.

G. O. PATTERSON, EDNA L. PATTERSON, LYLE FRANCIS AND CLARA FRANCIS personally appeared before me this 22nd day of April, 1954, and subscribed their names to the foregoing agreement.

____

My commission expires January 31, 1955

[illegible]

The following described unpatented mining claims located in San Juan County, Utah, the location certificates of which appear of record in the office of the Recorder of said County and State, to-wit:

Claim Name	Book	Page
White Rock No. 1	55	493
White Rock No. 2	55	493
White Rock No. 3	55	494
White Rock No. 4	55	494
Red Rocks No. 1	23	26
Red Rocks No. 2	23	27
Red Rocks No. 3	23	27
Red Rocks No. 4	23	28
Red Rocks No. 5	23	28
Red Rocks No. 7	23	29
Black King No. 10	23	32
Black King No. 11	23	32
Sunny Brook	29	22
Four Roses No. 1	21	443
Hot Spot No. 1	51	390
Hot Spot No. 2	51	391
Hot Spot No. 3	51	391
Hot Spot No. 4	51	392
Hot Spot No. 5	51	392

(243)

WALTER DUNCAN MINING CO.
P. O. BOX 1068 — SANTA FE, NEW MEXICO

AMENDMENT TO AGREEMENT

THIS AGREEMENT, Made and entered into this 6th day of December, 1954, by and between C. O. PATTERSON, of Moab, Utah, FLOYD E. JENKINS, of Grand Junction, Colorado, LYLE FRANCIS, of Moab, Utah, ROPER JENKINS, of Moab, Utah, and FRANK L. SEYMOUR, of Grand Junction, Colorado, (hereinafter referred to as the "Assignors") and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the "Assignee"),

W I T N E S S E T H :

WHEREAS, The parties hereto entered into an agreement on the 22nd day of April, 1954, wherein the Assignors agreed to lease unto the Assignee certain unpatented mining claims described in Exhibit "A" attached to said agreement, and

WHEREAS, By oversight or clerical error the Red Rock No. 6 claim was omitted from said Exhibit "A", but that it was the intention of the parties that such claim should be included in the lease agreement unto Assignee, and

WHEREAS, Certain other claims have been staked by Assignee pursuant to the provisions of said agreement for the purpose of covering fractional tracts of land, and the parties wish to include such claims within said lease agreement,

NOW, THEREFORE, IT IS AGREED Between the parties that the following claims be added to and considered a part of the claims covered by that certain agreement executed between the parties hereto on the 22nd day of April, 1954, a copy of which is attached hereto, to-wit:

Claim Name	Location Notice Recorded San Juan County, Utah Book	Page
Red Rock No. 6	23	29
Red Rock No. 3 North Extension		
Red Rock No. 3 East Extension		
Red Rock No. 1 West Extension		
White Rock No. 1 East Extension		

IT IS AGREED Between the parties that the above described claims shall be subject to all the terms and conditions set forth in the attached agreement and except for the addition of the above described claims, all of the terms and conditions of said agreement shall remain unchanged and in full force and effect.

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

THIS AGREEMENT shall be binding upon and shall inure to the benefit of the parties hereto, their legal representatives, heirs and assigns.

IN WITNESS WHEREOF, The parties hereto have executed this agreement in quadruplicate at Montrose, Colorado, the day and year first above written.

G. O. Patterson (SEAL)
G. O. PATTERSON

Floyd B Jenkins (SEAL)
FLOYD B. JENKINS

Lyle Francis (SEAL)
LYLE FRANCIS

Rupert F. Jenkins (SEAL)
RUPERT JENKINS

Frank L. Seymour (SEAL)
FRANK L. SEYMOUR

Assignors

(SEAL)
J. WALTER DUNCAN, JR.

Assignee

STATE OF COLORADO)
) ss.
COUNTY OF)

Before me, a notary public, personally appeared G. O. Patterson, Floyd B. Jenkins, Lyle Francis, Rupert F. Jenkins, Frank L. Seymour and acknowledged that they signed their names to the foregoing instrument as their free and voluntary act for the intention and purposes therein expressed.

Witness my hand and notarial seal this 6th day of December, 1954.

My commission expires: January 31, 1955

Lucia L. Ross
Notary Public

(4)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 25 1955

AGREEMENT

This Agreement made and entered into this 19th day of May, 1955 by and between FRANK L. SEYMOUR of Grand Junction, Colorado, and J. WALTER DUNCAN, Jr., doing business as Walter Duncan Mining Company of Oklahoma City, Oklahoma.

WITNESSETH:

WHEREAS, Frank L. Seymour is the record owner of a certain mining claim known as the Patterson Fraction in Lisbon Valley Mining District of San Juan County, Utah, which claim is more particularly described in that certain notice of location dated February 3, 1955 and filed in the County Recorder's Office of San Juan County, Utah on February 10, 1955 in Book No. 273 at Page No. 204; said location notice indicating the name of the locator to be Frank L. Seymour by Charles R. Butler, and

WHEREAS, Frank L. Seymour desires to add the above mentioned Patterson Fraction to a certain Agreement dated April 22, 1954 by and between G. O. Patterson of Moab, Utah, Floyd B. Jenkins of Grand Junction, Colorado, Lyle Francis of Moab, Utah, Rupert Jenkins of Moab, Utah, Frank L. Seymour of Grand Junction, Colorado, all referred to in said Agreement as Assignors, and J. Walter Duncan, doing business as Walter Duncan Mining Company of Oklahoma City, Oklahoma and referred to in said Agreement as Assignee;

NOW, THEREFORE, in consideration of Ten Dollars ($10.00) cash in hand paid to Seymour this date by Walter Duncan Mining Company and in consideration of the above mentioned agreement and for other good and valuable considerations, Frank L. Seymour does hereby agree that the Patterson Fraction claim above described is in all respects hereafter to be considered as being added to the above mentioned agreement of April 22, 1954 and that all of the terms and conditions of that agreement are to hereafter

apply to the Patterson Fraction Mining Claim located in the name of the said Frank L. Seymour.

This agreement shall be binding upon and inure to the benefit of the parties hereto, their legal representatives, heirs and assigns.

IN WITNESS WHEREOF the parties hereto have this day caused this instrument to be executed.

Frank L. Seymour (SEAL)
Frank L. Seymour

_____ (SEAL)
J. Walter Duncan doing
business as
Walter Duncan Mining Company

By_____ (SEAL)
Charles R. Butler
Attorney in Fact

[illegible]
[illegible]
[illegible]

February 8, 1955

Walter Duncan Mining Company
P. O. Box 1455
Denver, Colorado

Attention: Mr. Charles R. Butler, Manager

Gentlemen:

The writer has located a claim known as the Patterson Fraction in the southeast quarter (SE ¼) of Section 31, Township 22 South, Range 23 East, San Juan County, Utah. This fraction is located subject to some of the claims in that certain agreement entered into on April 12, 1950 by and between O. O. Patterson and others, including the writer, and Walter Duncan Mining Company. Please let this letter serve as notice to you that we are hereby incorporating this Patterson fraction in the aforementioned agreement, and that any and all terms in that agreement will hereafter apply to the Patterson fraction above mentioned. The writer is not only a party to the above mentioned agreement with Walter Duncan Mining Company, but represents all of the other parties named with the exception of the Walter Duncan Mining Company. We are willing to execute any and all instruments necessary to cause the Patterson fraction to be part of the agreement above mentioned.

Sincerely,

[illegible]
[illegible]

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

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

Department of the Interior
Defense Minerals Administration
RECEIVED
NOV 26 1954

Not to be filled in by applicant

Docket No. 3582
Metal or Mineral URANIUM
Date Received
Estimated Cost $92,200
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: J. Walter Duncan Jr. dba Walter Duncan Mining Company
P.O. Box 1468
Cortez, Colorado

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

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

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

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

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

(*b*) State any mine name by which the property is known. Not applicable

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

(*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. See photo copies of lease agreement.

(*e*) If you own the land, describe any liens or encumbrances on it Not applicable

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

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

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

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

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

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

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 60 days and be completed within 18 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated November 22, 1954

J Walter Duncan Jr.
(Applicant)

By .....

.....

.....

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

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

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

3 (a) Legal Description of DMEA Block

This block is in Sections 34 and 35, T30S, R25E, SLM, San Juan County, Utah.

Beginning at a point 1200' West of the SE Corner of Section 35, thence N1°E 155' to the NE Corner of Red Rock #6, thence N49°W 1185' to the NE Corner of Red Rock #5, thence 310' N57°32'W to the SE Corner of Pitchblende Extension #5, thence N53°42'W 1560' to the SE Corner of Pitchblende Extension #4, thence N76°13'W 1407' to the SE Corner of Pitchblende Extension #3, thence N84°30'W 900' to the SE Corner of Pitchblende Extension #2, thence 1500' West to the SE Corner of Pitchblende Extension #1, thence 742' West, thence S68°14'W 425' to the SW Corner of Service Berry #3, thence S17°31'E 350', thence N87°43'E 428' to the SE Corner of White Rock #1, thence S5°57'W 252' to the SW Corner of White Rock #2, thence S77°16'E 1611' to the SW Corner of White Rock #3, thence N88°46'E 1464' to the SW Corner of White Rock #4, thence West 50', thence south 20', thence West 1010', thence S64°22'E 425' to the SE Corner of Red Rock #3, thence S58°30'E 335', thence S 87°30'W 260' to the NW Corner of Paragon #8, thence S49°15'E 590' to the SW Corner of Paragon #8, thence S6°15'E 748' along the west end lines of Paragon 5 and Paragon 7 to the Section Line between Section 35 and Section 2, thence East 1700' to point of beginning.

Walter Duncan Mining Co.
P.O. Box 1468
Cortez, Colorado

3 (f)

Claim Name	Located	Book	Page
Red Rock #1	March 1[illegible], 1953	23	26
2	"	23	27
3	"	23	27
4	"	23	28
5	"	23	28
6	"	23	29
White Rock 1	Feb. 8, 1954	55	493
2	"	55	493
3	"	55	494
4	"	55	494
Paragon 5	Aug. 18, 1953	35	107
7	Nov. 6, 1953	37	85
8	Nov. 6, 1953	37	85
Red Rock #3 North Extension			
Red Rock #3 East Extension	Nov. 9, 1954		
Red Rock #1 West Extension	"		
Red Rock #2 East Extension	"		

4 (a) No mining operations have ever been conducted on the lands included in this application. However, the following operations on adjoining properties are significant in evaluating the application.

1. Divide Claims—see Plate 2.
   Some mining has been done on rim showings of the basal Chinle, although total production has probably not exceeded 200 tons. The workings are accessible.
2. Service Berry Claims—see Plate 2.
   Some mining has been done on rim showings of the basal Chinle. These workings consist of four seperate drifts from 50 to 150 feet in length. Total production has probably not exceeded 500 tons. The workings are accessible.
3. School Section 36. (Utah State Lease)
   The Continental Mines Inc. Company has drilled out an ore body in the SW Corner of Section 36. This ore body is purported to be in excess of 75,000 tons. Mining operations are now in progress, and the mine is accessible for examination.

(b) None

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

4 (c) Plate 2 shows the location of the proposed project in relation to the geology of the surrounding area and to nearby significant known ore deposits and mineralized rim showings.
Plate 1 shows the location of the proposed project in relation to the regional geology and to the main ore deposits in the Lisbon Valley--Big Indian area.

As shown in Plate 1, the project claims are in an area that has already proven itself as a major uranium producing district. Large ore bodies have been found in the basal Chinle formation on the Southwest flank of the Lisbon Valley anticline. The significance of the main structural features is not fully understood, but the actual presence of large ore bodies within one to four miles of a major fault and on the flanks of an anticline seems to be ample evidence that, whatever the significance, the area is a favorable one for locating new ore bodies.

Exploration in adjoining areas has shown that the ore occurs in medium to course grained sandstones and mudstone conglomerates containing an abundance of carbonaceous matterand pyrites. These favorable host rock sandstones are usually elongate and lenticular, and are probably channel or swamp bed deposits. Mineralized portions of these sandstones and mudstones are usually underlain and overlain by shales or fine grained mudstones.

As shown in Plate 2, the west end of the project is within 1,200' of a proven ore body. (Marked A on map) This ore body was developed by Continental Mines, Inc., and is reputed to contain in excess of 75,000 tons of commercial grade ore. Drilling to date indicates that the trend of the ore body is in an east-westerly direction. A projection of this trend will cross out the proposed project claims.

