4/12/54 gla

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

224 New Customhouse
Denver 2, Colorado

April 5, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3293 (Uranium), Contract Idm-E720, Aztec Mining Co., San Miguel County, Colorado

Enclosed are the Government, Division, and Docket copies of a Rescission Agreement which was prepared in Washington and forwarded by your letter of March 25, 1955 for signature by the operator.

Copies of the agreement 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

Enclosure

Division Copy

RESCISSION AGREEMENT

It is agreed this 25th day of March, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Aztec Mining Co., a partnership, that Exploration Project Contract Idm-E720 (Docket No. DMEA-3293), dated October 6, 1954, is hereby rescinded, revoked, and cancelled as of the date of the contract, without any obligation whatever, one party to the other, the same as if said contract had never been entered into.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C P Mettendorf
Administrator, Defense Minerals
Exploration Administration

Curtin
Hollenried
Murphy
Ellis
Champion
Selfridge

AZTEC MINING CO.

By W B Colbert

Memorandum

To: Hazel Berry, Operating Committee

From: Grace L. Ault, Rare & Misc. Metals Division

Subject: Contract finalized by Region IV

Mr. Ellis has reviewed and approved Contract Idm-E720, Docket No. DMEA-3293, Aztec Mining Company (Uranium), dated October 6, 1954, executed by the Executive Officer, Region IV, and representatives of the Company.

/s/ Grace L. Ault

Grace L. Ault

Date October 12, 1954

To: Mr. Ellis - Mr. Knouse

Docket No. DMEA-3293 Aztec Mining Co.
Contract No. Idm-E720

Attached is ~~Amendment No.~~ Contract No. Idm-E720, dated October 6, 1954

to be reviewed.

Approved: _____

Other action _____

Please return this slip to me for my records.

Mrs. Ault

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

224 New Customhouse
Denver 2, Colorado

October 7, 1954

REGISTERED

Memorandum

To: Administrator, DMEA, Attention Code 200

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3293 (Uranium), Contract Idm-E720, Aztec Mining Company, San Miguel County, Colorado

Enclosed are the original and two copies of Contract Idm-E720. Copies of the contract have been given to the operator, the Finance Office, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 3293

COMMODITY Uranium

Defense Minerals Administration
RECEIVED
OCT 11 1954

Idm-E720

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

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 6th day of October, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Aztec Mining Co., 214 W. Main, Farmington, New Mexico, A Partnership consisting of L. B. LaRue, B. F. LaRue, Aztec New Mexico, and Carl J. Leton, W. D. Colbert, Farmington, New Mexico,

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Colorado, County of San Miguel, described as follows:[3] Owner of Chipmunk No. 1 (Original) and Chipmunk No. 4 (Original), Chipmunk Claims Nos. 1, 2, 3, 6, and 11, are leased from the Atomic Energy Commission, under Circular 7. The claims are located in Secs. 34 and 35, T. 45 N., R. 19 W., and are further described in Annex I, attached,

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Owners of Chipmunk No. 1 (Original), and Chipmunk No. 4 (Original). Owners of Chipmunk Nos. 1, 2, 3, 6, and 11, by Public Law 585, further described in Annex I, attached.

(*b*) ~~[illegible]~~

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within 60 (sixty) days from the date of this contract shall commence work on a project of exploration for[5] Uranium

in or upon the described land; and shall bring the project to completion within a period of 4 (four) months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 75 (seventy-five) percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $4,995.00, which is 75 percent of $6,660.00, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or 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 ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operator shall provide the Government with monthly reports of units of work performed under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of units of work performed on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) *Compliance with requirements.*—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of the units of work performed, which the Government may inspect and audit at any time. The Government may at any time require a check of the work performed and an audit of the Operator's records and accounts, by a certified public accountant or otherwise, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account and statement of work performed to accompany his final report.

ARTICLE 6. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

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

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

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

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

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

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations. **See Annex II substituted for Article 6 above.**

ARTICLE 7. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; ~~*Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance~~. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 8. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if, in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified.

ARTICLE 9. *Changes and added provisions* **That part of the second sentence of Article 7 beginning with the word "Provided" is deleted.**

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By W S King
Executive Officer
DMEA Field Team
Region IV

Astec Mining Co. (Operator)
Fr LaRue

By B. L. La Rue
Earl D. Eaton
W.B. Colbert

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—66329-1

ANNEX I

Claim	Book	Page
Chipmunk No. 1 (Original)	175	174
Chipmunk No. 4 (Original)	175	176

The above claims are recorded in the County Clerk and Recorder's Office of San Miguel County, Colorado.

The following claims have been filed under Public Law 585 and the amended location certificates have been submitted to the County Clerk and Recorder for filing. The reception numbers for the filing of these amended location certificates are as follows:

Claim	Reception No.
Chipmunk No. 1	118125
Chipmunk No. 2	118126
Chipmunk No. 3	118127
Chipmunk No. 6	118128
Chipmunk No. 11	118129

Defense Minerals Administration
RECEIVED
OCT 11 1954

ANNEX II

The following provisions are in lieu of Article 6:

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 the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. 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, for 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 raw 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 ($1\frac{1}{2}$) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half ($\frac{1}{2}$) 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 ($1\frac{1}{2}$) percent; on an amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

f. 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.

g. 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.

h. 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 mining or production operations.

i. 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.

58694

EXHIBIT "A"

Description of the Work

The work consists of drilling a maximum of 15 holes in a three-fence pattern at locations as shown on Figure 2, which is attached and made a part of Exhibit "A".

All drill holes will penetrate the entire thickness of the top sandstone bed of the Salt Wash member of the Morrison formation which is the known ore horizon.

Hole No. 1 as shown in Figure 2 will be drilled first and cored the entire depth. This hole will bottom 100 feet below the base of the known ore horizon to prospect for deeper ore horizons.

Hole No. 15 will be drilled last and will not be started unless sufficient unexpended footage remains to assure completion of the hole to its objective within the total allowable footage.

Holes No. 2 to No. 14 may be drilled in any sequence.

All core drilling will be a minimum of AX size. Holes numbered 1, 2, 3, 4, 6, and 9, at locations as shown on Figure 2, will be cored in their entirety. The remaining holes may be drilled with a plug bit from surface to a point near but above the ore bearing horizon from which point the holes will be core drilled to the bottom.

It is estimated that 400 feet of plug drilling and 1100 feet of core drilling will be required to complete the 15 holes.

An engineer-geologist will be on the property at all times the drill rigs are in operation and will supervise and direct all drilling and bulldozer work for site preparation. He will split and store all core, saving one-half of the split core for the use of the Government. He will log all drill holes and keep up to date a combined geologic and assay map. The completed combined geologic and assay map will accompany the operator's final report. The engineer-geologist will check all drill core and sludge for the presence of radioactive material by radiometric instrument and a maximum of 30 samples indicating significant mineralization will be analyzed chemically for U_3O_8 and V_2O_5.

Estimated Costs of the Work

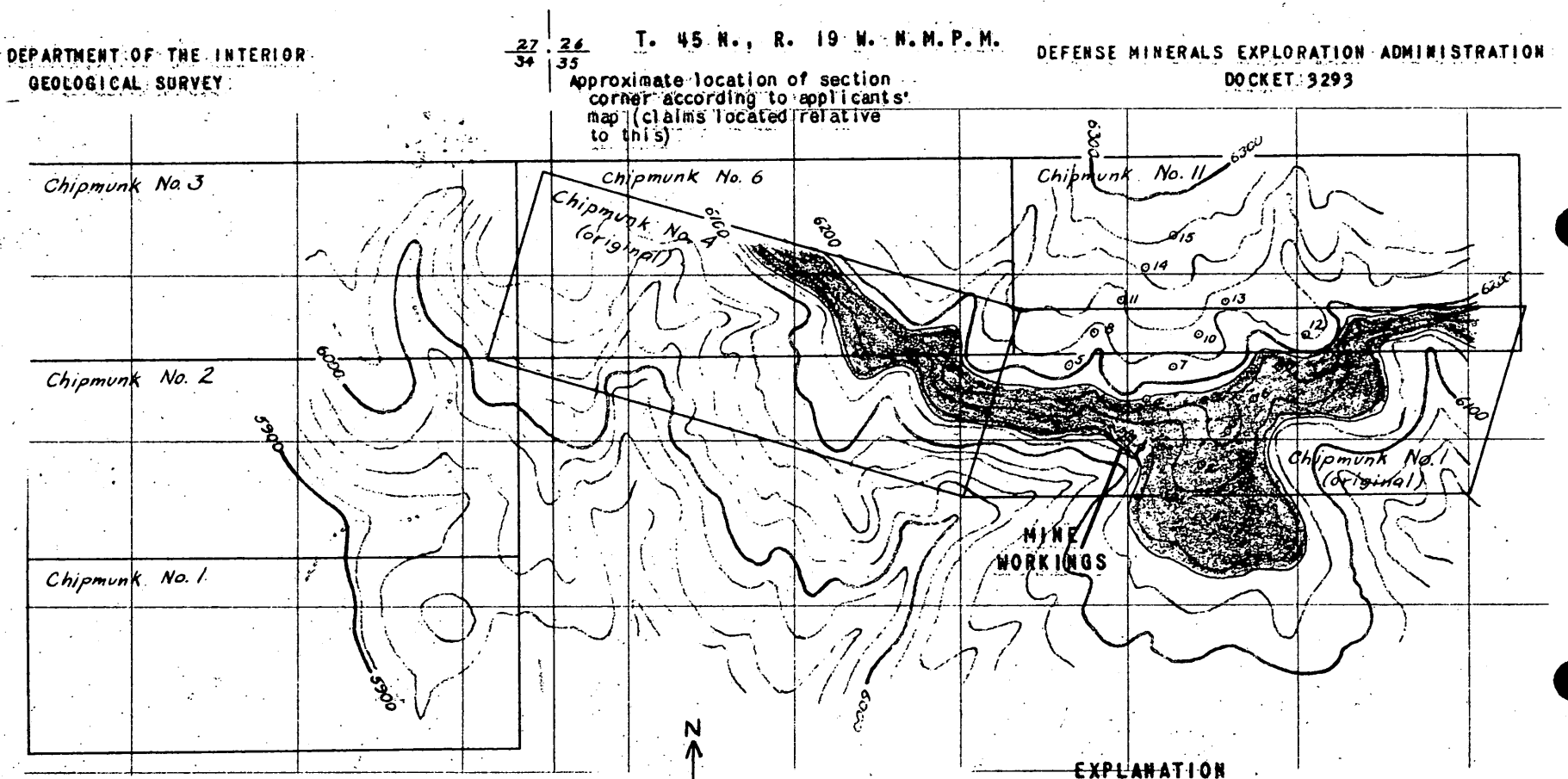
1/	Estimated 1100 feet of core drilling at $3.80 per foot -	$4,180.00
1/	Estimated 400 feet plug drilling at $2.45 per foot -	980.00
	Preparation of 15 drill sites, including access roads, at $40.00 each -	600.00
2/	A maximum of 30 chemical assays for U_3O_8 and V_2O_5 -	150.00
	Geologist-Engineer at $0.50 per foot of hole drilled -	750.00
	Estimated Cost	$6,660.00
	Government Participation at 75%	$4,995.00

1/ No reimbursement will be made for partially completed holes. Claim for reimbursement for completed holes must be supported by a certified drill log of the hole or holes involved.