Mineralized lenticular sandstones of the basal Chinle formation crop out on the Divide (marked B on map) and the Service Berry (marked C on map) claims. The Divide outcrop is 200 feet wide and varies in thickness from 0 to 15 feet.

The Service Berry outcrop is 600 feet wide and varies in thickness from 0 to 30 feet.

The trend of the Continental Mines ore body, plus the outcrop on Divide and Service Berry claims suggest that a continuation of the favorable host rock sandstone of the Continental Mines is in a westerly or northwesterly direction. The purpose of the proposed project is to test this theory by drilling an area between the known ore and the mineralized outcrops.

WALTER DUNCAN MINING CO.
P. O. BOX 1468
CORTEZ, COLORADO

4 (d)

Project area is easily accessible by roads, and is approximately 35 miles by road from Monticello, Utah. Plate 3, a highway map of part of San Juan County, Utah, shows the access roads in this area. Several drill roads have been constructed in the past few months on the project grounds.

Other distances to shipping, supply and residence points are as follows:

Cortez, Colorado- - - - - - - 70 miles
Moab, Utah- - - - - - - - - - 50 miles
Dove Creek, Colorado- - - - - 35 miles

(e) The project area is well within the main uranium producing area of the Colorado Plateau, and manpower, supplies and equipment are readily available from Cortez, Dove Creek, Moab and Monticello.

Water will be supplied from a Company reservoir five miles from the project and from a government well about 15 miles from the project. Drinking water will be hauled from one of the aforementioned towns.

Power must be supplied at the site by gasoline and deisel units. Fuel will be hauled from Monticello or Dove Creek.

5. (a) (b) Uranium

Plate 2 shows a plan view and cross section of the property, along with the proposed locations of the Phase 1 drill holes.

The Proposed Work is as follows:

Phase 1--Drill approximately 25 exploratory test holes as shown on Plate 2. These holes are to be approximately 400' apart on lines perpendicular to the assumed ore trend, and 1,000' apart parallel to the assumed ore trend. The lines of holes marked A will be drilled first, and the location of the lines of holes marked B will be subject to changes based on an evaluation of the A holes. All holes in Phase 1 will be drilled with plug bits, and will be cored for the bottom 40'. Total footage for Phase 1 is estimated at 13,500.

Phase 2--Drill approximately 20 offset holes to further explore favorable areas delineated by Phase 1 drilling. The locations of these holes will be determined by a geologic evaluation of Phase 1 drilling. Total footage for Phase 2 is estimated at 12,000

WALTER DUNCAN MINING CO.
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5. (c)
The work will start within 60 days and be completed within 18 months from the date of an exploration project contract.

(d)
Mr. J. Walter Duncan Jr. dba the Walter Duncan Mining Company has had over four years experience in the exploration, development and mining phases of the uranium business. The company operates producing mines in the Lukachukai mining district of Northeastern Arizona and in the Oak Springs mining district of Northwestern New Mexico. Total production from these mines has averaged about 1,000 tons per month for the past two years. The Company has drilled over 20,000 feet of exploratory and development holes on its own leases in 1954, so is familiar with the planning and execution of drilling programs.

The project will be directed by Charles R. Butler, General Manager of the Walter Duncan Mining Co. Butler has a Masters Degree in Geology from the University of Colorado, worked for the US Geological Survey in uranium exploration in 1950, and has been associated with the Duncan organization since September, 1950.

He has directed exploration and development programs for the Duncan Mining Company in the White Canyon, Gypsum Valley, Lukachukai Mtns., and Grants, New Mexico areas, and has a wide range of experience in uranium exploration. He was in charge of the "Jacob's Chair" DMEA project in 1952, so is familar with the regulations and procedures of working with the DMEA officials.

The drilling will be under the direct supervision of Mr. C.A. Hammond. Mr. Hammond was formerly with the Walker-Hammond drilling Company of Dallas, Texas and Moab, Utah, and is now associated with the Walter Duncan Drilling Company. Mr. Hammond has had several years experience on a Mayhew drill rig, and has done considerable drilling near Lisbon Valley about 10 miles north of the project area.

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6. Estimate of Costs

The Company proposes to negotiate a Unit Cost Contract based on drill hole footage. The foregoing estimates are supporting figures for determining a fair unit cost.

A summation of the costs estimates are as follows: Costs per foot are on a basis of 25,500.

	Costs Per Foot	Total Cost
Drilling Costs	2.63	67175.00
Other Costs (Supervision, geology, bulldozing, sampling, surveying, etc.)	.98	25025.00
Total Project Costs	3.61	92200.00

Drilling will be done by the Walter Duncan Drilling Company. This is a seperate entity from the Walter Duncan Mining Company. However, the equity interests of the two organizations are very similar, and for purposes of the application, the two organizations can be considered as all part of the Walter Duncan Mining Company.

If the Duncan drill is not available for all of this work because of previous commitments or other unforseen circumstances, the additional drilling will be contracted. A bid by Minerals Engineering Company for drilling on the project area is herewith submitted.

In defense of the figures given below in support of the Duncan proposal, it might be pointed out that the total cost of the drilling--if done entirely by Minerals Engineering Company on the basis of the submitted bid--would be about $77,500, or $10,000 higher than the Duncan proposal.

(a) Independent Contracts		
Bulldozing to prepare drill sites 200 hours @ $12.00/hr.		2400.00
(b) Labor, Supervision, Consultants		
Driller (Wages plus footage bonus) 13 months @ $750/month	9750.00	
Drillers helper 13 months. $1.50/hour plus o.t. @ 50 hours/week	4620.00	

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6 (b) (Cont.)

Water truck driver 13 months. $1.50/hour plus o.t. @ 50 hours/week	4620.00	
Total Drilling Labor		18990.00
Project supervisor 18 months @ ½ time @ 622/mo.	5600.00	
Project geologist 18 months @ ½ time @ 600/mo.	5400.00	
Surveyor 5 months @ 600/mo	3000.00	
Surveyors helper 5 months @ 300/mo.	1500.00	
Total non-drilling labor		15500.00
Allowable field expenses for personnel.		3450.00
(c) Operating Materials and Supplies 160 - 2 3/8" ODx10' Drill Pipe @ $37.50/jt.		6000.00
2 - 4 1/4" Diamond Drill Bits	2000.00	
3 - 4 3/4" Hawthorne adopters	175.00	
3 - 4 3/4" Rock bit adopters	90.00	
75 - 4 3/4" sets Hawthorne blades	1000.00	
150 - 4 3/4" Rock bits	8000.00	
3 core barrel assemblies	1600.00	
		12865.00
150 sacks silvogel	600.00	
150 sacks drilling mud	375.00	
		975.00
Power - None		
Fuel		
water truck - 40 gal. gas/day	3150.00	
14 cases oil	110.00	
Drill truck - 30 gal. gas/day	2370.00	
16 cases oil	125.00	

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6 (c) (Cont.)

3 KVA generator - gas	500.00	
1/2 ton supply pick-up gas and oil	500.00	
3/4 ton pick-up gas and oil	500.00	
Butane for camp	200.00	7455.00

(d) Operating Equipment

Unit	Aquisition Cost	Allowance
1954 R-192 Int. Truck	5497.79	1/60/mo. for 15 months
Mayhew Model 1000 Drill Rig	16283.55	"
Diamond Drill Bit Handling Tools	540.00	"
1954 F 750 Ford Truck with Water Tank	5223.42	"
1952 3/4 ton pick-up	1700.00	"
1954 1/2 ton pick-up	1800.00	"
O'Keefe Merrit 3 KVA Camp Generator	535.50	
600-A Babbel Counter	350.00	
2-700 probes	400.00	
	32330.26	7005.00
Equipment Insurance (est.)		2000.00
		9005.00

(e) Rehabilitation and Repairs
Rehabilitate Company Housing facilities now on property. Winterize cabin and equip with stove, lights etc. — 300.00

(f) Installations
Company owned trailer to be used for Drillers quarters. @ 13/60 cost — 200.00

(g) Miscellaneous
1. Repairs and Maintenience of Operating Equipment

Drill Rig — 300.00
Welding
Materials for maintenience of drill

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CORTEZ, COLORADO

6 (g) (Cont.) (Materials for maintenience of drill)

Rod lubricators for 5x6 Pump	15.00	
2 grease guns w/extension hose	17.00	
ARO Grease Dispenser	20.00	
300 lb. Tool Jt. Compound	63.00	
Lubriplate @ 6.50/35lb	50.00	
5 Dope Brushes	10.00	
3 Boxes lube sticks	4.00	
Rod packing @ 1.60/lb	15.00	
Valve rubbers @ 1.10 each	50.00	
Grease Fittings @ .10	3.00	
3 Gallon Rod Oilers	8.00	
Wing guide valves	300.00	
2 pressure hoses and wash out pipe	150.00	
1 suction hose	50.00	
Pull down chains replacement	150.00	
3 sets pump rods	100.00	
		1015.00
Mechanics materials and fees		1000.00
2. Analytical work		
Sampling and assaying		1000.00
3. Accounting		
To be contracted from Cooper-McGaughey CPA firm @ 250.00/mo.		4500.00
Workmans Compensation @ 3.302%	1150.06	
Employers liability insurance @ 0.206%	71.95	
Payroll taxes		
FICA @ 2.0% up to 3600		
State UCI @ 2.7% up to 3000		
Federal UCI @ 0.3% up to 3000		
Estimated	1025.09	
		2245.00

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6 (h) Contingencies
Unforseen equipment failures, lost drill pipe and probing equipment due to cored holes, etc. 5000.00

Total Project Costs 92,200.00

7. (a) Yes
(b) We propose to furnish our share of the costs through the use of Company owned equipment plus whatever additional money may be required. A copy of the June Balance Sheet for the Walter Duncan Mining Company and the Walter Duncan Drilling Company is included here to show the financial status of the organization. If additional monies are required for completion of the project, they will be supplied by Walter Duncan Jr.

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

WALTER DUNCAN MINING COMPANY
BALANCE SHEET
June 30, 1954

Assets

Current assets		
Cash in bank		$ 21,935.90
Notes receivable		3,610.53
Accounts receivable		
Ore sales	$23,091.23	
Employees	312.10	
Other	340.00	23,743.33
Inventories		
Explosives	$ 3,282.71	
Employee supplies	156.48	3,439.19
Prepaid insurance		5,042.61
Prepaid royalty - King Tutt		200.00
Total current assets		$ 57,971.56
Fixed assets		
Cost	$83,216.61	
Less reserve for depreciation	24,089.39	59,127.22
Other assets		
Deferred road construction costs	$ 6,000.00	
Less reserve for amortization	2,490.47	3,509.53
Leaseholds		14,119.37
Deposits		289.00
Total assets		$135,016.68

Liabilities

Current liabilities		
Accounts payable		$ 8,512.05
Accrued payroll		3,840.53
Accrued F.I.C.A. taxes		1,031.98
Accrued U.C.I. taxes		878.08
Accrued withholding tax		1,313.49
Accrued royalty payable		405.91
Accrued hospitalization payable		42.30
Accrued payroll insurance payable		1,867.66
Total liabilities		$ 17,892.00
Investments		
Walter Duncan Oil Properties		
Net investment, January 1, 1954	$131,859.30	
Net (decrease) in investment, January 1, 1954 to June 30, 1954	(44,249.72)	
	$ 87,609.58	
Profit - year to date	29,515.10	
Total investment		117,124.68
Total liabilities and investment		$135,016.68

WALTER DUNCAN MINING CO.
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WALTER DUNCAN DRILLING COMPANY
BALANCE SHEET
June 30, 1954

Assets

Current assets		
Cash in bank		$30,000.00
Accounts receivable - trade		281.89
Accounts receivable - capital contributions		20,100.00
Total current assets		$50,381.89
Fixed assets		
Equipment	$28,515.17	
Less reserve for depreciation	335.85	
Net fixed assets		28,179.32
Other assets		
Prepaid insurance		208.37
Total assets		$78,769.58

Liabilities

Accounts payable - trade		$31,928.31
Accounts payable - other		20,100.00
Accrued F.I.C.A. tax		25.65
Accrued Federal withholding tax		75.60
Accrued unemployment compensation taxes		18.33
Accrued payroll		340.20
Accrued payroll insurance		58.04
Total current liabilities		$52,546.13

Capital

Capital investment		
Walter Duncan	$ 9,900.00	
J. Walter Duncan, Jr.	12,000.00	
Vincent J. Duncan	4,500.00	
Raymond T. Duncan	2,100.00	
Charles R. Butler	1,500.00	
Total capital contributions	$30,000.00	
Net (loss) - month of June 1954	(3,776.55)	
Net capital		26,223.45
Total liabilities and capital		$78,769.58

MINERALS ENGINEERING COMPANY
P. O. BOX 957
GRAND JUNCTION, COLORADO

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

November 5, 1954

Walter Duncan Mining Company
P.O. Box #1468
Cortez, Colorado

Attention: Mr. Charles R. Butler

Dear Sir:

In reply to your letter of Nov. 3, 1954, and my telephone conversation with you this morning, please accept the following quotations as our bid for a minimum of 2500 feet of Diamond Drilling in Lisbon Valley Area, to a maximum depth of 800 feet with coring on the last 40 feet in each hole:

Depth	Price per foot	
	Plug Bit	BX Core
0-200 feet	$2.35	$2.60
200-400 feet	$2.85	3.35
400-600 feet	$3.85	4.85
600-800 feet	$4.35	6.75

We also submit our bid on coring only the holes which you would plug, supply, set and pull casing.

We would expect 40 feet of BX Coring in each hole at depths averaging 550 feet, but could be to a depth of 800 feet.

Depth	Price per foot
400-600 feet	$6.50
600-800 feet	$7.75

We have a charge for drill Standby Time of $12.00 per hour. This is time standing by for probing holes, waiting for drill sites, etc.

It will be a pleasure to hear from you concerning this bid.

Very truly yours,

MINERALS ENGINEERING COMPANY

Edson Foster

Edson Foster
Assistant Drill Superintendent

EF/brd.

Walter Duncan
Oil Properties
2212 First National Building
Oklahoma City, Oklahoma

November 22, 1954

STATEMENT OF FINANCIAL POSITION OF
J. WALTER DUNCAN, JR.

In addition to the material furnished herewith, including a statement of the financial condition of the Walter Duncan Mining Company, I would like to give The First National Bank of Oklahoma City, The La Salle State Bank of La Salle, Illinois, and The First National Bank of Dallas, Texas as references.

The applicant for this loan is worth in excess of $250,000.00.

Very truly yours,

J Walter Duncan, Jr.

J. Walter Duncan, Jr.

WD:DB

AGREEMENT

THIS AGREEMENT, made and entered into this 7th day of May, 1954, by and between QUENTIN S. BULLOCK, of Bryan, Texas, (hereinafter referred to as the Assignor), and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the Assignee),

W I T N E S S E T H :

WHEREAS, Assignor is the locator of certain five (5) unpatented mining claims more fully described on Exhibit "A" attached hereto, which claims are believed to have been located on lands subject to prior federal oil and gas leases; and

WHEREAS, Assignor is making an application to the Atomic Energy Commission under Circular 7 for a validating lease on all of said unpatented mining claims, and Assignor desires to assign such lease and his interest in said mining claims unto Assignee;

NOW, THEREFORE, THESE PRESENTS:

1. Assignment:

(a) For and in consideration of the sum of One Dollar ($1.00) and of the royalties hereinafter reserved and the payments, covenants and agreements herein contained to be paid, kept and performed by Assignee, the Assignor hereby agrees that at such time as the said validating lease is granted by the Atomic Energy Commission, he will assign and transfer such lease and his interest in the claims described on Exhibit "A" unto Assignee upon the terms and conditions hereinafter set forth and take all necessary action to obtain approval of such assignment from the Atomic Energy Commission.

(b) TO HAVE AND TO HOLD unto Assignee, his successors, heirs and assigns, from the date of the assignment of such lease and extending for the full term of such lease, including any extensions or renewals thereof, which may be granted by the Atomic Energy Commission, unless these presents be sooner surrendered, forfeited or terminated as hereinafter provided.

2. Advance Royalty:

(a) There shall be paid unto Assignor an advance royalty of Fifty Dollars ($50.00) per acre of land which is actually covered and validated by the said lease executed by the Atomic Energy Commission.

(b) The advance royalty as specified above shall be paid as follows: The sum of Five Hundred Dollars ($500.00) shall be paid upon the execution of these presents, receipt whereof is hereby acknowledged by the Assignor; the balance shall be determined according to the provisions of 2(a) above at such time as the aforementioned validating lease is executed and approved for assignment unto Assignee by the Atomic Energy Commission. Within ten (10) days of such approval of assignment, the Assignee shall pay the balance of such advance royalty or shall surrender and release unto Assignor all of his rights and interest created hereunder in said mining claims, in which event these presents shall terminate and Assignor shall retain all of said initial payment of $500.00.

3. Royalty:

(a) Any assignment of the above specified validating lease made to Assignee hereunder shall specifically reserve unto Assignor a royalty of fifteen per cent (15%) of the gross returns received from ores mined and removed from the property covered by said validating lease, such royalty to be calculated by excluding transportation and development allowances but including any discovery and production bonuses.

(b) The Assignee shall be entitled to deduct and retain one-third (1/3) of the royalty above reserved to Assignor until he has recovered in full all sums paid as advance royalty pursuant to paragraph two (2) above.

4. Work Requirement:

(a) Within one (1) year after approval of assignment of said lease unto Assignee, Assignee shall either complete one (1) exploratory drill hole penetrating the ore horizon for each fifteen (15) acres included within the said validating lease, or shall surrender unto Assignor all of his rights hereunder and reassign said lease unto Assignor.

(b) Subsequent to one (1) year after approval of Assignment of said validating lease, in the event Assignee elects to continue operations hereunder, Assignee shall with reasonable diligence and continuity conduct exploration, mining or development activities on the property.

(c) During the term of this agreement as specified in paragraph 1(b) hereof, unless sooner terminated or surrendered, Assignee shall perform

or render all work, reports and acts incumbent upon the Lessee by the terms of the assigned validating lease, and in addition, in the event that some of the claims covered by this agreement are not subject to prior federal oil and gas leases, Assignee shall perform at least One Hundred Dollars ($100.00) worth of work per year upon or with respect to each of such claims and shall file an affidavit attesting to such work with the County Recorder of San Juan County, Utah; such work shall be completed and such affidavit shall be filed not later than June 1 of each year. It is understood, however, that the work requirement specified in this subsection (c) is not an additional requirement but may be a part of the requirements above specified.

(d) Assignee shall perform all of the work incumbent upon him under the terms hereof in good faith and in accordance with good mining practice and in full compliance with all applicable health and safety laws and regulations of federal, state and local governmental authorities. Assignee agrees to hold Assignor harmless from any liability directly resulting from Assignee's operations hereunder.

5. Validation of Titles:

(a) Assignor specifically represents that he has not knowingly alienated or encumbered any interest in the property covered hereby.

(b) The parties hereto understand that Assignee may make application for a Defense Minerals Exploration Administration loan to cover a portion of the exploratory expense incurred by Assignee in connection with the claims covered by these presents, in which event Assignor agrees to execute such papers, including consent to lien, as may be required by the governmental lending agency in connection with such loan. It is specifically understood and agreed, however, that repayment of any such loan shall in no manner decrease or effect the royalties reserved unto Assignor by paragraph three (3) hereof.

(c) In the event of the passage of subsequent legislation affecting the title to the claims covered hereby or in the event that certain of such claims are found to be not subject to federal oil and gas leases, the parties agree that they will, in good faith, jointly and severally, take such

DUNGAN MFG. CO.
P. O. BOX 1468 - CORTEZ, COLORADO

actions and steps and execute such further instruments as may be necessary to effectuate and achieve the full intents and purposes of this agreement.

6. Right of Surrender:

(a) Notwithstanding anything to the contrary herein contained, Assignee shall have the option at any time, upon thirty (30) days written notice to Assignor, to terminate this Agreement and reassign said validating lease to Assignor. In the event of any such termination or reassignment, Assignee shall perform all work then due under the terms and provisions of this Agreement or under said lease or assignment, and thereafter the parties hereto shall be relieved of any further duties, liabilities or responsibilities under this Agreement or under said lease or the assignment thereof.

7. Forfeiture:

(a) In the event that Assignee shall fail to perform any of the covenants or duties incumbent upon him by the terms of this Agreement, or under said validating lease or assignment thereof, the Assignor shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a period of thirty (30) days from service thereof, cure or correct such failure to perform. In the event that Assignee shall fail or refuse within said thirty (30) day period to enter in good faith upon the correction of such default in performance and to carry out such correction to completion thereafter with due diligence, then Assignor shall have the privilege, at his option, of declaring this Agreement and said assignment forfeited and null and void.

8. Notices:

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

Quenton S. Bullock
P. O. Box 322
Bryan, Texas

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

Notice directed to Assignee shall bear the following address:

Walter Duncan
2212 First National Building
Oklahoma City, Oklahoma

9. Assignor's Right to Access and Information:

(a) Assignor reserves the right at all reasonable times to enter upon the property covered hereby for the purpose of inspection. In addition, Assignee agrees to furnish Assignor from time to time as compiled and prepared, upon request of Assignor, copies of all maps, drill logs, reports and other data resulting from the investigation, exploration and mining activities of Assignee hereunder.

10. Benefit:

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

IN WITNESS WHEREOF, the parties hereto have executed the within Agreement the day and year first above written.

Quentin S. Bullock
Assignor

_____
Assignee

STATE OF UTAH)
) ss.
COUNTY OF SAN JUAN)

Before me, a Notary Public within and for the County and State aforesaid, personally appeared Quenton S. Bullock and acknowledged that he executed the foregoing Agreement as his free and voluntary act and deed for the intents and purposes therein specified.

Witness my hand and notarial seal this 7th day of May, 1954.

My commission expires Jan. 20, 1955.

Pearl Butt
Notary Public

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

STATE OF OKLAHOMA)
) ss.
COUNTY OF OKLAHOMA)

Before me, a Notary Public within and for the County and State aforesaid, personally appeared J. Walter Duncan, Jr., and acknowledged that he executed the foregoing Agreement as his free and voluntary act and deed for the intents and purposes therein specified.

Witness my hand and notarial seal this _____ day of _____, 1954.

My commission expires _____.

_____
Notary Public

WALTER DUNCAN MINING CO.
P. O. BOX 1468 - CORTEZ, COLORADO

EXHIBIT A

The following described unpatented mining claims located in San Juan County, Utah, the location certificates of which appear of record in the office of the Recorder of said County and State, to-wit:

Claim Name	Location Certificate Book	Location Certificate Page	Notice of Lease Application Book	Notice of Lease Application Page
Paragon #2	35	106	61	418
Paragon #4	35	107	61	418
Paragon #5	35	107	61	419
Paragon #6	37	84	61	419
Paragon #7	37	85	61	420
Paragon # 8	37	85		

AGREEMENT

THIS AGREEMENT made and entered into this [illegible] day of April, 1954, by and between G. O. PATTERSON, of Moab, Utah, FLOYD B. JENKINS of Grand Junction, Colorado, LYLE FRANCIS, of Moab, Utah, RUPERT JENKINS, of Moab, Utah, and FRANK L. SEYMOUR, of Grand Junction, Colorado, (hereinafter referred to as the "Assignors") and J. WALTER DUNCAN, JR., doing business as WALTER DUNCAN MINING COMPANY, of Oklahoma City, Oklahoma, (hereinafter referred to as the "Assignee"), WITNESSETH:

WHEREAS, Assignors are all the locators of certain nineteen (19) unpatented mining claims more fully described on Exhibit "A" attached hereto, which claims are believed to have been located on lands subject to prior Federal Oil and Gas leases; and

WHEREAS, Assignors are making an application to the Atomic Energy Commission under Circular 7 for a validating lease on all of said unpatented mining claims, and Assignors desire to assign such lease and their interest in said mining claims unto Assignee:

NOW, THEREFORE, THESE PRESENTS:

1. Assignment:

(a) For and in consideration of the sum of One Dollar and of the royalties hereinafter reserved and the payments, covenants and agreements herein contained to be paid, kept and performed by Assignee, the Assignors hereby agree that at such time as the said validating lease is granted by the Atomic Energy Commission they will assign and transfer such lease and their interest in the claims described on Exhibit "A" unto Assignee upon the terms and conditions hereinafter set forth and take all necessary action to obtain approval of such assignment from the Atomic Energy Commission.

(b) TO HAVE AND TO HOLD unto Assignee, his successors, heirs and assigns, from the date of the assignment of such lease and extending for the full term of such lease including any extensions or renewals thereof which may be granted by the Atomic Energy Commission, unless these presents be sooner surrendered, forfeited or terminated as hereinafter provided.