2/ Claim for reimbursement for analysis charges must be supported by a copy of the assay return showing costs and results.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3293



SCALE 1" = 500 FEET
CONTOUR INTERVAL 20 FEET

TOPOGRAPHY FROM U.S. GEOLOGICAL SURVEY QUADRANGLE MAP, HORSE RANGE MESA

CLAIM LINES ARE APPROXIMATELY LOCATED RELATIVE TO TOPOGRAPHY

Geology by D.R. Shawe

EXPLANATION

APPROXIMATE OUTCROP OF TOP SALT WASH SANDSTONE LENS

ORE (RED; MINED OUT) AND MINE WORKINGS

MINERALIZED WAGON DRILL HOLE

PROPOSED LOCATION OF DIAMOND DRILL (CORE) HOLE

Figure 2. SKETCH MAP OF PART OF HORSE RANGE MESA QUADRANGLE SHOWING LOCATIONS OF PROPOSED EXPLORATION DRILL HOLES ON THE CHIPMUNK GROUP OF CLAIMS, AZTEC MINING CO. SAN MIGUEL COUNTY, COLORADO

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

MAR 2 5 1955

Mr. [illegible] Drever
Executive Officer
DMEA Field Team, Region III
2[illegible] New Customhouse Building
Denver 2, Colorado

re: Contract No. DMA-3293 (Amendment)
Contract No. [illegible]-720
Anton Mining Company
Chimney Gulch
San Miguel County, Colorado

Dear Mr. Drever:

This is in response to your memorandum, dated March 1, 195[illegible], requesting appropriate action in regard to the subject contract.

In view of your memorandum and the attached copies of letters exchanged by your office and the Operator, we have prepared the enclosed original and five copies of a Rescission Agreement, which have been signed by the Administrator.

If you and the Operator find the enclosed document in order, kindly have the letter sign all of the copies and thereafter make the usual distribution.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosure

[illegible]

J. H. Hedges

Director, Bureau of Mines

Thor H. Kiilsgaard

Director, Geological Survey

DMurphy/ela
3-24-55
cc to: Admr's Reading File
Operating Committee
Docket
Messrs. J. M. Crawford, Rm. 3611
T. H. Kiilsgaard, Rm. 5228
J. [illegible] Morton, Rm. 3210, DMA
Code 700
Mr. Murphy

March 15, 1955

Memorandum

To: Acting Assistant Solicitor, DMEA

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

Subject: Termination Agreement
Contract No. Idm-K720
Docket No. DMEA-3293 (Uranium)
Astoc Mining Company
Chipmunk Group
San Miguel County, Colorado

Will you kindly prepare a ~~Termination~~ Rescission Agreement by mutual consent between the Government and the subject Operator.

There has been no work performed under this short-form contract (MF-200 A-February 1952), dated October 6, 1954.

Various letters were written to the Operator by the Field Team Executive Officer of Region III, in regard to what action the Company wished to take in completing the work described in the contract, etc.

The Operator finally answered by writing a note, dated March 8, 1955, on the Executive Officer's last letter, dated March 4, 1955, and returning same to him. A copy of this letter is attached, in the docket.

The Operator states that they are no longer interested in performing the work under the subject contract.

Therefore this Division recommends a termination of the subject contract.

Fred M. Murphy

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

3/14/55 gla

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

MAR 14 1955

224 New Customhouse
Denver 2, Colorado

March 9, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3293 (Uranium), Contract Idm-E720, Aztec Mining Co., San Miguel County, Colorado

In confirmation of advice in our teletype to you of March 8, in conjunction with material forwarded by our memorandum of March 4, we are enclosing the original and two copies of a notation from the operator on our letter to them of March 4, 1955.

The operator verifies that they are no longer interested in performing work under the contract.

W. M. Traver

W. M. Traver

Enclosure

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

DMEA
Date Rec'd,
MAR 1955
BUREAU OF MINES

224 New Customhouse
Denver 2, Colorado

March 4, 1955

Mr. W. B. Colbert
The Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to our letters dated January 26 and February 10, 1955, relative to operations under the subject contract.

As we did not receive a reply from you by February 21, 1955, as stipulated in our letter dated February 10, we assume that you are no longer interested in performing work under the contract. Therefore, we are initiating appropriate action in the matter.

Yours very truly,

W. M. Traver

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

March 8, 1955

Dear Mr. Traver:
We are no longer interested in performing the work under this contract, due to weather and other things beyond our controll.

We wish to thank you very much for your kind efforts and consideration in this matter.

Very truly yours,
W. B. Colbert
W. B. Colbert
Aztec Mining Co
214 W. Main
Farmington, N. M.

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

224 New Customhouse
Denver 2, Colorado

March 4, 1955

Memorandum

To: Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3293 (Uranium), Contract Idm-E720, Aztec Mining Company, San Miguel County, Colorado

Enclosed is the following material relative to operations under the subject contract:

1. The original and three copies of the operator's letter dated December 17, 1954, in reply to our letter of December 15, a copy of which was forwarded to you.

2. The original and three copies of a memorandum dated January 14, 1955, from M. H. Salsbury, Mining Engineer, Bureau of Mines.

3. The original and three copies of a memorandum dated January 12, 1955, from W. P. Williams, Geologist, Geological Survey, and transmittal thereof from E. N. Harshman dated January 19, 1955.

4. Four copies of our letter to the operator dated January 26, 1955.

5. Four copies of our letter to the operator dated February 10, 1955.

6. Four copies of our letter to the operator dated March 4, 1955.

copy only need (in docket) Also enclosed is one copy of the suggested amendment to the contract referred to in our letter to the operator dated January 26, 1955.

Inasmuch as all dates for performance of work under the contract have expired and the operator has failed to comply with our requests the entire matter is forwarded for your consideration and appropriate action with the recommendation that the contract be rescinded as though it never had existed.

W. M. TRAVER,

W. M. Traver

Enclosures
JW:ld
Townsend Copy to: E. N. Harshman
J. F. Shaw (w/enc - Items 1, 2, 3 & 6
hron W. P. Williams (w/enc - Items 1, 2, 3 & 6

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

224 New Customhouse
Denver 2, Colorado

March 4, 1955

Mr. W. B. Colbert
The Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to our letters dated January 26 and February 10, 1955, relative to operations under the subject contract.

As we did not receive a reply from you by February 21, 1955, as stipulated in our letter dated February 10, we assume that you are no longer interested in performing work under the contract. Therefore, we are initiating appropriate action in the matter.

Yours very truly,

W. M. TRAVER,

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

JWT:ld

Copy to: Chairman, Spr. Comm. (3)
E. N. Marshman
W. P. Williams
J. F. Shaw
J. W. Townsend
Subject
Chron

COPY

224 New Customhouse
Denver 2, Colorado

February 10, 1955

REGISTERED

Mr. W.B.Colbert
Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Urarium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to our letter of January 26, 1955, whereby we forwarded a copy of suggested Amendment No. 1 for your consideration, and in addition we advised that it would be necessary for you to request an amendment to Article 3 of the contract form to extend the starting and completion dates.

Your attention is directed to the fact that the date for completion of the work outlined under the contract expired February 6, 1955, therefore if you are desirous of maintaining the contract in force your prompt attention should be given the matter.

If we do not hear from you by February 21, 1955, we will assume that you are no longer interested in performing work under the contract and will take such steps as are indicated.

Very truly yours,

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

Note: Letter received by W.B.Colbert
2/11/55 as per return receipt.
JWT

COPY

224 New Customhouse
Denver 2, Colorado

January 26, 1955

Mr. W.B.Colbert
Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to your letter of December 17, 1954 wherein you request DMEA consideration in amending the contract to provide that drilling be accomplished with a dry rotary drill in lieu of core drilling as presently stipulated.

Based on recommendations of DMEA field examiners and a review of other information available to this office, we have prepared a suggested amendment to replace the present EXHIBIT "A" attached to the contract. One copy of the suggested amendment is attached.

If such an amendment is satisfactory to you we will appreciate verification of that fact by return mail.

In addition it is suggested that you request a further amendment to the contract amending Article 3 of the contract form to extend the period for start of the project work to on or before March 1, 1955 and also request an extension of the period for completion of the project work for such a period as you deem will be necessary. Action in the matter will be deferred pending receipt of advice from you.

Should an amendment of the suggested nature be prepared, Amendment No. 1 which you are retaining unexecuted will automatically be void, therefore please return all copies of the amendment to this office with your advice.

Very truly yours,

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

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

January 19, 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3293 (uranium), Contract Idm-E 720, Antec Mining Co., San Miguel County, Colorado - Request for amendment

Enclosed are 10 copies of a memorandum by D. R. Shawe, U. S. Geological Survey, covering a request for amendment to Contract Idm-E 720.

In a letter of December 17, 1954, the operator states that due to water losses in the holes, it has been impossible to proceed with core drilling as specified in the contract but that he has successfully drilled several holes with a non-core air drill. He therefore requests an amendment to the contract to allow non-core air drilling in lieu of core drilling. Shawe recommends the operator's proposal and I concur in the recommendation.

At the time of the field conference the operator verbally requested authorization to drill an additional 15 holes not authorized in the contract. Shawe recommends the additional drilling. There is no provision in the contract for a 2nd stage of exploration and the operator has not requested in writing the additional exploration or indicated specific drill-hole locations. I therefore question the propriety of action at this time to authorize exploration in addition to that set forth in the contract.

In view of the field discussion and in view of Shawe's belief that additional work may be warranted, it appears that the operator should be notified that action on a request for additional exploration can be taken only after receipt of that request in writing.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

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

January 12, 1955

Memorandum

To: E. N. Harshman

From: W. P. Williams

Subject: Amendment of DMEA Docket 3293, contract Idm-E 720, Aztec Mining Company

Transmitted herewith are 10 copies of a memorandum and accompanying map prepared by D. R. Shawe concerning the proposed amendment of contract Idm-E 720.

Shawe concludes that the contract should be amended to allow non-core air drilling instead of core and plug drilling. The amendment is justified as core drilling has been unsuccessful because of loss of water in porous and fractured ground. I concur with Shawe's recommendation.

The amended contract will call for more footage, but at a lower cost. Mr. M. H. Salsbury of the Bureau of Mines will submit a separate report covering the amended cost of the project.

WPWilliams

W. P. Williams
Geologist

WPW/mlr

Enclosures

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GEOLOGICAL SURVEY
P. O. BOX 360
COLORADO PLATEAU DISTRICT
GRAND JUNCTION, COLORADO

January 12, 1955

Memorandum

To: W. P. Williams

From: Daniel R. Shawe

Subject: Amendment of DMEA Docket 3293, contract Idm-E 720, Aztec Mining Company

A DMEA Field Team consisting of M. H. Salsbury of the U. S. Bureau of Mines, and D. R. Shawe of the U. S. Geological Survey, met with H. N. LaRue and W. B. Colbert of the Aztec Mining Company on January 6, 1954. The purpose of this meeting was to discuss revising contract Idm-E 720 to allow air drilling in lieu of core and plug drilling.