2. Advance Royalty:

(a) There shall be paid unto Assignors an advance royalty of One Thousand Dollars ($1,000.00) per claim which are actually covered and validated by the said lease executed by the Atomic Energy Commission. It is understood, however, that for any of such claims containing less than 15 acres of area as validated such advance royalty shall be reduced to Seven Hundred Fifty Dollars ($750.00) and that for any such claims containing less than five (5) acres of area as validated no advance royalty shall be paid.

(b) The advance royalty as specified above shall be paid as follows: The sum of Six Thousand Three Hundred Thirty-three and 33/100 Dollars ($6,333.33) paid upon the execution of these presents, receipt whereof is hereby acknowledged by the Assignors. The balance shall be calculated according to the provisions of Paragraph 2 (a) above at such time as the aforementioned validating lease is executed and approved for assignment unto Assignee by the Atomic Energy Commission. Within ten (10) days of such approval of assignment, the Assignee shall pay the balance of such advance royalty or shall surrender and release unto Assignors all of his rights and interest created hereunder in said mining claims, in which event these presents shall terminate and Assignors shall retain all of said initial payment of $6,333.33, provided, that in the event the mining claims actually covered by said validating lease are entitled to a total advance royalty, as calculated under paragraph 2(a) above, of less than the said $6,333.33, then and in that event, the Assignors will repay to Assignee the difference between the total advance royalty as then calculated and the said $6,333.33 this day paid to said Assignors, whether or not Assignee elects to surrender his rights hereunder or take an assignment of such validating lease and proceed hereunder.

3. Royalty:

(a) Any assignment of the above specified validating lease made to Assignee hereunder shall specifically reserve unto Assignors a royalty of fifteen percent (15%) of the gross returns received from ores mined and removed from the property covered by said validating lease, such royalty to be calculated by excluding transportation and development allowances but including any discovery and production bonuses.

(b) The Assignee shall be entitled to deduct and retain one-third (1/3) of the royalty above reserved to Assignors until he has recovered in full all sums paid as advance royalty pursuant to paragraph two (2) above.

4. Work Requirement:

(a) Within sixty (60) days after approval of the assignment of the validating lease as herein provided, in the event Assignee has elected to proceed further under these presents, Assignee shall enter possession of the property covered by such lease and commence exploratory drilling or work directly incident thereto such as road building. Within one year after approval of assignment of said lease, Assignee shall either complete twenty thousand feet (20,000) of such exploratory drilling or encounter ore in commercial quantities and commence operations to develop, mine and remove such ore or shall surrender unto Assignors all of his rights hereunder and reassign said lease unto Assignors. Assignee shall not be entitled to commence actual drilling operations on the property included hereunder until Assignee has paid the total amount of advance royalty due as calculated under paragraph two (2) hereof.

(b) The drilling requirement specified in paragraph 4(a) above is based upon the assumption that nineteen (19) mining claims having an area of at least fifteen (15) acres each shall be validated by lease, or otherwise, and assigned to Assignee hereunder, and in the event that a less number of claims or total area than above contemplated is assigned hereunder, the said drilling requirement shall be reduced, in proportion to the decrease in acreage. It being understood that two hundred eighty five (285) acres is to be considered the total acreage hereunder contemplated for purposes of calculating the number of feet of drilling to be accomplished. In no instance is Assignee to be obligated to drill more than twenty thousand feet.

(c) During the ten month's period commencing sixty (60) days after approval of the assignment of said validating lease Assignee agrees to pay Assignors the sum of $500.00 cash for any calendar month during which no drilling is done nor work incidental thereto is accomplished on the premises covered hereby unless this agreement is sooner terminated pursuant to its terms and provisions.

(d) Subsequent to one year after the date of approval of assignment of said validating lease, in the event Assignee elects to continue operations hereunder, Assignee shall with reasonable diligence and continuity conduct exploration, mining or development activites on the property.

(e) During the term of this agreement as specified in Paragraph 1 (b) hereof, unless sooner terminated or surrendered, Assignee shall perform or render all work, reports and acts incumbent upon the Lessee by the terms of the assigned validating lease, and in addition, in the event that some of the claims covered by this agreement are not subject to prior Federal Oil and Gas Leases, Assignee shall perform at least $100.00 worth of work per year upon or with respect to each of such claims and shall file an affidavit attesting to such work with the County Recorder of San Juan County, Utah; such work shall be completed and such affidavit shall be filed not later than June 1st of each year. It is understood, however, that the work requirement specified in this subsection (d) is not an additional requirement but may be a part of the requirements above specified.

(f) Assignee shall perform all of the work incumbent upon him under the terms hereof in good faith and in accordance with good mining practice and in full compliance with all applicable health and safety laws and regulations of Federal, State and Local governmental authorities. Assignee agrees to hold Assignors harmless from any liability directly resulting from Assignee's operations hereunder.

5. Validation of Titles:

(a) The parties hereto agree severally and in cooperation to take such steps and actions as may be necessary to expedite the issuance and assignment of validating leases by the Atomic Energy Commission pursuant to Circular 7 covering such of said nineteen (19) claims as may come within the purview of such Circular. With respect to any of such claims as may be not subject to the provisions of said Circular 7, the parties agree to take such actions or steps as may be necessary to establish the titles of such claims.

(b) Assignors specifically warrant that they or any of them have not knowingly alienated or encumbered any interest in the property covered hereby and such Assignors hereby warrant the title as against all and every person or persons lawfully claiming or to claim the whole or any part of such property through or under said Assignors or any of them in the manner above stated.

(c) The parties hereto understand that Assignee may make application for a Defense Minerals Exploration Administration loan to cover a portion of the exploratory expense incurred by Assignee in connection with the claims covered by these presents, in which event Assignors agree to execute such papers, including consent to lien, as may be required by the governmental lending agency in connection with such loan. It is specifically understood and agreed, however, that repayment

of any such loan shall in no manner decrease or effect the royalties reserved unto Assignors by paragraph 3 hereof.

(c) In the event of the passage of subsequent legislation effecting the title to the claims covered hereby or in the event that certain of such claims are found to be not subject to Federal Oil and Gas Leases, the parties agree that they will, in good faith, jointly and severally, take such actions and steps and execute such further instruments as may be necessary to effectuate and achieve the full intents and purposes of this agreement.

6. Right of Surrender:

(a) Notwithstanding anything to the contrary herein contained, Assignee shall have the option at any time, upon thirty (30) days written notice to Assignors, to terminate this Agreement and reassign said validating lease to Assignors. In the event of any such termination or reassignment, Assignee shall perform all work then due under the terms and provisions of this Agreement or under said lease or assignment, and thereafter the parties hereto shall be relieved of any further duties, liabilities or responsibilities under this Agreement or under said lease or the Assignment thereof.

7. Forfeiture:

(a) In the event that Assignee shall fail to perform any of the covenants or duties incumbent upon him by the terms of this Agreement, or under said validating lease or assignment thereof, the Assignors shall have the privilege of serving written notice upon Assignee specifying in detail the covenants and duties which Assignee has failed to perform and the substantial facts constituting such failure. Such notice shall further provide that Assignee shall, within a period of thirty (30)days from service thereof, cureor correct such failure to perform. In the event that Assignee shall fail or refuse within said thirty (30) day period to enter in good faith upon the correction of such default in performance and to carry out such correction to completion thereafter with due diligence, then Assignors shall have the privilege, at their option, of declaring this Agreement and said assignment forfeited and null and void.

8. Notices:

(a) Any written notice required under the terms of this Agreement or under the terms of said lease or assignment thereof, shall be deemed validly served and such service complete when the same has been deposited in the United States mail for transmittal by ordinary mail in a properly stamped and addressed

envelope. Notice directed to Assignors shall bear the following address:

Frank L. Seymour
317 Main Street
Grand Junction, Colorado

Notices directed to Assignee shall bear the following address:

Walter Duncan
2212 First National Building
Oklahoma City, Oklahoma

9. Designation of Depository:

(a) The Assignors hereby designate the United States Bank of Grand Junction in Grand Junction, Colorado, as the depository for all payments and royalties hereafter which may be paid hereunder and such Assignors agree that payment to such bank or depository shall be deemed to be payment to the Assignors at the time that such payment is received by such bank.

10. Assignors Right to Access and Information:

(a) Assignors reserve the right at all reasonable times to enter upon the property covered hereby for the purpose of inspection. In addition Assignee agrees to furnish Assignors from time to time as compiled and prepared, upon request of Assignors, copies of all maps, drill logs, reports and other data resulting from the investigation, exploration and mining activities of Assignee hereunder.

Benefit

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

IN WITNESS WHEREOF the parties hereto have executed the within Agreement the day and year first above written.

Floyd B Jenkins

Floyd B Jenkins

Assignors

Walter Duncan Jr.
Assignee

RUPERT JENKINS, IRENE S. JENKINS, DAISY E. JENKINS, FLOYD JENKINS, FRANK L. SEYMOUR, DORIS SEYMOUR personally appeared before me this_____ day of April, 1954, and subscribed their names to the foregoing agreement.

Irene Martin
Notary Public

My commission expires August 19, 1957.

L. WALTER DUNCAN, JR. personally appeared before me this 22nd day of April, 1954, and subscribed his name to the foregoing agreement.

XXXXXXXXXXXXXXXXXXXX
Notary Public

My commission expires August 8, 1957.

State of Utah)
County of [illegible])

[illegible] County [illegible] _____ [illegible]

[illegible]

[illegible] _____ day of _____, 1954.

[illegible]
Notary Public

[illegible]

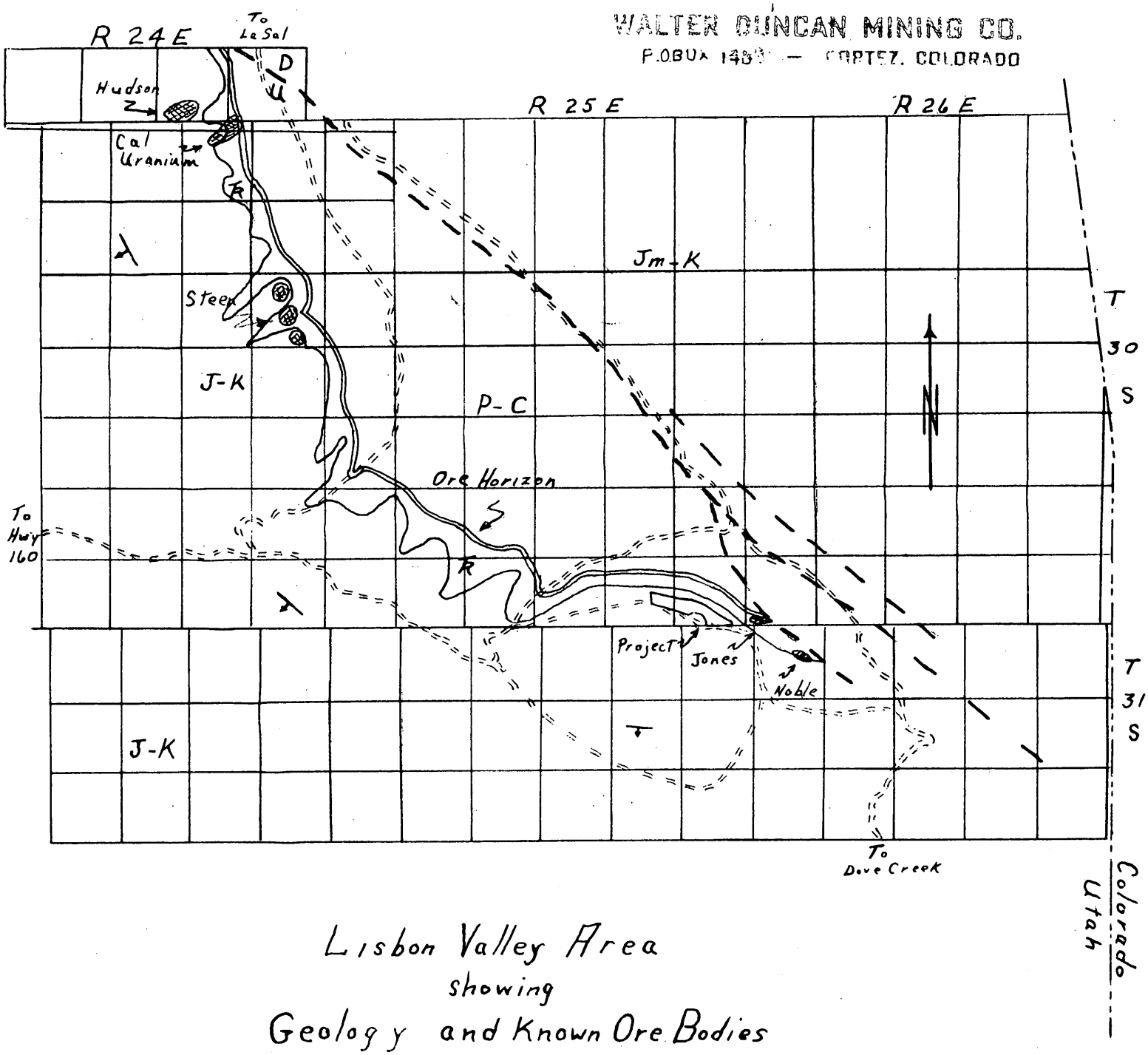
EXHIBIT A

The following described unpatented mining claims located in San Juan County, Utah, the location certificates of which appear of record in the office of the Recorder of said County and State, to-wit:

Claim Name	Book	Page
White Rock No. 1	55	493
White Rock No. 2	55	493
White Rock No. 3	55	494
White Rock No. 4	55	494
Red Rocks No. 1	23	26
Red Rocks No. 2	23	27
Red Rocks No. 3	23	27
Red Rocks No. 4	23	28
Red Rocks No. 5	23	28
Red Rocks No. 7	23	29
Black King No. 10	23	82
Black King No. 11	23	82
Sunney Brook	23	22
Four Roses No. 1	21	443
Hot Spot No. 1	51	390
Hot Spot No. 2	51	391
Hot Spot No. 3	51	391
Hot Spot No. 4	51	392
Hot Spot No. 5	51	392

WALTER DUNCAN MINING CO.
P. O. BOX 1468 — CORTEZ, COLORADO

WALTER DUNCAN MINING CO.
P.O.BOX 148 — CORTEZ, COLORADO

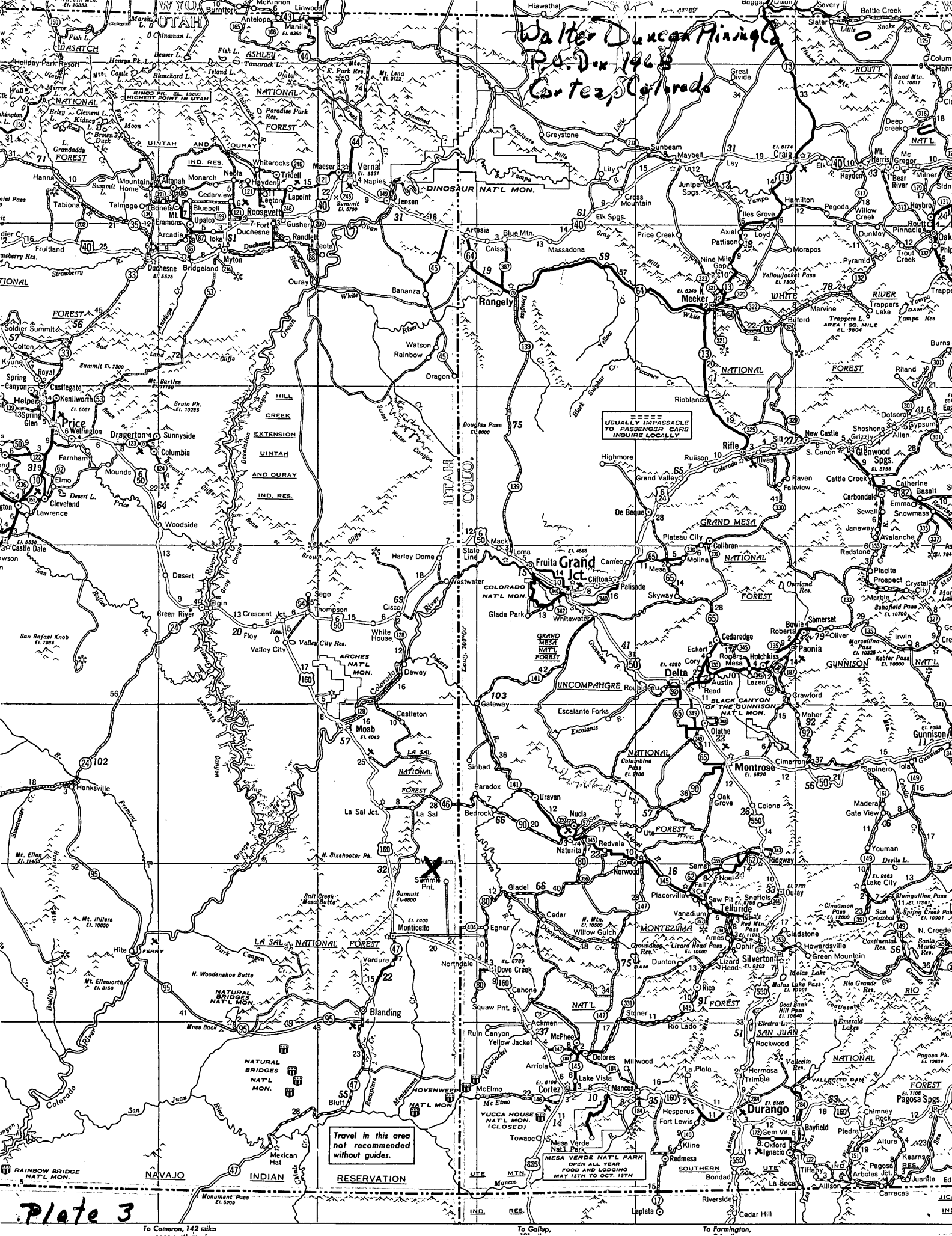


Lisbon Valley Area
showing
Geology and Known Ore Bodies
1" = 2 miles

C - Pennsylvanian
P - Permian
Ꞧ - Triassic Chinle fm
J-K Jurassic + Cretaceous
— — Fault
Ore body

PLATE I

Walter Duncan Pinnigla
P.O. Box 1468
Cortez, Colorado



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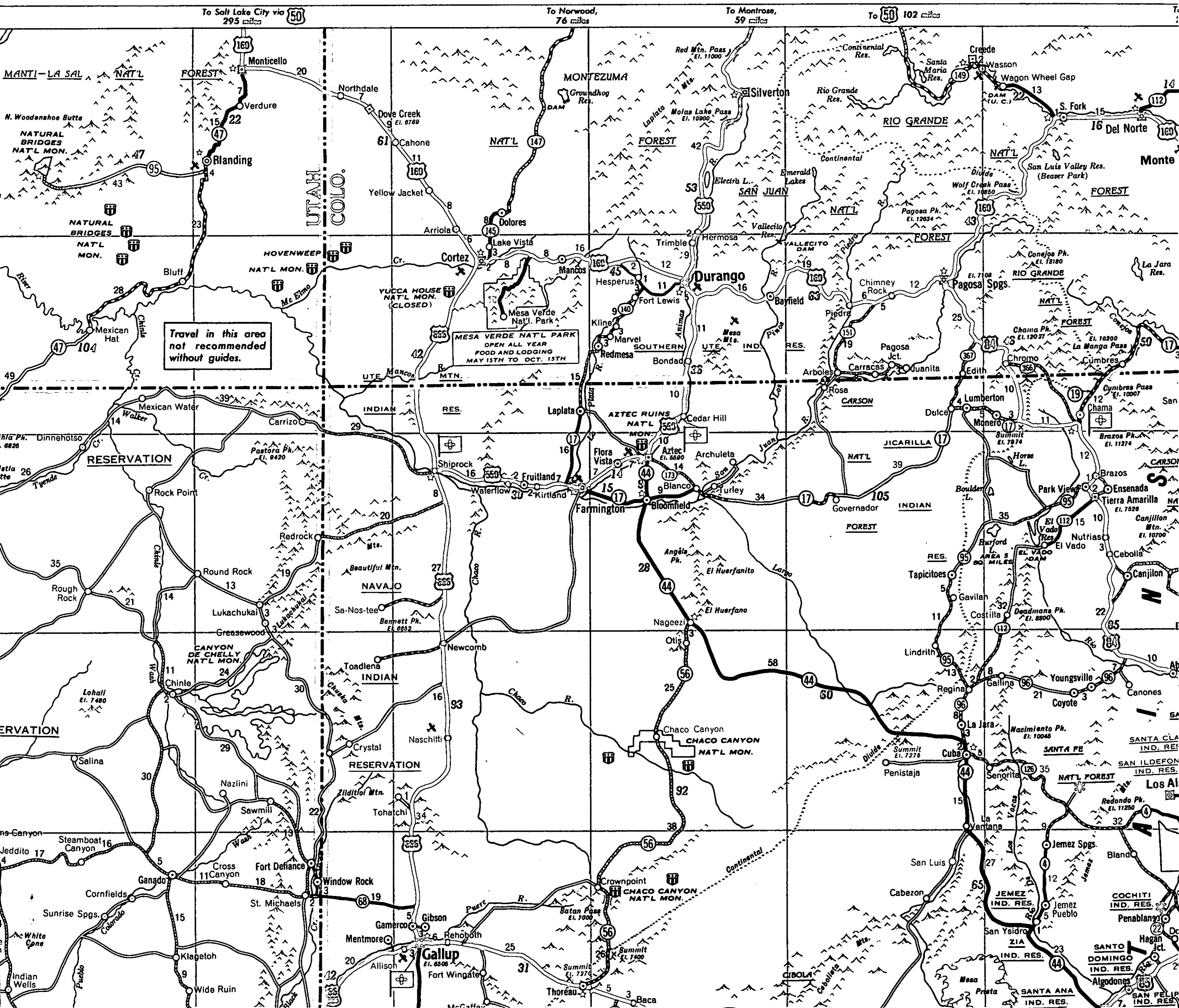
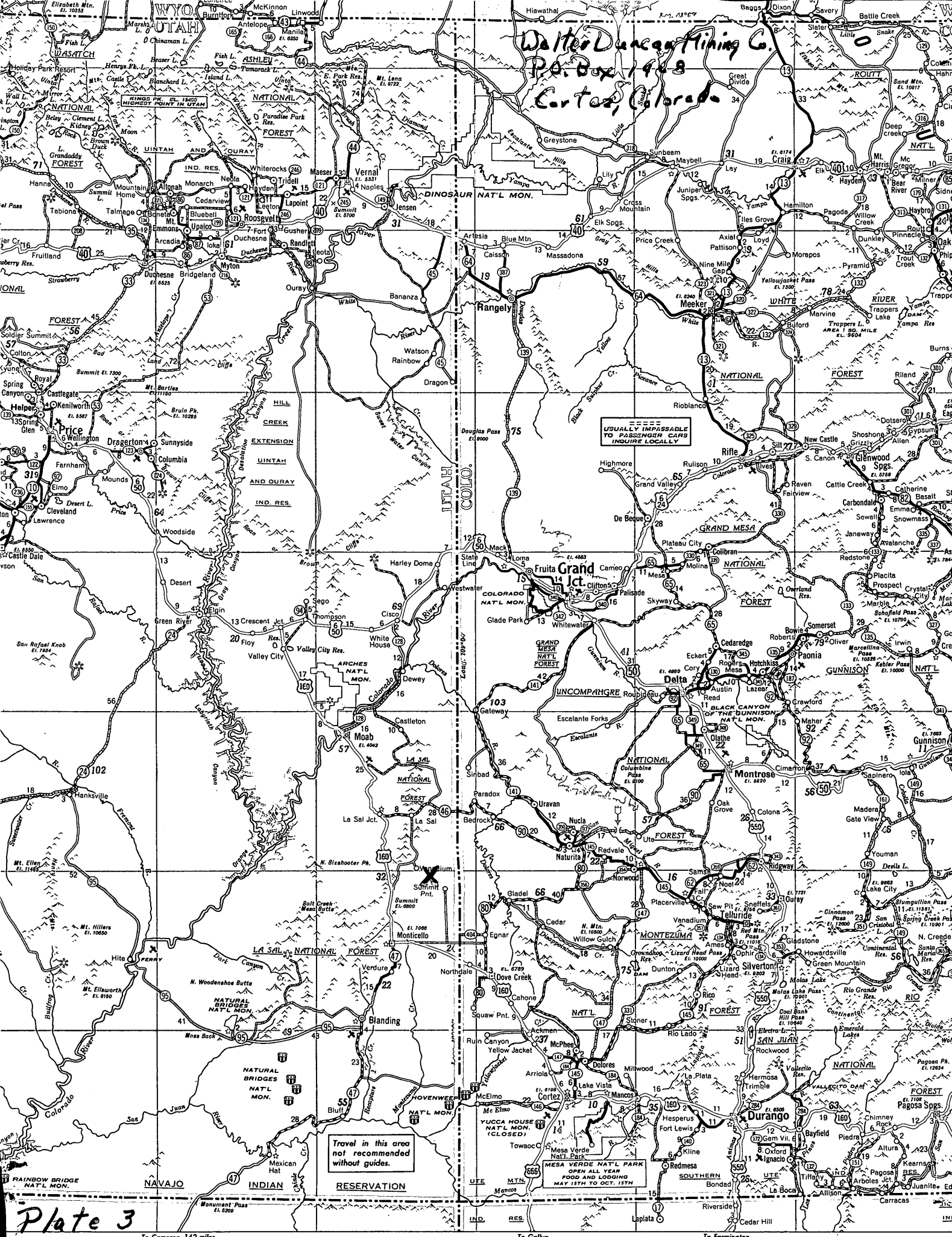