The original contract Idm-E 720 called for 1,100 of core drilling and 400 feet of plug drilling. The applicants attempted to core drill 3 holes on their property, but all were unsuccessful as porous and fractured ground caused loss of circulation. The applicants did, however, complete 4 holes by drilling with air and collecting cuttings only. For this reason, the applicants desire to amend the contract to allow non-core air drilling in lieu of core and plug drilling with water.

An amendment agreeable to the Field Team and to the applicants is outlined below. In view of the difficulties in core drilling on the property and the much cheaper cost of air drilling, the Field Team recommends that contract Idm-E 720 be amended to this program. The Field Team agreed that 3,000 feet of air drilling in two stages are warranted to test the property. Stage 1, consisting of 15 holes and a total of 1,500 feet, is to be drilled as outlined in the original contract. This stage is to search for and outline favorable ground. Stage 2, consisting of 15 holes and a total of 1,500 feet, is dependent on results of stage 1 drilling and will be done only on Shawe's recommendation. Holes in stage 2 will be drilled on 62.5-foot centers within areas of favorable ground outlined by stage 1 drilling. As no core will be recovered by air drilling, the applicants must collect samples of cuttings of each 2-foot interval and at each change in rock type. These samples are to be stored in paper sacks and protected from weather. All material considered mineralized should be saved and sacked. The mineralized material will be split for analysis; one-half delivered to the Government and one-half used for assay purposes.

The increased total footage and change in manner of drilling required that the contract costs be revised. Mr. M. H. Salsbury of the Bureau of Mines will submit a separate report showing revised costs.

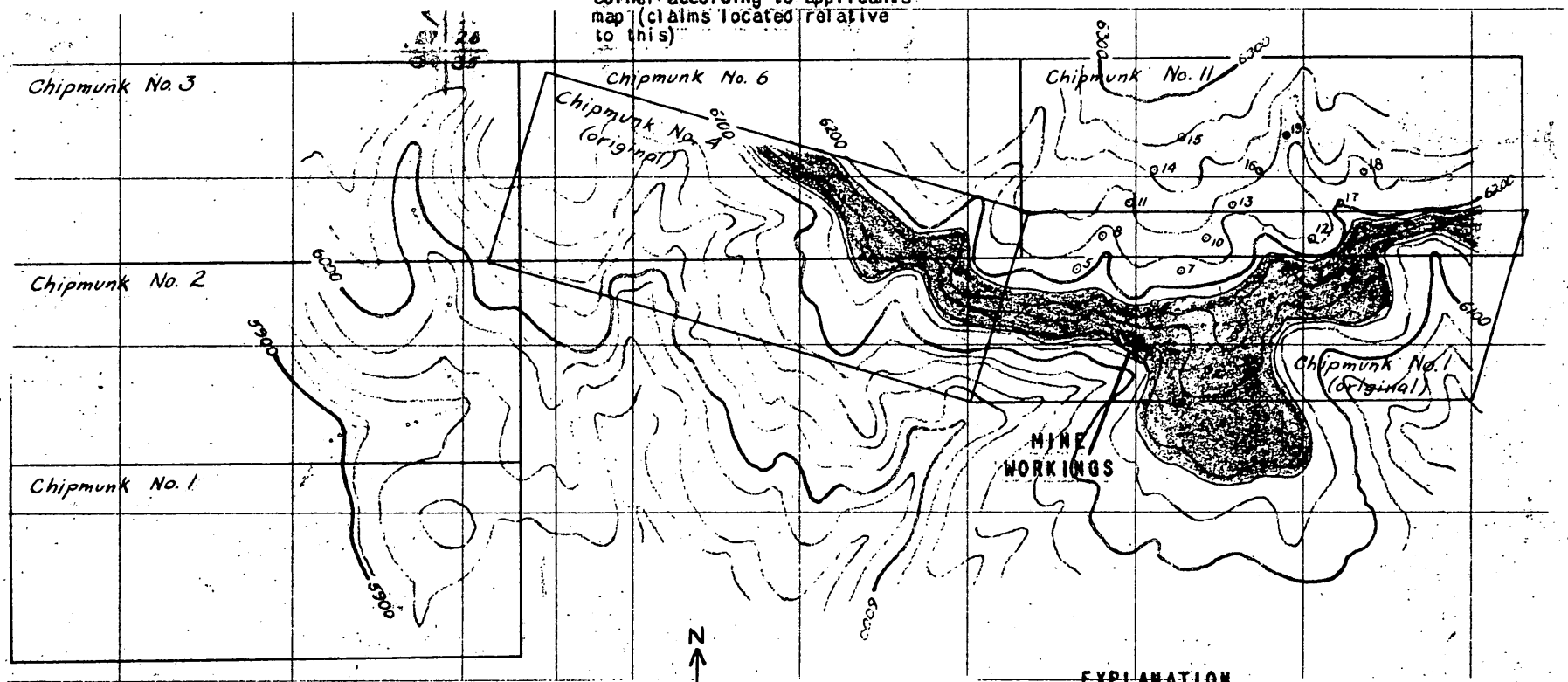
Holes drilled by the applicants have eliminated the necessity of drilling holes 1 through 4 of the original contract. Four (16 through 19) holes required about the same footage to replace the original 4 holes are located as shown on figure 1.

DRS/mlr

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

T. 45 N., R. 19 W. N.M.P.M.

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3293



SCALE 1" - 500 FEET
CONTOUR INTERVAL 20 FEET

TOPOGRAPHY FROM U.S. GEOLOGICAL SURVEY QUADRANGLE MAP, HORSE RANGE MESA

CLAIM LINES ARE APPROXIMATELY LOCATED RELATIVE TO TOPOGRAPHY

Geology by D.R. Shawe

EXPLANATION

APPROXIMATE OUTCROP OF TOP SALT WASH SANDSTONE LENS

ORE (RED; MINED OUT) AND MINE WORKINGS

MINERALIZED WAGON DRILL HOLE

LOCATION OF PROPOSED DRILL HOLE

Figure 1. SKETCH MAP OF PART OF HORSE RANGE MESA QUADRANGLE SHOWING LOCATIONS OF PROPOSED EXPLORATION DRILL HOLES ON THE CHIPMUNK GROUP OF CLAIMS, AZTEC MINING CO. SAN MIGUEL COUNTY, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
January 14, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: M. H. Salsbury

Subject: DMEA 3293, Contract Ida-8720 (Uranium) Astec Mining Company (Chipmunk group) San Miguel County, Colorado - Recommendations on amendment requested by the operator

A conference was held at the Slick Rock field camp of the Geological Survey on January 5, 1955, with D. R. Shawe of the Geological Survey, and H. L. LaRue and W. S. Colbert representing the Astec Mining Company.

A revision of the contract permitting substitution of rotary dry drilling for the diamond core drilling called for was requested by the operators in a letter to the DMEA Field Team dated December 17, 1955.

The subject contract calls for 1,500 feet of core drilling in 15 holes averaging 100 feet in depth. Work under the contract has never been started. Instead, the operators attempted core drilling on their own account while waiting for a decision on the loan application and were unsuccessful in drilling the broken formations near the rim by this method. The driller could not get return on the drilling water which was being lost in fractures, and the work could not be done at the price allowed in the contract. Shawe verifies the fact that the cost of core drilling under similar conditions has been excessive in his experience.

The core drilling attempt was abandoned, and seven holes were drilled by dry rotary drilling with satisfactory results according to the operators. Five of these holes were grouped near proposed hole No. 4 as shown on figure 2 with the contract, and the other two at locations approximating proposed holes No. 2 and 3 (see also figure 2 with D. R. Shawe's recommendations on this proposal.

The operators report that two of the holes near proposed hole No. 4 were mineralized and a radiometric count of 0.05 to 0.10 percent U_3O_8 over a "narrow" width as indicated by probing. Other holes were

All drill holes will penetrate the entire thickness of the top sandstone bed of the Salt Wash member of the Morrison formation, which is the known ore horizon and will be bottomed after penetrating a maximum of 5 feet of the red sandstone immediately underlying the top sandstone of the Salt Wash, an estimated average depth of 100 feet.

No hole will be started unless sufficient unexpended footage remains to assure completion of the hole to its objective within the total allowable footage.

Samples of the cuttings will be taken, using methods and equipment which will recover both coarse and fine fractions. Samples will be taken at a maximum of 5-foot intervals in solid formations, but a new sample will be started at each change of formation. When cuttings or other evidence indicate uranium mineralization, all of the cuttings in the mineralized interval will be saved. Samples will be stored out of the weather in paper bags marked with hole numbers, depths, and footage, and portions will be saved for the use of the Government. When samples have been examined and released by a DMRA representative, all but mineralized portions may be discarded.

Mineralized samples shall be split, one-half analyzed chemically for U_3O_8, V_2O_5, and $CuCO_3$, and the other half delivered to the Slick Rock camp of the Geological Survey for the use of the Government.

The operators will keep a supervisor on the property at all times while drilling is in progress who will locate drill sites in accordance with contract provisions, control drilling depths, and oversee sampling procedures.

A competent geologist will be employed to examine and log cuttings.

Holes will be logged by a Bobcat probing unit or equivalent.

Claims for reimbursement for completed holes will be supported by certified drill logs, and geologic logs including probing results.

A maximum of 45 samples which have an indicated significant uranium content will be analyzed chemically for U_3O_8, V_2O_5, and $CuCO_3$.

Some revision of other contract items is required, and employment of a geologist-engineer full time is not necessary, in the opinion of the examining team. The operators stated that they have been unable to find a competent geologist who would agree to remain on the property continuously. They do have access to a suitable probing unit.

Estimated Cost of the Work under the Proposed Amendment

Stage I	Estimated time for completion 1 month	
	Estimated 1,500 feet of dry rotary drilling at $1.25 per foot	$1,875.00
	Preparation of 15 drill sites, including access roads at $40.00 each	600.00
	Supervision, including sampling, probing, and geologic hole logging at $0.35 per foot	525.00
	Total Stage I	$3,000.00
Stage II	Estimated time for completion 1 month	
	1/ Estimated 1,500 feet of dry rotary drilling at $1.25 per foot	1,875.00
	Preparation of 15 drill sites, including access roads at $40.00 each	600.00
	Supervision, including sampling, probing, and geologic hole logging at $0.35 per foot	525.00
	Total Stage II	$3,000.00
	2/ A maximum of 40 chemical assays for V_2O_5, V_2O_5, and $CuCO_3$	200.00
Total estimated cost of work under amendment		$6,800.00
Government participation, 75 percent, or		$4,650.00
Original total estimated cost		$6,660.00

1/ No reimbursement will be made for partially completed holes. Claim for reimbursement for completed holes must be supported by a certified drill log and geologic log of the hole or holes involved.

2/ Claim for reimbursement for analysis charges must be supported by a copy of the assay returns showing costs and results.

It is recommended that, on request of the operator, Stage II drilling be authorized by telephone or teletype, if recommended by the Geological Survey DMEA representative, after consideration of the results of Stage I, to be confirmed in writing. Because of the remote location

barren. Hole No. 2 was drilled through overburden most of the way, entering red mudstone which underlies the potential ore-bearing sandstone, indicating that the ore horizon had been removed by erosion. This eliminates the need for proposed hole No. 1, to the south.

The examining team believes that adequate information can be obtained on this project by dry rotary drilling methods under controlled conditions. The partner designated by the operators to supervise the project, W. B. Gulbert, impressed the DMEA team as being competent to supervise the sampling procedures and with enough experience to be able to recognize hole bottoming depths.

A revised drilling program is being recommended. The original engineering report recommended one stage of drilling with the suggestion that, if results were favorable, further drilling might be recommended. No allowance was made for this, however, in the contract which was approved. Substitution of dry rotary drilling for core drilling would materially lower the cost per foot, and an increased amount of drilling has been requested.

Since more drilling could be justified if the 1,500 feet originally provided gives favorable results, the additional work is recommended at no increase in maximum cost. For this purpose, the proposed work is scheduled in two stages, Stage I covering the drill footage in the original contract.

Suggested Amended Description of the Work

The work consists of drilling a maximum of 30 holes at locations shown in figure 2, which is attached (see figure 2 in the geologic memorandum) using dry rotary drilling methods.

The work will be done in two stages of 15 holes each.

Stage I will consist of a maximum of 15 holes and 1,500 feet of drilling at the locations shown in figure 2 attached. Holes No. 1, 2, 3, and 4 called for in the original contract have been deleted as no longer necessary and holes No. 16, 17, 18, and 19 substituted at new locations. No hole in Stage I will be closer than 100 feet to any previously drilled hole.

Stage II will consist of a maximum of 15 holes and 1,500 feet of drilling around holes where mineralization or favorable geologic evidence is found in Stage I drilling, and will not be undertaken without authorization by the DMEA Field Team, Region III. No hole in Stage II will be closer than 66.5 feet to any previously drilled hole.

of the project and the probable delay in requiring participation in the progress examination by a Bureau of Mines representative, the cost of the delay to the operator on this comparatively small contract would probably be excessive because the drilling contractor would undoubtedly make an extra charge if work was suspended for more than a few days.

The operator's letter of December 17, 1954, was a request couched in general terms and did not specifically outline the program which was discussed and approved by them at the field conference. A definite request from the Aztec Mining Company for an amendment to do the work outlined in this memorandum, 1,500 feet of rotary dry drilling in 15 holes as Stage I and 1,500 feet of rotary dry drilling in 15 holes as Stage II, to be performed only if approved by the Field Team, Region III on the basis of results of Stage I, is probably advisable. A request to make the final date for starting the project March 1, 1955, or later should also be made.

M. N. Salabury
M. N. Salabury
Mining Engineer

cc 9
R720
DMEA Chron.

MNS/pak

THE HALLMARK OF INSURANCE

The Home Insurance Company

ORGANIZED 1853

THE EATON AGENCY

CARL J. EATON, *Owner*

214 W. Main St. — P. O. Box 666 — Farmington, New Mexico

Phone: Davis 5-3742

Mining Division
Date Rec'd
DEC 23 1954
BUREAU OF MINES
Denver, Colorado

Dec. 17, 1954

Defense Minerals Exp. Adm.
Mr. W. L. King
Executive Officer, DMEA
224 New Custom house
Denver 2, Colorado

Re; Docket DMEA 3293
Contract Idm-E720

Dear Mr. King:

We have performed no work under this contract, (Idm E720) for several reasons, some of which I will set forth;

First we had a rig in the area and drilled a few holes on our own, and found that it would be imposible to drill and core in some locations; At hole No.1 which your program showed a core from surface, we found 50ft. of clay, which was so porus that the driller could not hold circulation to drill let alone to core. The same was found where you showed hole No.3. At hole No.7 the rock formation is ~~of~~ fractured that it could not be drilled with water. We brought in a air Compressor and the drilling was done that way. But there would be no cores.

drilled with air

We would like to drill this property but unless your engineer-Geologist can reconsider and revise the drilling program to ~~a~~ strait plug drilling, we beleive it would be best to not start at all, with your program.

We feel that we have a very good property and wish to explore it, but do not wish to waste the Gov. money or ours trying to do the impossible.

We want to thank the DMEA, and especially you Mr. King for all of your kind consideration on this project. We are very disappointed that we could not carry out the contract, and hope that you and your staff can come up with a more workable program.

We will appreciate any sugestions that you care to make as to how we may proceed.

P.S. Please do not feel we are finding fault with your Eng-Geologist it was just one of those unforseen things. WBC.

Very truly yours,

The Aztec Mining Co.

Glen B. Colbert
214 W. Main
Farmington, N. Mex.

NATIONAL ASSOCIATION OF REAL ESTATE BOARDS REALTORS

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

224 New Customhouse
Denver 2, Colorado

March 4, 1955

Mr. W. B. Colbert
The Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-2720

Dear Mr. Colbert:

Reference is made to our letters dated January 20 and February 10, 1955, relative to operations under the subject contract.

As we did not receive a reply from you by February 21, 1955, as stipulated in our letter dated February 10, we assume that you are no longer interested in performing work under the contract. Therefore, we are initiating appropriate action in the matter.

Yours very truly,

W. M. TRAVER,

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

JWT:ld

Copy to: Chairman, Opr. Comm. (6)
A. H. Harshman
W. P. Williams
J. F. Shaw
J. W. Townsend
Subject
Chron

COPY

234 New Customhouse
Denver 2, Colorado

February 10, 1955

REGISTERED

Mr. W.B.Colbert
Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3295 (Uranium)
Contract Idm-2720

Dear Mr. Colbert:

Reference is made to our letter of January 26, 1955, whereby we forwarded a copy of suggested Amendment No. 1 for your consideration, and in addition we advised that it would be necessary for you to request an amendment to Article 3 of the contract form to extend the starting and completion dates.

Your attention is directed to the fact that the date for completion of the work outlined under the contract expired February 6, 1955, therefore if you are desirous of maintaining the contract in force your prompt attention should be given the matter.

If we do not hear from you by February 21, 1955, we will assume that you are no longer interested in performing work under the contract and will take such steps as are indicated.

Very truly yours,

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

Note: Letter received by W.B.Colbert
2/11/55 as per return receipt.
JMT

COPY

224 New Customhouse
Denver 2, Colorado

January 26, 1955

Mr. W.B.Colbert
Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to your letter of December 17, 1954 wherein you request DMEA consideration in amending the contract to provide that drilling be accomplished with a dry rotary drill in lieu of core drilling as presently stipulated.

Based on recommendations of DMEA field examiners and a review of other information available to this office, we have prepared a suggested amendment to replace the present EXHIBIT "A" attached to the contract. One copy of the suggested amendment is attached.

If such an amendment is satisfactory to you we will appreciate verification of that fact by return mail.

In addition it is suggested that you request a further amendment to the contract amending Article 3 of the contract form to extend the period for start of the project work to on or before March 1, 1955 and also request an extension of the period for completion of the project work for such a period as you deem will be necessary. Action in the matter will be deferred pending receipt of advice from you.

Should an amendment of the suggested nature be prepared, Amendment No. 1 which you are retaining unexecuted will automatically be void, therefore please return all copies of the amendment to this office with your advice.

Very truly yours,

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

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

January 19, 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3293 (uranium), Contract Idm-E 720, Aztec Mining Co., San Miguel County, Colorado - Request for amendment

Enclosed are 10 copies of a memorandum by D. R. Shawe, U. S. Geological Survey, covering a request for amendment to Contract Idm-E 720.

In a letter of December 17, 1954, the operator states that due to water losses in the holes, it has been impossible to proceed with core drilling as specified in the contract but that he has successfully drilled several holes with a non-core air drill. He therefore requests an amendment to the contract to allow non-core air drilling in lieu of core drilling. Shawe recommends the operator's proposal and I concur in the recommendation.

At the time of the field conference the operator verbally requested authorization to drill an additional 15 holes not authorized in the contract. Shawe recommends the additional drilling. There is no provision in the contract for a 2nd stage of exploration and the operator has not requested in writing the additional exploration or indicated specific drill-hole locations. I therefore question the propriety of action at this time to authorize exploration in addition to that set forth in the contract.

In view of the field discussion and in view of Shawe's belief that additional work may be warranted, it appears that the operator should be notified that action on a request for additional exploration can be taken only after receipt of that request in writing.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

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

January 12, 1955

Memorandum

To: E. N. Harshman

From: W. P. Williams

Subject: Amendment of DMEA Docket 3293, contract Idm-E 720, Aztec Mining Company

Transmitted herewith are 10 copies of a memorandum and accompanying map prepared by D. R. Shawe concerning the proposed amendment of contract Idm-E 720.

Shawe concludes that the contract should be amended to allow non-core air drilling instead of core and plug drilling. The amendment is justified as core drilling has been unsuccessful because of loss of water in porous and fractured ground. I concur with Shawe's recommendation.

The amended contract will call for more footage, but at a lower cost. Mr. M. H. Salsbury of the Bureau of Mines will submit a separate report covering the amended cost of the project.

WPWilliams

W. P. Williams
Geologist

WPW/mlr

Enclosures

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GEOLOGICAL SURVEY
P. O. BOX 360
COLORADO PLATEAU DISTRICT
GRAND JUNCTION, COLORADO

January 12, 1955

Memorandum

To: W. P. Williams

From: Daniel R. Shawe

Subject: Amendment of DMEA Docket 3293, contract Idm-E 720, Aztec Mining Company

A DMEA Field Team consisting of M. H. Salsbury of the U. S. Bureau of Mines, and D. R. Shawe of the U. S. Geological Survey, met with H. N. LaRue and W. B. Colbert of the Aztec Mining Company on January 6, 1954. The purpose of this meeting was to discuss revising contract Idm-E 720 to allow air drilling in lieu of core and plug drilling.

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An amendment agreeable to the Field Team and to the applicants is outlined below. In view of the difficulties in core drilling on the property and the much cheaper cost of air drilling, the Field Team recommends that contract Idm-E 720 be amended to this program. The Field Team agreed that 3,000 feet of air drilling in two stages are warranted to test the property. Stage 1, consisting of 15 holes and a total of 1,500 feet, is to be drilled as outlined in the original contract. This stage is to search for and outline favorable ground. Stage 2, consisting of 15 holes and a total of 1,500 feet, is dependent on results of stage 1 drilling and will be done only on Shawe's recommendation. Holes in stage 2 will be drilled on 62.5-foot centers within areas of favorable ground outlined by stage 1 drilling. As no core will be recovered by air drilling, the applicants must collect samples of cuttings of each 2-foot interval and at each change in rock type. These samples are to be stored in paper sacks and protected from weather. All material considered mineralized should be saved and sacked. The mineralized material will be split for analysis; one-half delivered to the Government and one-half used for assay purposes.