Walter Duncan Mining Co.
P.O. Box 148
Cortez, Colorado



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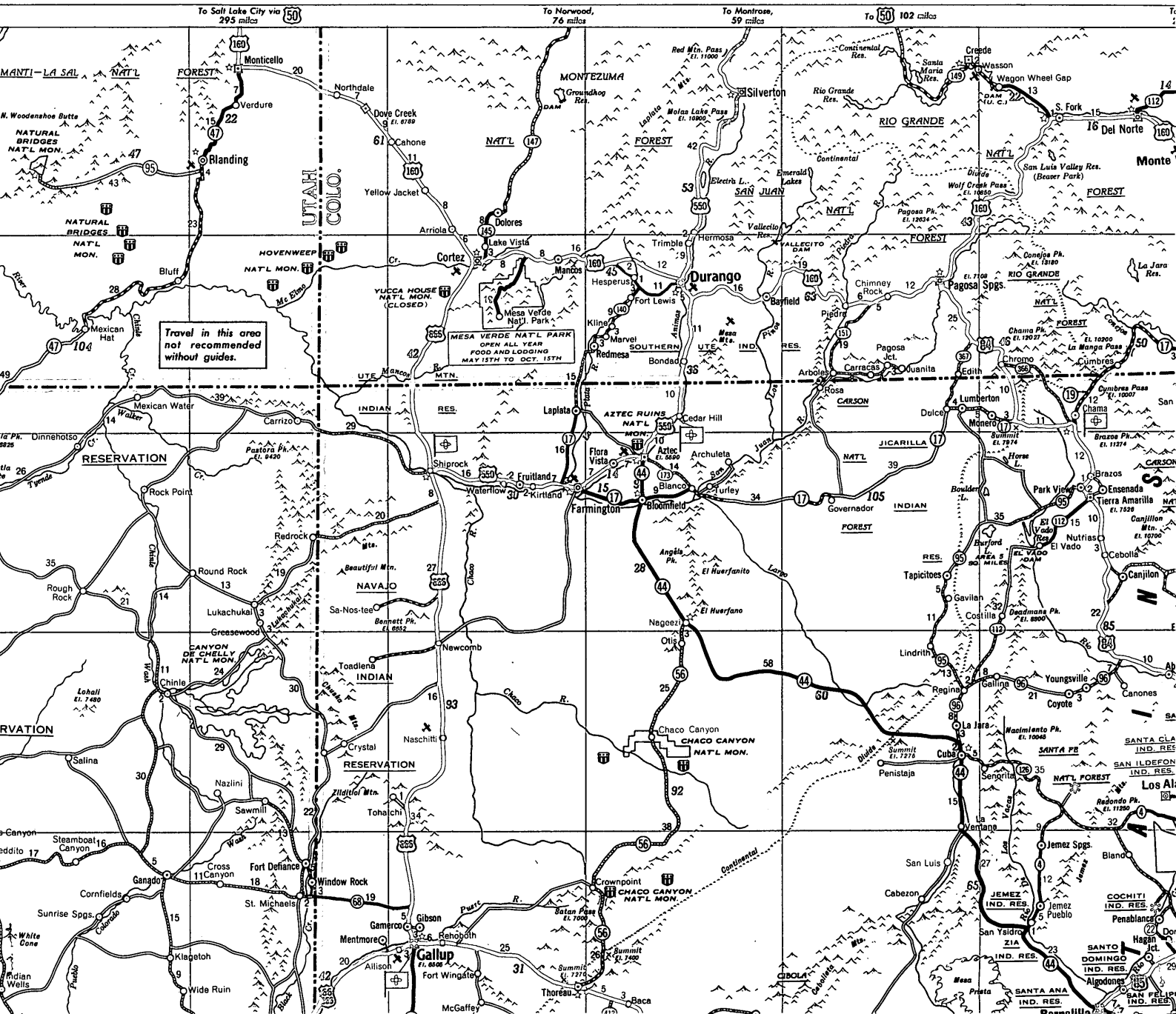
House	I-18
Hurley	L-12
Isleta	H-14
Jal	M-20
Jarales	I-14
Jemes Pueblo	G-14
Jemez Springs	G-14
Jicarilla	J-16
Jordan	H-18
Kelly	J-13
Kenna	J-19
La Cueva	F-16
Laguna	H-13
La Jara	F-13
Lajoya	I-14
Lake Arthur	L-18
La Liendre	G-16
La Madera	E-15
La Mesa	M-14
Lamy	G-15
Laplata	D-11
Las Cruces	M-14
Las Tablas	E-15
Las Vegas	G-16
La Union	N-14
La Ventana	F-13
Ledoux	F-16
Lemitar	J-14
Leyba	H-16
Lincoln	K-16
Loco Hills	L-18
Logan	G-19
Lordsburg	M-11
Los Alamos	F-14
Los Lunas	H-14
Los Pinos	D-15
Loving	M-18
Lovington	L-19
Lucero	F-16
Lumberton	D-13
McIntosh	H-15
Madrid	G-15
Maes	G-17
Magdalena	J-13
Malaga	M-18
Maljamar	L-19
Manzano	I-14
Marquez	G-13
Maxwell	E-17
Mayhill	L-16
Melrose	I-19
Mentmore	G-10
Mescalero	K-15
Mesilla	M-14
Mesilla Park	M-14
Mesquite	M-14
Miami	E-17
Mills	F-18
Mogollon	K-11
Monero	D-14
Mora	F-16
Moses	E-19
Mosquero	F-18
Mountainair	I-15
Mountain Park	L-15
Mount Dora	E-19
Nageezi	E-12
Nambe	F-15
Nara Visa	G-19
Newkirk	H-18
Ocate	F-16
Ojo Caliente	F-15
Ojo Sarco	F-15
Optimo	F-17
Paguate	H-13
Pajarito	H-14
Park View	E-14
Pastura	H-17
Pecos	G-15
Penablanca	G-14
Penasco	F-15
Peralta	H-14
Petaca	E-15
Picacho	K-16
Pilar	F-15
Pinon	M-16
Pinos Altos	L-11
Pojuaque	F-15
Polvadera	J-14
Portales	I-19
Puerto de Luna	H-17
Quarai	I-15
Quemado	I-11
Questa	E-16
Ramah	H-11
Ranches of Taos	E-15
Raton	D-17
Redrock	L-11
Rehoboth	G-11
Rencona	G-15
Reserve	J-11
Ribera	G-16
Rincon	L-13
Rociada	F-16
Rodarte	F-15
Rodeo	N-10
Rogers	J-19
Roswell	K-17
Roy	F-18
Ruidoso	K-16
Sabinoso	G-17
Saint Vrain	I-19
Salem	L-13
San Antonio	J-14
San Cristobal	E-15
Sandoval	H-14
San Fidel	H-12
San Ildefonso	F-15
San Jon	H-19
San Jose	G-16
San Lorenzo	L-12
San Marcial	K-13
San Mateo	G-12
San Miguel	D-15
San Miguel	G-16
San Rafael	H-12
Santa Cruz	F-15
Santa Fe	G-15
Santa Rita	L-12
Santa Rosa	H-17
Seboyeta	H-13
Sena	G-16
Sherman	L-12
Shiprock	E-11
Silver City	L-11
Socorro	J-14
Springer	E-17
Sugarite	D-17
Tafoya	E-18
Tajiq	
Taos	
Tapic	
Tatum	
Tecol	
Texic	
Thore	
Tierra	
Tijera	
Tome	
Torre	
Tortu	
Trem	
Truch	
Trujil	
Truth	
que	
Sp	
Tucu	
Tular	
Turn	
Tyron	
Vadit	
Vado	
Valde	
Valer	
Valm	
Vaug	
Vegu	
Velar	
Villar	
Virde	
Wago	
Wate	
Watr	
Whit	
Willa	
Yeso	
Youn	



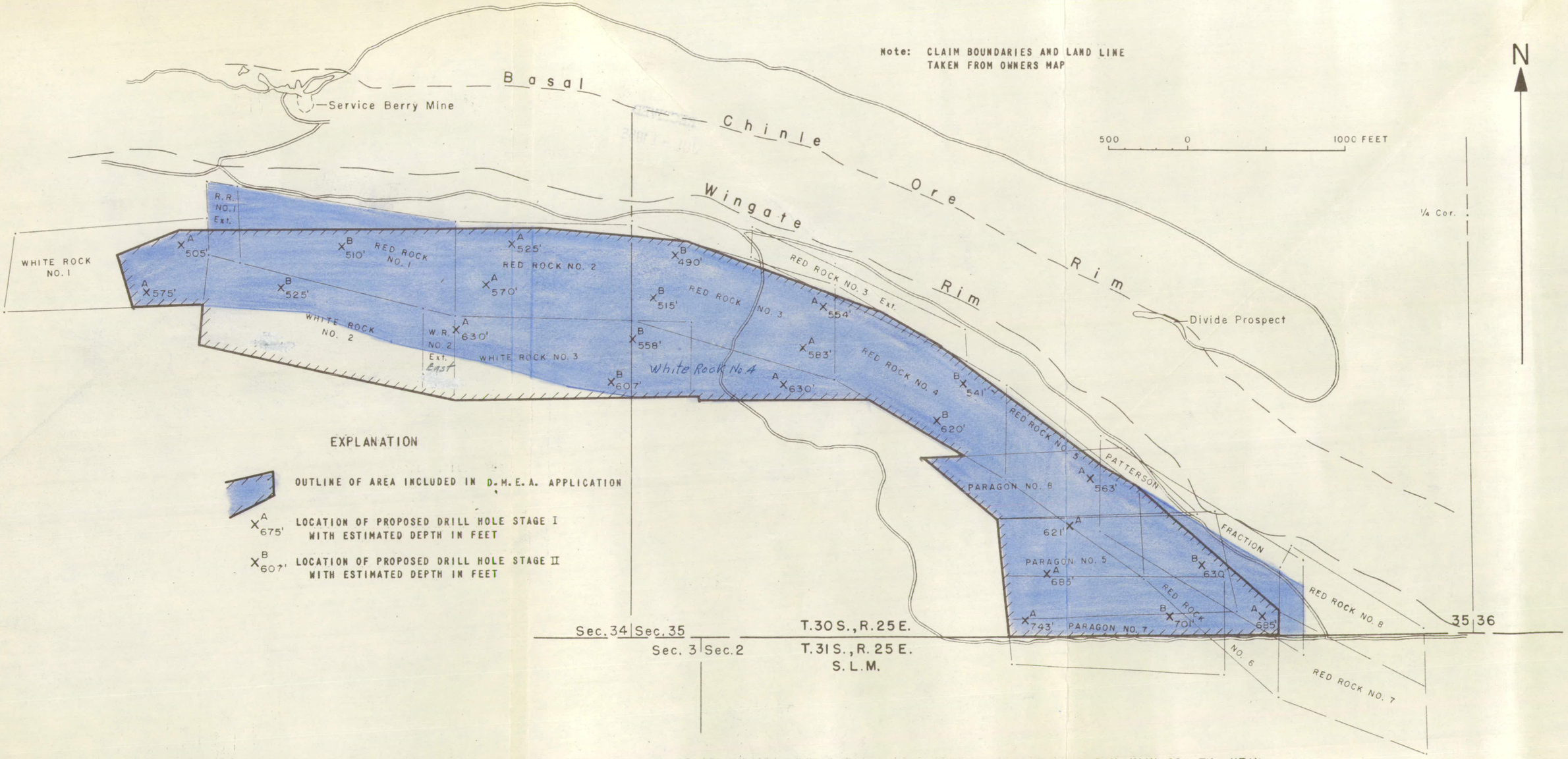


Figure 3. CLAIM MAP SHOWING LOCATION OF PROPOSED DRILL HOLES ON WALTER DUNCAN MINING CO. CLAIMS, LISBON VALLEY AREA, SAN JUAN COUNTY, UTAH

BUREAU OF MINES

OFFICIAL BUSINESS

420 CUSTOM HOUSE
555 BATTERY STREET
SAN FRANCISCO 11, CALIF.

SAN FRANCISCO JUL 2 1954 CALIF.