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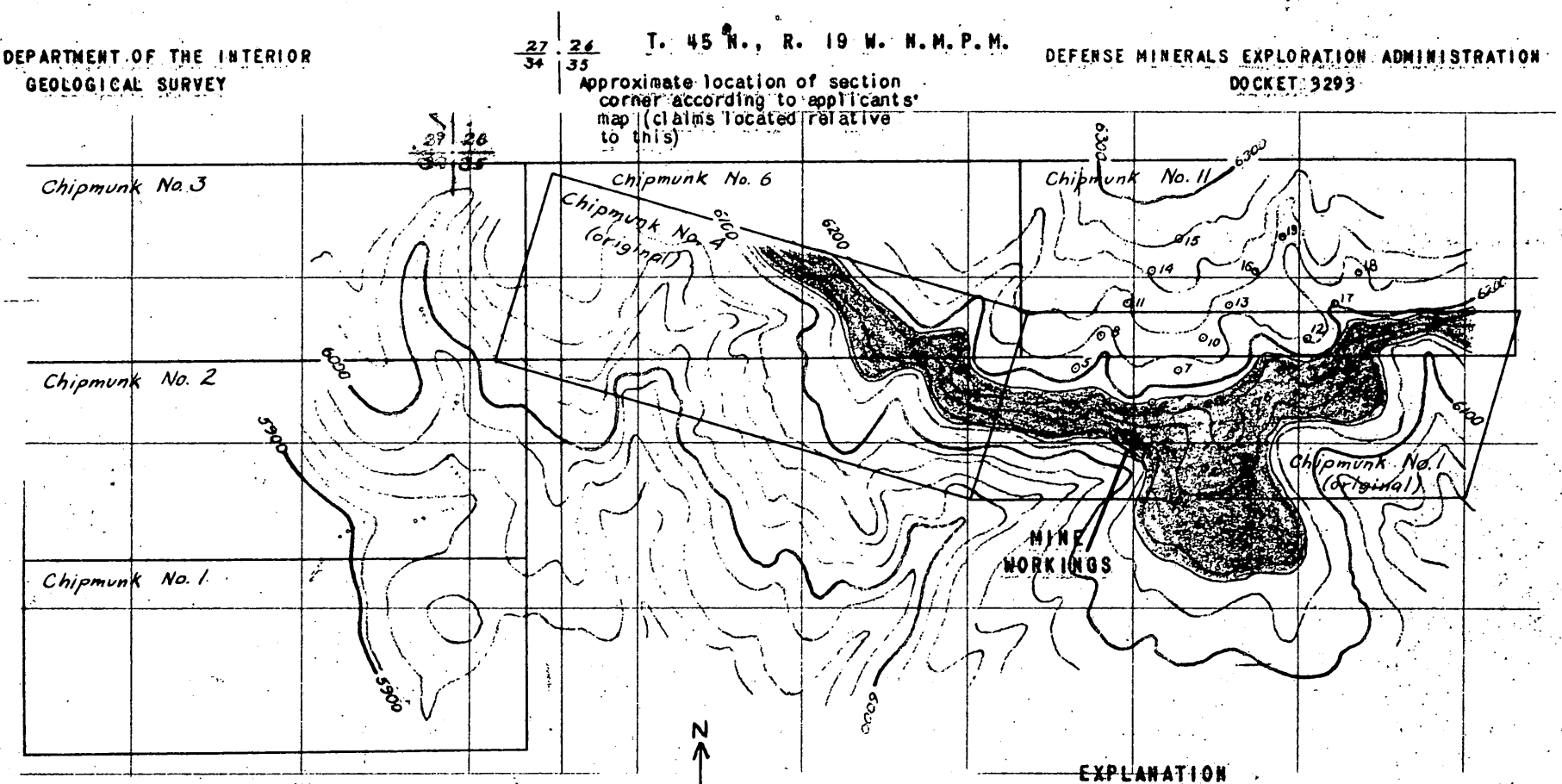
Holes drilled by the applicants have eliminated the necessity of drilling holes 1 through 4 of the original contract. Four (16 through 19) holes required about the same footage to replace the original 4 holes are located as shown on figure 1.

DRS/mlr

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3293



SCALE 1" = 500 FEET
CONTOUR INTERVAL 20 FEET

TOPOGRAPHY FROM U.S. GEOLOGICAL SURVEY QUADRANGLE MAP, HORSE RANGE MESA

CLAIM LINES ARE APPROXIMATELY LOCATED RELATIVE TO TOPOGRAPHY

Geology by D.R. Shawe

EXPLANATION

APPROXIMATE OUTCROP OF TOP SALT WASH SANDSTONE LENS

ORE (RED; MINED OUT) AND MINE WORKINGS

MINERALIZED WAGON DRILL HOLE

LOCATION OF PROPOSED DRILL HOLE

Figure 1. SKETCH MAP OF PART OF HORSE RANGE MESA QUADRANGLE SHOWING LOCATIONS OF PROPOSED EXPLORATION DRILL HOLES ON THE CHIPMUNK GROUP OF CLAIMS, AZTEC MINING CO. SAN MIGUEL COUNTY, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
January 14, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: M. E. Salsbury

Subject: DMEA 3893, Contract Idm-47BJ (Uranium) Aztec Mining Company (Chipmunk group) San Miguel County, Colorado - Recommendations on amendment requested by the operator

A conference was held at the Slick Rock field camp of the Geological Survey on January 5, 1955, with D. R. Shawe of the Geological Survey, and E. L. LaRue and W. B. Colbert representing the Aztec Mining Company.

A revision of the contract permitting substitution of rotary dry drilling for the diamond core drilling called for was requested by the operators in a letter to the DMEA Field Team dated December 17, 1955.

The subject contract calls for 1,500 feet of core drilling in 15 holes averaging 100 feet in depth. Work under the contract has never been started. Instead, the operators attempted core drilling on their own account while waiting for a decision on the loan application and were unsuccessful in drilling the broken formations near the rim by this method. The driller could not get return on the drilling water which was being lost in fractures, and the work could not be done at the price allowed in the contract. Shawe verifies the fact that the cost of core drilling under similar conditions has been excessive in his experience.

The core drilling attempt was abandoned, and seven holes were drilled by dry rotary drilling with satisfactory results according to the operators. Five of these holes were grouped near proposed hole No. 4 as shown on figure 2 with the contract, and the other two at locations approximating proposed holes No. 2 and 3 (see also figure 2 with D. R. Shawe's recommendations on this proposal.

The operators report that two of the holes near proposed hole No. 4 were mineralized and a radiometric count of 0.05 to 0.10 percent U_3O_8 over a "narrow" width as indicated by probing. Other holes were

barren. Hole No. 2 was drilled through overburden most of the way, entering red siltstone which underlies the potential ore-bearing sandstone, indicating that the ore horizon had been removed by erosion. This eliminates the need for proposed hole No. 1, to the south.

The examining team believes that adequate information can be obtained on this project by dry rotary drilling methods under controlled conditions. The partner designated by the operators to supervise the project, W. B. Colbert, impressed the DMEA team as being competent to supervise the sampling procedures and with enough experience to be able to recognize hole bottoming depths.

A revised drilling program is being recommended. The original engineering report recommended one stage of drilling with the suggestion that, if results were favorable, further drilling might be recommended. No allowance was made for this, however, in the contract which was approved. Substitution of dry rotary drilling for core drilling would materially lower the cost per foot, and an increased amount of drilling has been requested.

Since more drilling could be justified if the 1,500 feet originally provided gives favorable results, the additional work is recommended at no increase in maximum cost. For this purpose, the proposed work is scheduled in two stages, Stage I covering the drill footage in the original contract.

Suggested Amended Description of the Work

The work consists of drilling a maximum of 30 holes at locations shown in figure 2, which is attached (see figure 2 in the geologic memorandum) using dry rotary drilling methods.

The work will be done in two stages of 15 holes each.

Stage I will consist of a maximum of 15 holes and 1,500 feet of drilling at the locations shown in figure 2 attached. Holes No. 1, 2, 3, and 4 called for in the original contract have been deleted as no longer necessary and holes No. 16, 17, 18, and 19 substituted at new locations. No hole in Stage I will be closer than 185 feet to any previously drilled hole.

Stage II will consist of a maximum of 15 holes and 1,500 feet of drilling around holes where mineralization or favorable geologic evidence is found in Stage I drilling, and will not be undertaken without authorization by the DMEA Field Team, Region III. No hole in Stage II will be closer than 62.5 feet to any previously drilled hole.

All drill holes will penetrate the entire thickness of the top sandstone bed of the Salt Wash member of the Morrison formation, which is the known ore horizon and will be bottomed after penetrating a maximum of 5 feet of the red sandstone immediately underlying the top sandstone of the Salt Wash, an estimated average depth of 100 feet.

No hole will be started unless sufficient unexpended footage remains to assure completion of the hole to its objective within the total allowable footage.

Samples of the cuttings will be taken, using methods and equipment which will preserve both coarse and fine fractions. Samples will be taken at a maximum of 5-foot intervals in solid formations, but a new sample will be started at each change of formation. When cuttings or other evidence indicate uranium mineralization, all of the cuttings in the mineralized interval will be saved. Samples will be stored out of the weather in paper bags marked with hole numbers, depths, and footage, and portions will be saved for the use of the Government. When samples have been examined and released by a DMRA representative, all but mineralized portions may be discarded.

Mineralized samples shall be split, one-half analyzed chemically for U_3O_8, V_2O_5, and SeO_2, and the other half delivered to the Glenn Rock camp of the Geological Survey for the use of the Government.

The operators will keep a supervisor on the property at all times while drilling is in progress who will locate drill sites in accordance with contract provisions, control drilling depths, and oversee sampling procedures.

A competent geologist will be employed to examine and log cuttings.

Holes will be logged by a Robbel probing unit or equivalent.

Claims for reimbursement for completed holes will be supported by certified drill logs, and geologic logs including probing results.

A maximum of 45 samples which have an indicated significant uranium content will be analyzed chemically for U_3O_8, V_2O_5, and SeO_2.

Some revision of other contract items is required, and employment of a geologist-engineer full time is not necessary, in the opinion of the examining team. The operators stated that they have been unable to find a competent geologist who would agree to remain on the property continuously. They do have access to a suitable probing unit.

Estimated Cost of the Work under the Proposed Amendment

Stage I	Estimated time for completion 1 month Estimated 1,500 feet of dry rotary drilling at $1.25 per foot	$1,875.00
	Preparation of 15 drill sites, including access roads at $40.00 each	600.00
	Supervision, including sampling, probing, and geologic hole logging at $0.35 per foot	525.00
	Total Stage I	$3,000.00
Stage II	Estimated time for completion 1 month 1/ Estimated 1,500 feet of dry rotary drilling at $1.25 per foot	1,875.00
	Preparation of 15 drill sites, including access roads at $40.00 each	600.00
	Supervision, including sampling, probing, and geologic hole logging at $0.35 per foot	525.00
	Total Stage II	$3,000.00
2/	A maximum of 40 chemical assays for U_3O_8, V_2O_5, and $CaCO_3$	200.00
Total estimated cost of work under amendment		$6,200.00
Government participation, 75 percent, or		$4,650.00
Original total estimated cost		$6,660.00

1/ No reimbursement will be made for partially completed holes. Claim for reimbursement for completed holes must be supported by a certified drill log and geologic log of the hole or holes involved.

2/ Claim for reimbursement for analysis charges must be supported by a copy of the assay returns showing costs and results.

It is recommended that, on request of the operator, Stage II drilling be authorized by telephone or teletype, if recommended by the Geological Survey DMEA representative, after consideration of the results of Stage I, to be confirmed in writing. Because of the remote location

of the project and the probable delay in requiring participation in the progress examination by a Bureau of Mines representative, the cost of the delay to the operator on this comparatively small contract would probably be excessive because the drilling contractor would undoubtedly make an extra charge if work was suspended for more than a few days.

The operator's letter of December 17, 1954, was a request couched in general terms and did not specifically outline the program which was discussed and approved by them at the field conference. A definite request from the Anton Mining Company for an amendment to do the work outlined in this memorandum, 1,500 feet of rotary dry drilling in 15 holes on Stage I and 1,500 feet of rotary dry drilling in 15 holes on Stage II, to be performed only if approved by the Field Team, Region XIX on the basis of results of Stage I, is probably advisable. A request to make the final date for starting the project March 1, 1955, or later should also be made.

M. K. Salsbury
Mining Engineer

cc 9
2780
DMRA Chron.

MKS/pch

The Home Insurance Company
ORGANIZED 1853

THE EATON AGENCY
CARL J. EATON, *Owner*
214 W. Main St. — P. O. Box 666 — Farmington, New Mexico
Phone: Davis 5-3742

Mining Division
Date Rec'd
DEC 21 1954
BUREAU OF MINES
Denver, Colorado

Dec. 17, 1954

Defense Minerals Exp. Adm.
Mr. W. H. King
Executive Officer, DMEA
224 New Custom house
Denver 2, Colorado

Re; Docket DMEA 3293
Contract Idm-E720

Dear Mr. King:

We have performed no work under this contract, (Idm E720) for several reasons, some of which I will set forth;

First we had a rig in the area and drilled a few holes on our own, and found that it would be imposible to drill and core in some locations; At hole No.1 which your program showed a core from surface, we found 50ft. of clay, which was so porus that the driller could not hold circulation to drill let alone to core. The same was found where you showed Hole No.3. At hole No.7 the rock formation is so fractured that it could not be drilled with water. We brought in a air Compressor and the drilling was done that way. But there would be no cores. drilled with air

We would like to drill this property but unless your engineer-Geologist can reconsider and revise the drilling program to a strait plug drilling, we beleive it would be best to not start at all, with your program.

We feel that we have a very good property and wish to explore it, but do not wish to waste the Gov. money or ours trying to do the impossible.

We want to thank the DMEA, and especially you Mr. King for all of your kind consideration on this project. We are very disappointed that we could not carry out the contract, and hope that you and your staff can come up with a more workable program.

We will appreciate any sugestions that you care to make as to how we may proceed.

P.S. Please do not feel too [illegible] fault with your Eng.-Geologist. It was first one of these [illegible] through. [illegible]

Very truly yours,

The Aztec Mining Co.

[illegible]
[illegible]
Farmington, N. Mex.

NATIONAL ASSOCIATION OF REAL ESTATE BOARDS
REALTORS

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

224 New Customhouse
Denver 2, Colorado

March 4, 1955

Mr. W. B. Colbert
The Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-8720

Dear Mr. Colbert:

Reference is made to our letters dated January 20 and February 10, 1955, relative to operations under the subject contract.

As we did not receive a reply from you by February 21, 1955, as stipulated in our letter dated February 10, we assume that you are no longer interested in performing work under the contract. Therefore, we are initiating appropriate action in the matter.

Yours very truly,

W. M. TRAVER,

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

JWT:ld

Copy to: Chairman, Opr. Comm. (8)
E. H. Marshall
E. F. Williams
J. F. Shaw
J. W. Townsend
Subject
Chron

COPY

224 New Customhouse
Denver 2, Colorado

February 10, 1955

REGISTERED

Mr. W.B.Colbert
Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to our letter of January 26, 1955, whereby we forwarded a copy of suggested Amendment No. 1 for your consideration, and in addition we advised that it would be necessary for you to request an amendment to Article 3 of the contract form to extend the starting and completion dates.

Your attention is directed to the fact that the date for completion of the work outlined under the contract expired February 6, 1955, therefore if you are desirous of maintaining the contract in force your prompt attention should be given the matter.

If we do not hear from you by February 21, 1955, we will assume that you are no longer interested in performing work under the contract and will take such steps as are indicated.

Very truly yours,

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

Note: Letter received by W.B.Colbert
2/11/55 as per return receipt.
JWT

COPY

224 New Customhouse
Denver 2, Colorado

January 26, 1955

Mr. W.B.Colbert
Aztec Mining Company
214 West Main Street
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Dear Mr. Colbert:

Reference is made to your letter of December 17, 1954 wherein you request DMEA consideration in amending the contract to provide that drilling be accomplished with a dry rotary drill in lieu of core drilling as presently stipulated.

Based on recommendations of DMEA field examiners and a review of other information available to this office, we have prepared a suggested amendment to replace the present EXHIBIT "A" attached to the contract. One copy of the suggested amendment is attached.

If such an amendment is satisfactory to you we will appreciate verification of that fact by return mail.

In addition it is suggested that you request a further amendment to the contract amending Article 3 of the contract form to extend the period for start of the project work to on or before March 1, 1955 and also request an extension of the period for completion of the project work for such a period as you deem will be necessary. Action in the matter will be deferred pending receipt of advice from you.

Should an amendment of the suggested nature be prepared, Amendment No. 1 which you are retaining unexecuted will automatically be void, therefore please return all copies of the amendment to this office with your advice.

Very truly yours,

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

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

January 19, 1955

Memorandum

To: Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3293 (uranium), Contract Idm-E 720, Astec Mining Co., San Miguel County, Colorado - Request for amendment

Enclosed are 10 copies of a memorandum by D. R. Shawe, U. S. Geological Survey, covering a request for amendment to Contract Idm-E 720.

In a letter of December 17, 1954, the operator states that due to water losses in the holes, it has been impossible to proceed with core drilling as specified in the contract but that he has successfully drilled several holes with a non-core air drill. He therefore requests an amendment to the contract to allow non-core air drilling in lieu of core drilling. Shawe recommends the operator's proposal and I concur in the recommendation.

At the time of the field conference the operator verbally requested authorization to drill an additional 15 holes not authorized in the contract. Shawe recommends the additional drilling. There is no provision in the contract for a 2nd stage of exploration and the operator has not requested in writing the additional exploration or indicated specific drill-hole locations. I therefore question the propriety of action at this time to authorize exploration in addition to that set forth in the contract.

In view of the field discussion and in view of Shawe's belief that additional work may be warranted, it appears that the operator should be notified that action on a request for additional exploration can be taken only after receipt of that request in writing.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (10)

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

January 12, 1955

Memorandum

To: E. N. Harshman

From: W. P. Williams

Subject: Amendment of DMEA Docket 3293, contract Idm-E 720, Aztec Mining Company

Transmitted herewith are 10 copies of a memorandum and accompanying map prepared by D. R. Shawe concerning the proposed amendment of contract Idm-E 720.

Shawe concludes that the contract should be amended to allow non-core air drilling instead of core and plug drilling. The amendment is justified as core drilling has been unsuccessful because of loss of water in porous and fractured ground. I concur with Shawe's recommendation.

The amended contract will call for more footage, but at a lower cost. Mr. M. H. Salsbury of the Bureau of Mines will submit a separate report covering the amended cost of the project.

WPWilliams

W. P. Williams
Geologist

WPW/mlr

Enclosures

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

January 12, 1955

Memorandum

To: W. P. Williams

From: Daniel R. Shawe

Subject: Amendment of DMEA Docket 3293, contract Idm-E 720, Aztec Mining Company

A DMEA Field Team consisting of M. H. Salsbury of the U. S. Bureau of Mines, and D. R. Shawe of the U. S. Geological Survey, met with H. N. LaRue and W. B. Colbert of the Aztec Mining Company on January 6, 1954. The purpose of this meeting was to discuss revising contract Idm-E 720 to allow air drilling in lieu of core and plug drilling.

The original contract Idm-E 720 called for 1,100 of core drilling and 400 feet of plug drilling. The applicants attempted to core drill 3 holes on their property, but all were unsuccessful as porous and fractured ground caused loss of circulation. The applicants did, however, complete 4 holes by drilling with air and collecting cuttings only. For this reason, the applicants desire to amend the contract to allow non-core air drilling in lieu of core and plug drilling with water.

An amendment agreeable to the Field Team and to the applicants is outlined below. In view of the difficulties in core drilling on the property and the much cheaper cost of air drilling, the Field Team recommends that contract Idm-E 720 be amended to this program. The Field Team agreed that 3,000 feet of air drilling in two stages are warranted to test the property. Stage 1, consisting of 15 holes and a total of 1,500 feet, is to be drilled as outlined in the original contract. This stage is to search for and outline favorable ground. Stage 2, consisting of 15 holes and a total of 1,500 feet, is dependent on results of stage 1 drilling and will be done only on Shawe's recommendation. Holes in stage 2 will be drilled on 62.5-foot centers within areas of favorable ground outlined by stage 1 drilling. As no core will be recovered by air drilling, the applicants must collect samples of cuttings of each 2-foot interval and at each change in rock type. These samples are to be stored in paper sacks and protected from weather. All material considered mineralized should be saved and sacked. The mineralized material will be split for analysis; one-half delivered to the Government and one-half used for assay purposes.

The increased total footage and change in manner of drilling required that the contract costs be revised. Mr. M. H. Salsbury of the Bureau of Mines will submit a separate report showing revised costs.