AIR MAIL

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Interior Building
Washington 25, D. C.

AIR MAIL

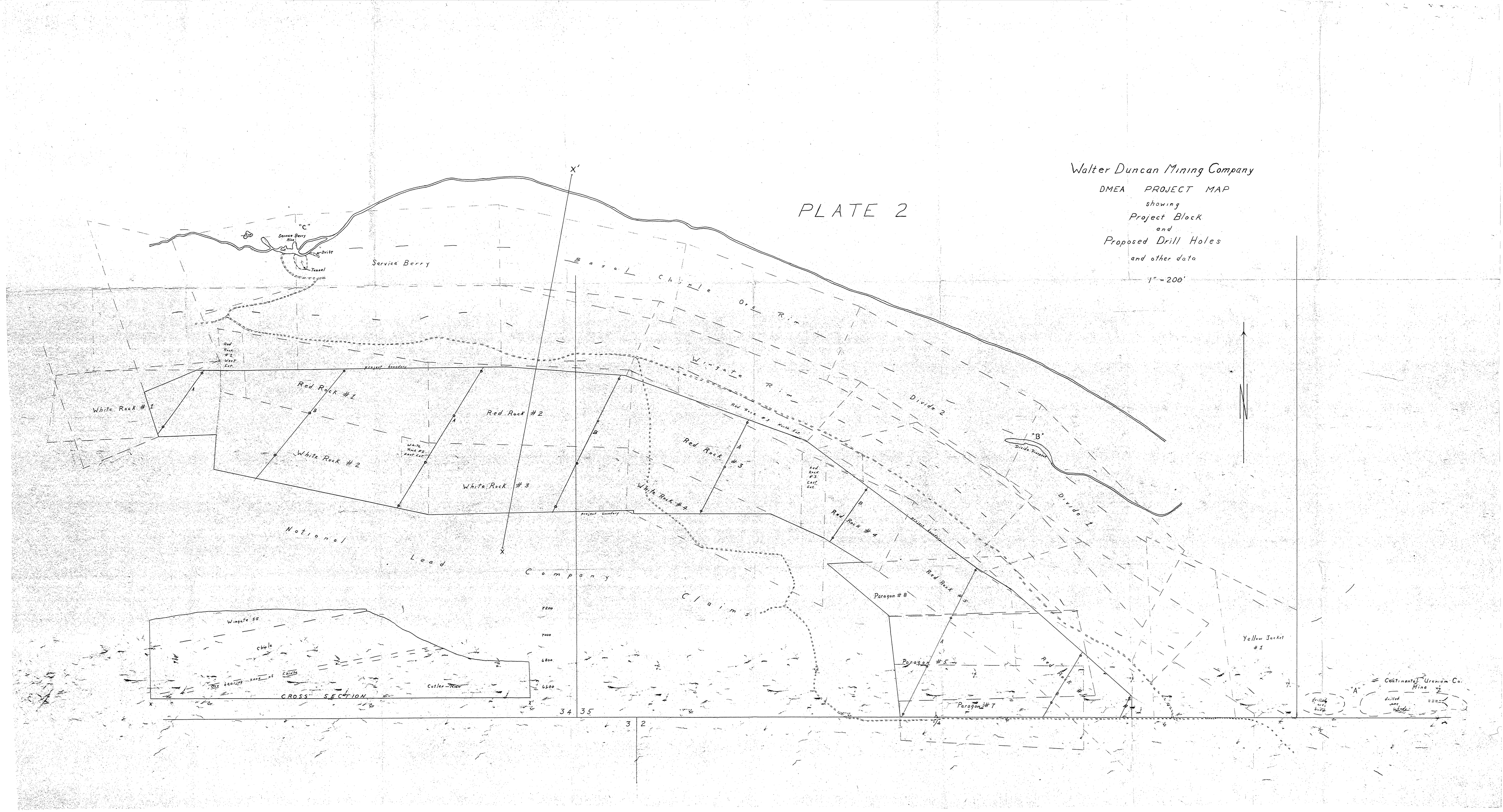


PLATE 2
Walter Duncan Mining Company
DMEA PROJECT MAP
showing
Project Block
and
Proposed Drill Holes
and other data
1" = 200'
N
"C"
Service Berry Mine
Drift
Tunnel
Service Berry
Basal Chinle Ore Rim
Wingate Rim
Divide 2
Divide 1
"B"
Divide Tunnel
Red Rock #1 West Exp.
Red Rock #1
Red Rock #2
White Rock #1
White Rock #2
White Rock #2 West Exp.
White Rock #3
White Rock #4
Red Rock #3
Red Rock #3 North Exp.
Red Rock #3 East Exp.
Red Rock #4
Red Rock #5
Paragon #8
Paragon #5
Paragon #7
Yellow Jacket #1
Continental Uranium Co. Mine
"A"
drilled with Diamond
drilled with Rotary
National Lead Company Claims
Project boundary
X
X'
Wingate SS
Chinle
Cutler Fm
CROSS SECTION
7200
7000
6800
6600
34
35
3
2

Walter Duncan Mining Company

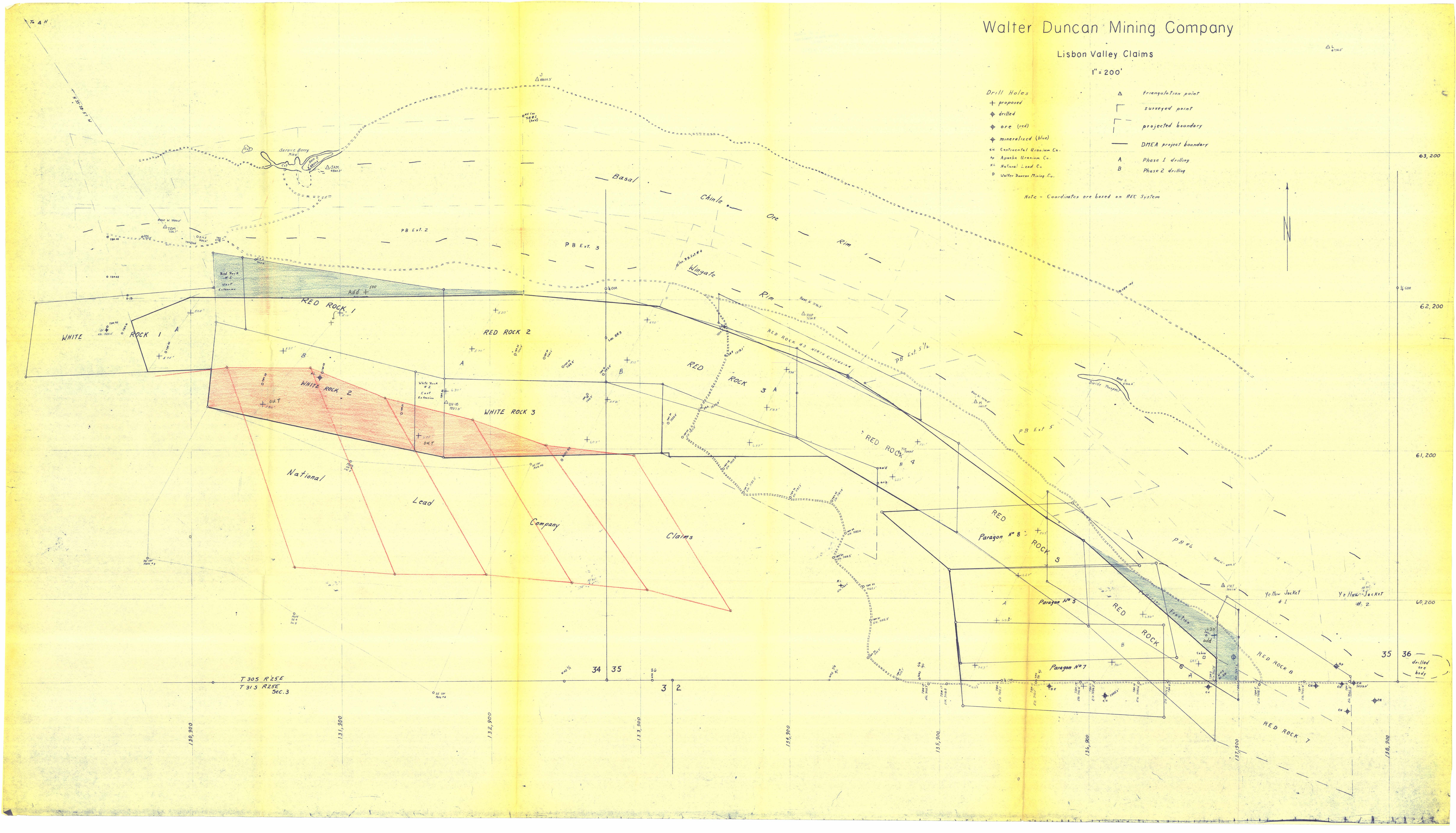
Lisbon Valley Claims

1" = 200'

Drill Holes
- + proposed
- drilled
- ore (red)
- mineralized (blue)
- CU Continental Uranium Co.
- Ap Apache Uranium Co.
- NL National Lead Co.
- D Walter Duncan Mining Co.

- △ triangulation point
- surveyed point
- projected boundary
- DMEA project boundary
- A Phase 1 drilling
- B Phase 2 drilling

Note - Coordinates are based on REC System



Walter Duncan Mining Company

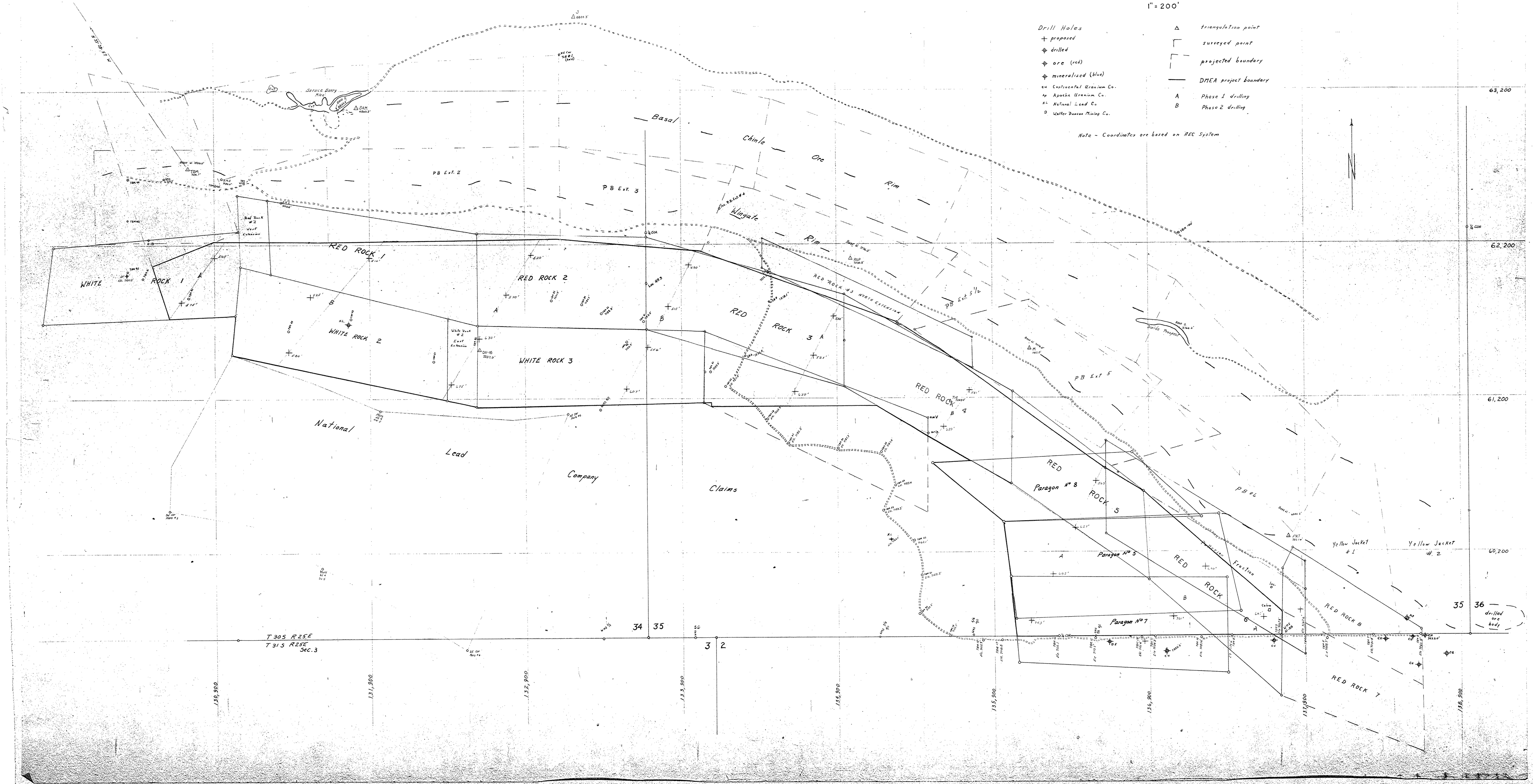
Lisbon Valley Claims

1" = 200'

Drill Holes
- + proposed
- drilled
- ore (red)
- mineralized (blue)
- CU Continental Uranium Co.
- Ap Apache Uranium Co.
- NL National Lead Co.
- D Walter Duncan Mining Co.