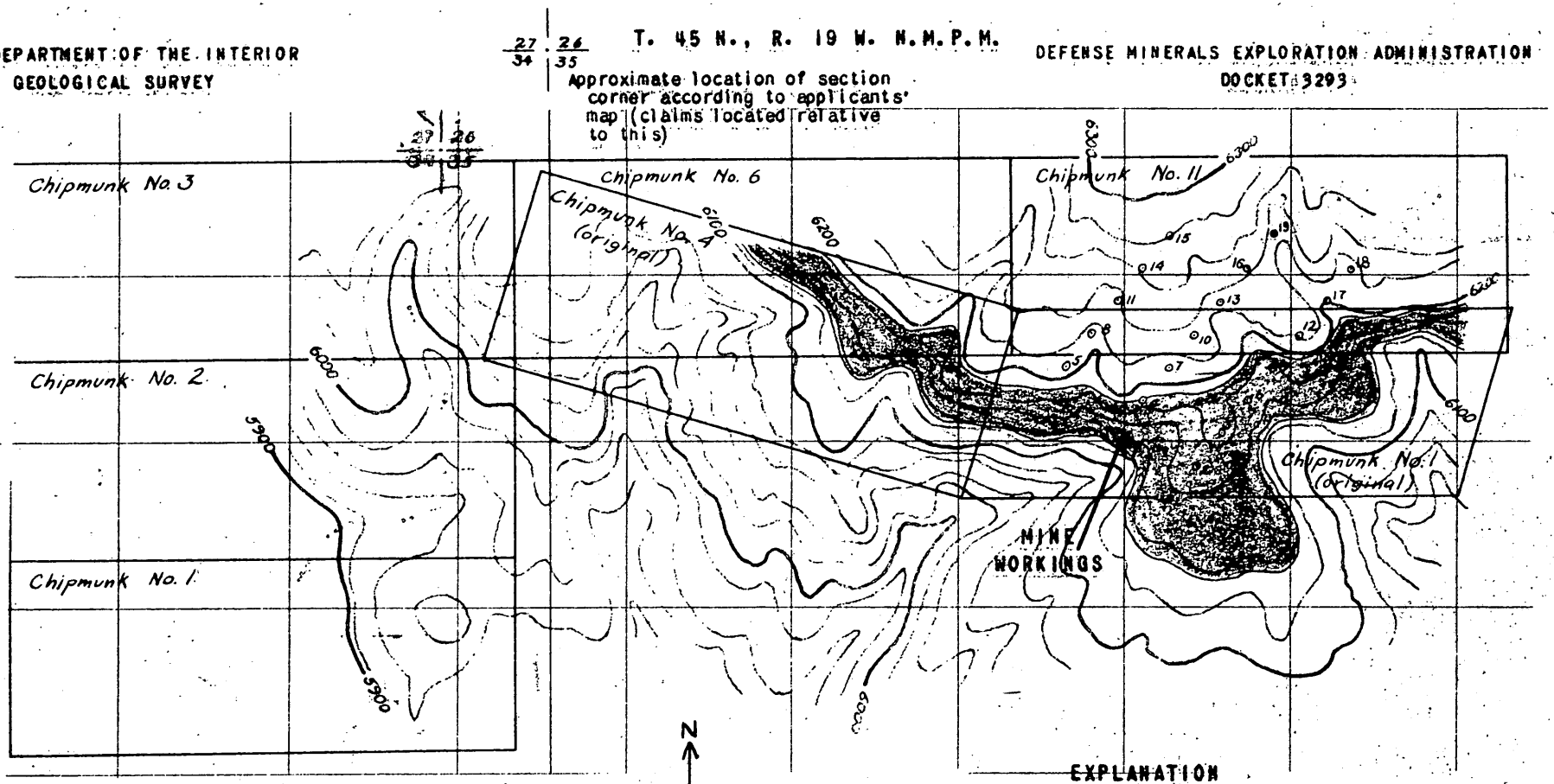
Holes drilled by the applicants have eliminated the necessity of drilling holes 1 through 4 of the original contract. Four (16 through 19) holes required about the same footage to replace the original 4 holes are located as shown on figure 1.

DRS/mlr

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

T. 45 N., R. 19 W. N.M.P.M.

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3293



SCALE 1" - 500 FEET
CONTOUR INTERVAL 20 FEET

TOPOGRAPHY FROM U.S. GEOLOGICAL SURVEY QUADRANGLE MAP, HORSE RANGE MESA

CLAIM LINES ARE APPROXIMATELY LOCATED RELATIVE TO TOPOGRAPHY

Geology by D.R. Shawe

EXPLANATION

APPROXIMATE OUTCROP OF TOP SALT WASH SANDSTONE LENS

ORE (RED; MINED OUT) AND MINE WORKINGS

MINERALIZED WAGON DRILL HOLE

LOCATION OF PROPOSED DRILL HOLE

Figure 1. SKETCH MAP OF PART OF HORSE RANGE MESA QUADRANGLE SHOWING LOCATIONS OF PROPOSED EXPLORATION DRILL HOLES ON THE CHIPMUNK GROUP OF CLAIMS, AZTEC MINING CO. SAN MIGUEL COUNTY, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
January 14, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: M. E. Salsbury

Subject: DMEA 3893, Contract Idm-8720 (Uranium) Aztec Mining Company (Chipmunk group) San Miguel County, Colorado - Recommendations on amendment requested by the operator

A conference was held at the Slick Rock field camp of the Geological Survey on January 5, 1955, with D. R. Shawe of the Geological Survey, and E. L. LaRue and W. B. Colbert representing the Aztec Mining Company.

A revision of the contract permitting substitution of rotary dry drilling for the diamond core drilling called for was requested by the operators in a letter to the DMEA Field Team dated December 17, 1955.

The subject contract calls for 1,500 feet of core drilling in 15 holes averaging 100 feet in depth. Work under the contract has never been started. Instead, the operators attempted core drilling on their own account while waiting for a decision on the loan application and were unsuccessful in drilling the broken formations near the rim by this method. The driller could not get return on the drilling water which was being lost in fractures, and the work could not be done at the price allowed in the contract. Shawe verifies the fact that the cost of core drilling under similar conditions has been excessive in his experience.

The core drilling attempt was abandoned, and seven holes were drilled by dry rotary drilling with satisfactory results according to the operators. Five of these holes were grouped near proposed hole No. 4 as shown on figure 2 with the contract, and the other two at locations approximating proposed holes No. 2 and 3 (see also figure 2 with D. R. Shawe's recommendations on this proposal.

The operators report that two of the holes near proposed hole No. 4 were mineralized and a radiometric count of 0.05 to 0.10 percent U_3O_8 over a "narrow" width as indicated by probing. Other holes were

barren. Hole No. 2 was drilled through overburden most of the way, entering red sandstone which underlies the potential ore-bearing sandstone, indicating that the ore horizon had been removed by erosion. This eliminates the need for proposed hole No. 1, to the north.

The engineering team believes that adequate information can be obtained on this project by dry rotary drilling methods under controlled conditions. The partner designated by the operators to supervise the project, W. R. Colbert, impressed the ERRA team as being competent to supervise the sampling procedures and with enough experience to be able to recognize hole bottoming depths.

A revised drilling program is being recommended. The original engineering report recommended one stage of drilling with the suggestion that, if results were favorable, further drilling might be recommended. No allowance was made for this, however, in the contract which was approved. Substitution of dry rotary drilling for core drilling would materially lower the cost per foot, and an increased amount of drilling has been requested.

Since more drilling could be justified if the 1,500 feet originally provided gives favorable results, the additional work is recommended at no increase in maximum cost. For this purpose, the proposed work is scheduled in two stages, Stage I covering the drill footage in the original contract.

Recommended Revised Description of the Work

The work consists of drilling a maximum of 30 holes at locations shown in Figure 2, which is attached (see figure 2 in the geologic memorandum) using dry rotary drilling methods.

The work will be done in two stages of 15 holes each.

Stage I will consist of a maximum of 15 holes and 1,500 feet of drilling at the locations shown in Figure 2 attached. Holes No. 1, 2, 3, and 4 called for in the original contract have been deleted as no longer necessary and holes No. 16, 17, 18, and 19 substituted at new locations. No hole in Stage I will be closer than 125 feet to any previously drilled hole.

Stage II will consist of a maximum of 15 holes and 1,500 feet of drilling around holes where mineralization or favorable geologic evidence is found in Stage I drilling, and will not be undertaken without authorization by the ERRA Field Team, Region III. No hole in Stage II will be closer than 62.5 feet to any previously drilled hole.

All drill holes will penetrate the entire thickness of the top sandstone bed of the Salt Wash member of the Morrison formation, which is the known ore horizon and will be bottomed after penetrating a maximum of 5 feet of the red mudstone immediately underlying the top sandstone of the Salt Wash, an estimated average depth of 100 feet.

No hole will be started unless sufficient unexpended footage remains to assure completion of the hole to its objective within the total allowable footage.

Samples of the cuttings will be taken, using methods and equipment which will recover both coarse and fine fractions. Samples will be taken at a maximum of 5-foot intervals in solid formations, but a new sample will be started at each change of formation. When cuttings or other evidence indicate uranium mineralization, all of the cuttings in the mineralized interval will be saved. Samples will be stored out of the weather in paper bags marked with hole numbers, depths, and footage, and portions will be saved for the use of the Government. When samples have been examined and released by a DMRA representative, all but mineralized portions may be discarded.

Mineralized samples shall be split, one-half analyzed chemically for U_3O_8, V_2O_5, and $CaCO_3$, and the other half delivered to the Slick Rock camp of the Geological Survey for the use of the Government.

The operators will keep a supervisor on the property at all times while drilling is in progress who will locate drill sites in accordance with contract provisions, control drilling depths, and oversee sampling procedures.

A competent geologist will be employed to examine and log cuttings.

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Some revision of other contract items is required, and employment of a geologist-engineer full time is not necessary, in the opinion of the examining team. The operators stated that they have been unable to find a competent geologist who would agree to remain on the property continuously. They do have access to a suitable probing unit.

Estimated Cost of the Work under the Proposed Amendment

Stage I	Estimated time for completion 1 month Estimated 1,500 feet of dry rotary drilling at $1.25 per feet	$1,875.00
	Preparation of 15 drill sites, including access roads at $40.00 each	600.00
	Supervision, including sampling, probing, and geologic hole logging at $0.35 per foot	525.00
	Total Stage I	$3,000.00
Stage II	Estimated time for completion 1 month 1/ Estimated 1,500 feet of dry rotary drilling at $1.25 per feet	1,875.00
	Preparation of 15 drill sites, including access roads at $40.00 each	600.00
	Supervision, including sampling, probing, and geologic hole logging at $0.35 per foot	525.00
	Total Stage II	$3,000.00
	2/ A maximum of 40 chemical assays for U_3O_8, V_2O_5, and $CaCO_3$	200.00
	Total estimated cost of work under amendment	$6,200.00
	Government participation, 75 percent, or	$4,650.00
	Original total estimated cost	$6,660.00

1/ No reimbursement will be made for partially completed holes. Claim for reimbursement for completed holes must be supported by a certified drill log and geologic log of the hole or holes involved.

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It is recommended that, on request of the operator, Stage II drilling be authorized by telephone or teletype, if recommended by the Geological Survey DMEA representative, after consideration of the results of Stage I, to be confirmed in writing. Because of the remote location

of the project and the probable delay in requiring participation in the progress examination by a Bureau of Mines representative, the cost of the delay to the operator on this comparatively small contract would probably be excessive because the drilling contractor would undoubtedly make an extra charge if work was suspended for more than a few days.

The operator's letter of December 17, 1954, was a request couched in general terms and did not specifically outline the program which was discussed and approved by them at the field conference. A definite request from the Aztec Mining Company for an amendment to do the work outlined in this memorandum, 1,500 feet of rotary dry drilling in 15 holes on Stage I and 1,500 feet of rotary dry drilling in 15 holes on Stage II, to be performed only if approved by the Field Team, Region III on the basis of results of Stage I, is probably advisable. A request to make the final date for starting the project March 1, 1955, or later should also be made.

M. K. Salabury
M. K. Salabury
Mining Engineer

cc 9
STRO
NMRA Chron.