- △ triangulation point
- surveyed point
- projected boundary
- DMEA project boundary
- A Phase 1 drilling
- B Phase 2 drilling

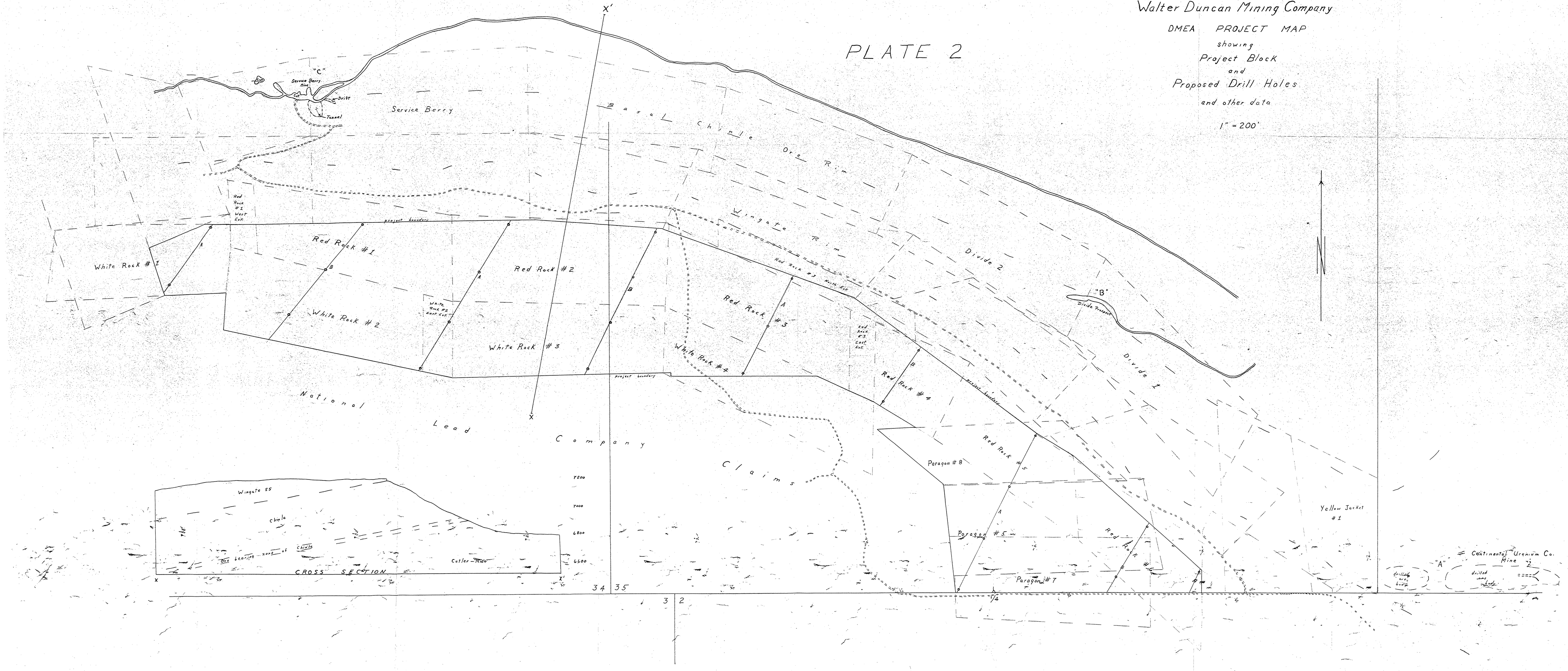
Note - Coordinates are based on REC System



DMEA 3582
This shows location of White Rock #4
5/3/55

PLATE 2

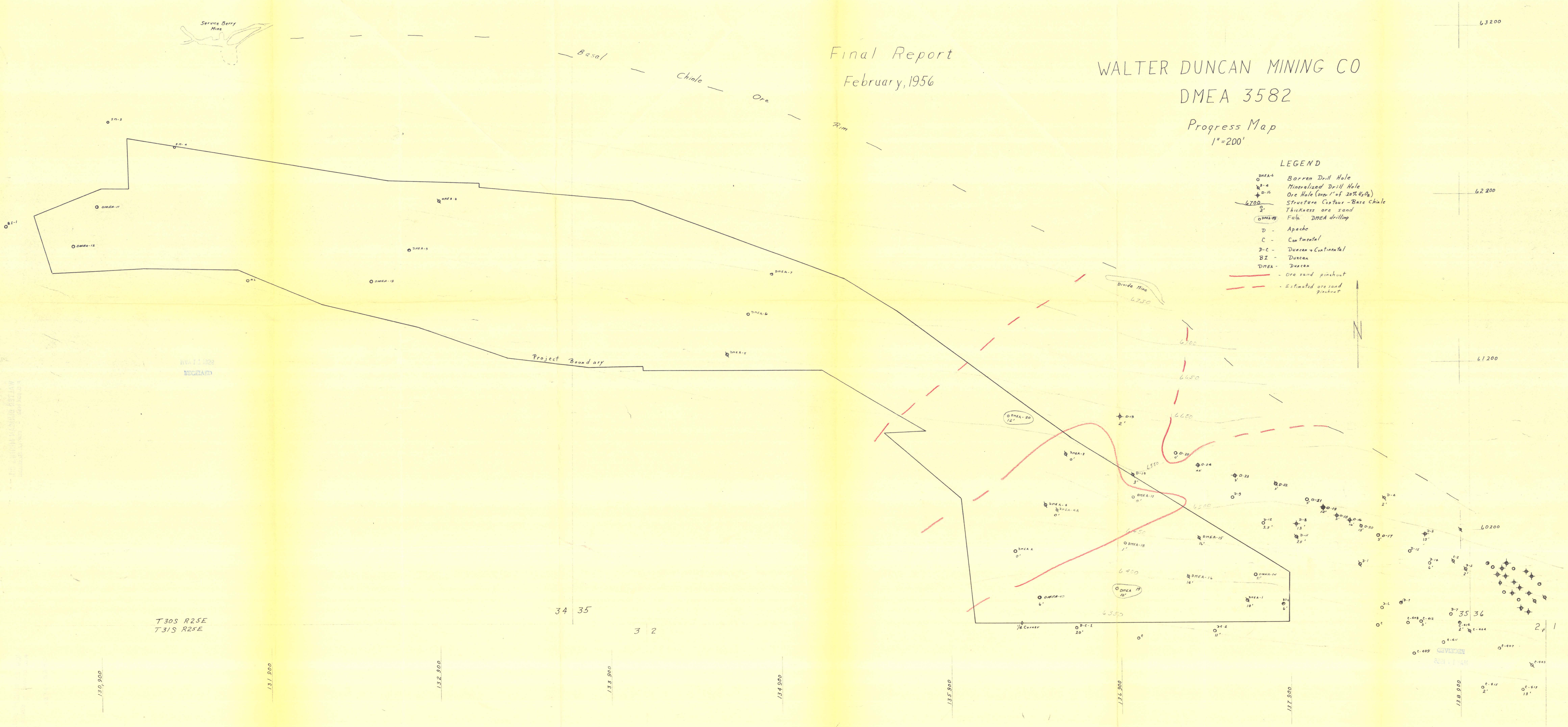
Walter Duncan Mining Company
DMEA PROJECT MAP
showing
Project Block
and
Proposed Drill Holes
and other data
1" = 200'



WALTER DUNCAN MINING CO
DMEA 3582

Progress Map
1" = 200'

Final Report
February, 1956



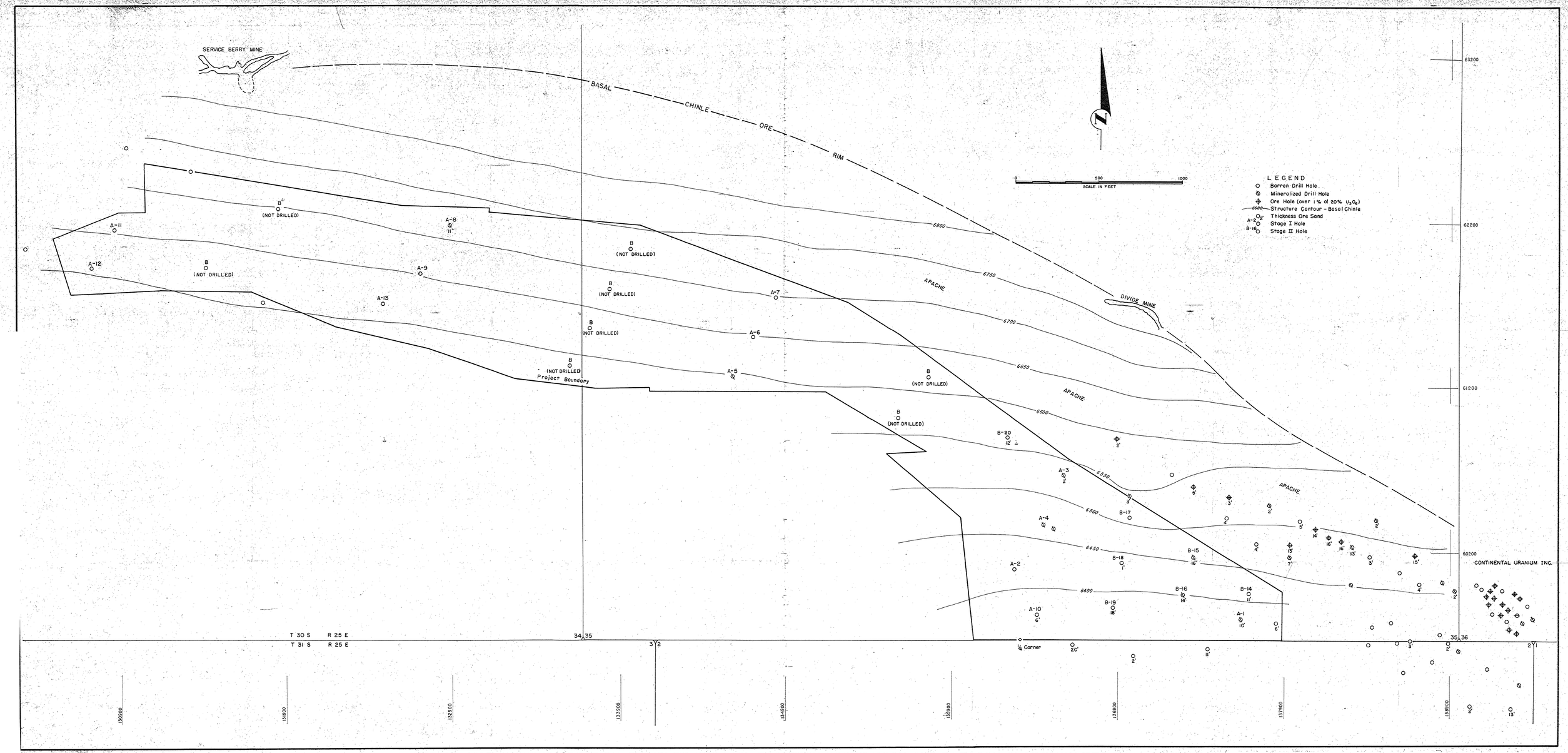


FIGURE 2 - MAP SHOWING LOCATION OF HOLES DRILLED, RED ROCK, WHITE ROCK AND PARAGON CLAIMS, WALTER DUNCAN MINING CO., SAN JUAN COUNTY, UTAH. DMEA 3582