MKS/pah

ORGANIZED 1955

THE EATON AGENCY
CARL J. EATON, *Owner*
214 W. Main St. — P. O. Box 666 — Farmington, New Mexico
Phone: Davis 5-3742

Mining Division
Date Rec'd
DEC 21 1954
BUREAU OF MINES
Denver, Colorado

Dec. 17, 1954

Defense Minerals Exp. Adm.
Mr. W. H. King
Executive Officer, DMEA
224 New Custom house
Denver 2, Colorado

Re; Docket DMEA 3293
Contract Idm-E720

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drilled with air

We would like to drill this property but unless your engineer-Geologist can reconsider and revise the drilling program to ~~a~~ strait plug drilling, we beleive it would be best to not start at all, with your program.

We feel that we have a very good property and wish to explore it, but do not wish to waste the Gov. money or ours trying to do the impossible.

We want to thank the DMEA, and especially you Mr. King for all of your kind consideration on this project. We are very disappointed that we could not carry out the contract, and hope that you and your staff can come up with a more workable program.

We will appreciate any sugestions that you care to make as to how we may proceed.

P.S. Please do not [illegible] the faulting fault [illegible] your [illegible] geologist at [illegible] your [illegible] response. Thanks [illegible]

Very truly yours,

The Aztec Mining Co.

[illegible]

Farmington N. Mex.

NATIONAL ASSOCIATION OF REAL ESTATE BOARDS
REALTORS

1/4/55 gla

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

224 New Customhouse
Denver 2, Colorado

December 29, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3293 (Uranium), Contract Idm-E720, Aztec Mining Co., San Miguel County, Colorado

Enclosed for your records are the original and two copies of a Power of Attorney executed by three of the partners designating the fourth partner, W. B. Colbert, to act as agent of the partnership to conduct matters under the DMEA contract.

W H King
W. H. King

Encls.

[illegible]

We, the undersigned [illegible]
of H.N. LaRue, B.F. La[illegible]
[illegible]
New Mex[illegible]
to act as [illegible] said [illegible]
the United States Department of [illegible], Defense Minerals
Exploration Administration, DMEA Contract [illegible], [illegible],
and in behalf of said partnership to render to the Government
all necessary reports [illegible] required under said contract,
and said agent is authorized [illegible] receipt
for, any monies that [illegible] may thereafter become [illegible] said
partnership by reason of said Contract [illegible].

H. N. LaRue

B. F. LaRue

Earl J. Eaton

Accepted:

[illegible]

11/23/54 gla

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

224 New Customhouse
Denver 2, Colorado

November 18, 1954

Aztec Mining Company
214 West Main
Farmington, New Mexico

Re: Docket DMEA 3293 (Uranium)
Contract Idm-E720

Gentlemen:

Enclosed are the original and five copies of Amendment No. 1 to Contract Idm-E720, which we have prepared to establish a unit cost for assaying to effect consistency between the recitation in Exhibit A and the provisions of Article 4 of the contract form, which stipulates all work will be performed at an agreed unit cost.

All copies of the amendment should be signed by all four partners as indicated, and returned to this office, leaving the date blank.

Upon signature by the Executive Officer, DMEA Field Team, Region IV, for the Government, your copy of the amendment will be forwarded to you.

Yours very truly,

J. F. Shaw

J. F. Shaw for
W. H. King
Executive Officer
DMEA Field Team, Region IV

Enclosures

J.Trill

cc: [illegible], Op. Comm. (2)
A. Koschmann
J. Traver
A. Wrchaw
J. Townsend

[illegible]
chron

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

224 New Customhouse
Denver 2, Colorado

October 7, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3293 (Uranium), Contract Idm-E720, Aztec Mining Company, San Miguel County, Colorado

Enclosed are four copies of the report of examination and two copies of Form B on the subject Docket.

A contract has been prepared and is in force.

W H King
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

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

COPY

224 New Customhouse
Denver 2, Colorado

September 9, 1954

Memorandum

To: Administrator, Defense Minerals Exploration Administration

From: DMEA Field Team, Region IV

Subject: Report of Examination, DMEA Docket 3293 (Uranium), Aztec Mining Company, Chipmunk Group, San Miguel County, Colorado.

The application for Government assistance in exploration work estimated to cost $6,732.00, has been approved by us and a contract is being prepared.

Government participation will be 75 percent, or $5,049.00.

Four copies of the Final Report will be forwarded with your copy of the contract.

/s/ W. H. KING
W. H. King

/s/ E. N. HARSHMAN
for A. H. Koschmann

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

September [illegible], 1954

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination, DMEA Docket [illegible] (Uranium), Aztec Mining Company, Chipmunk Group, San Miguel County, Colorado.

Enclosed are eleven copies of the engineering report on the subject docket.

The applicant requested [illegible] to explore the property by diamond drilling [illegible] holes.

The engineer examiner recommends a modified project in which the applicant concurs, to explore by drilling a total of [illegible] holes at a total cost of $[illegible].

We concur in the examining engineers' recommendation.

W. H. King
W. H. King

Enclosures

HMC:mb

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
August 6, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 3293 (Uranium) Aztec Mining Co., (Chipmunk group)
San Miguel County, Colo.

Enclosed herewith are the original and ten copies of the "Summary, Conclusions, and Recommendations" by R. R. McLellan, Bureau of Mines, and D. R. Shawe, Geological Survey, and of McLellan's engineering report on the above docket.

McLellan concludes the Chipmunk No. 1 (original) and Chipmunk No. 11 claims show sufficient uranium and vanadium mineralization to justify a limited amount of surface core drilling exploration. An ore trend is apparent, but ore bodies to be expected will be small elongated ones and probably few in number. Drilling of about 1,500 feet in 15 holes in 3 fences spaced 250 feet apart with hole intervals of 125 feet is recommended. This will test the possible extension of an apparent ore trend shown in mine workings on the Chipmunk No. 1 (original) claim to depths of 100 feet or through the Salt Wash member of the Morrison formation. One hole is recommended to be drilled to a depth of 100 feet below the base of the known ore-bearing Salt Wash as a long shot prospect for deeper ore horizons. The examiner estimates a total overall cost for the limited exploration as $6,737.00, Government participation $5,052.75, and suggests a short-form, unit-cost contract.

The brochure loaned to the Mineral Resources Branch with your memorandum of July 29, 1954, for use in preparing the engineering report is also returned. We were not provided with a brochure with your original memorandum of April 12, 1954, instructing us to prepare a suitable report, as none was available.

W. M. Traver
W. M. Traver

enclosure

WMT/kp

cc 10
DMEA 3293
Chron

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

July 26, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3293, Aztec Mining Company, Chipmunk Group, San Miguel County, Colorado

Enclosed are 11 copies of a geologic report by D. R. Shawe of the U. S. Geological Survey covering the above docket.

Mr. Shawe concludes that exploration on the Chipmunk group of claims is warranted and recommends a program consisting of 3 lines of drill holes in the vicinity of the mine - the lines to be spaced 250 feet apart and the holes drilled on 125 feet centers. Should this exploration indicate favorable ground, additional exploration will be recommended on 62-1/2-feet centers. Offset holes on 25-feet centers may be recommended for any hole penetrating rock of ore grade.

Enclosed also are 8 additional copies of maps included in Shawe's report.

E. M. Hawkman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (35)

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

July 22, 1954

Memorandum

To: A. H. Koschmann, DMEA Field Team, Region IV

From: W. P. Williams

Subject: DMEA 3293, Aztec Mining Company, Chipmunk group, San Miguel County, Colorado

Transmitted herewith are eleven copies of a revised geologic report prepared by Daniel R. Shawe, covering the subject DMEA application.

The revised report is intended to replace the original report by Shawe which was submitted to you on June 15, 1954.

After careful reconsideration, Shawe concludes that his original exploration plan, as described in his original report, is the best plan for exploration on the subject mining claims; consequently, the basic recommendations in Shawe's original report have been retained in the revised report. The principal changes in the revised report consist of refurbishing the context and brushing up the grammar and syntax. We hope the revised report will now meet with your approval.

No changes have been made in the three figures accompanying the report. You should, therefore, have in your possession enough copies of the illustrations to put with the revised report.

/s/ W. P. Williams

W. P. Williams
Geologist

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3293, Chipmunk Group

Aztec Mining Company

San Miguel County, Colo.

Uranium

R. R. McLellan, Mining Engineer
Bureau of Mines

D. R. Shawe, Geologist
Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

July 30, 1954

IMBA 3193

CHIPMUNK GROUP
ALTMC MINING COMPANY
SAN MIGUEL COUNTY, COLO.

Summary, Conclusions, and Recommendations

By R. R. McAllen
Mining Engineer
Bureau of Mines

D. R. Shawe
Geologist
Geological Survey

DMEA 3893

CHIPMUNK GROUP
ARTEC MINING COMPANY
SAN MIGUEL COUNTY, COLO.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By R. R. McLellan and D. R. Shawe

The Artec Mining Company of Farmington, N. Mex., applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the Chipmunk Nos. 1 (original), 7 (original), 1, 2, 3, 6, and 11 claims in San Miguel County, Colo. The company proposed a core drilling program consisting of 90 holes totaling 10,000 feet of surface drilling and bulldozer road and drill site preparation work at a total estimated cost of $33,400.00. Upon inspection of the property, the Defense Minerals Exploration Administration examining team concluded that the mineralization is too limited to justify a comparatively extensive drilling program as proposed by the applicants. However, a limited amount of core drilling may establish additional favorable ground to provide the basis for more intensive exploration.

The carnotite-type ore in mine workings on the Chipmunk No. 1 (original) claim occurs as a series of northwest-trending rolls at the base of a 60-foot thick sandstone that is probably the top sand bed of the Salt Wash member of the Morrison formation in this area. The favorable nature of the ground in the vicinity of the above mentioned claim and the presence of ore elsewhere in the area of the

claim suggest the likelihood of nearby occurrences of ore deposits similar in size to those exposed by the Chipmunk workings. The possibility exists that exploration may reveal larger deposits as the area has had no exploration whatsoever and there is little basis for a prediction as to the ultimate size or number of ore deposits in the area.

The modified exploration program recommended for approval consists of 3 fences totaling 15 holes (total 1,500 feet) to be drilled on the slope above the mine normal to the northwest trend of the rolls as exposed in the mine. The fences are to be spaced 250 feet apart and the holes will be drilled at intervals of 125 feet. One hole will be drilled 100 feet below the base of the known ore-bearing sandstone to prospect for possible deeper ore horizons. Flug bit drilling will be permissible above the ore horizon where feasible. All core will be boxed until geologic logs can be prepared. Mineralized sections of core will be saved and split for assay and storage.

In the event favorable ground is encountered, additional exploration should be considered providing the company requests such assistance.

The revised program of 1,500 feet of core and non-core drilling is estimated to cost $6,737.00, with Government participation of 75 percent or $5,052.75. A unit-cost, short-form contract is suggested.

UNITED STATES DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3293, Aztec Mining Company, Chipmunk group, San Miguel County, Colo.

Uranium

Geologic Report

by

Daniel R. Shawe
U. S. Geological Survey

July 22, 1954

Reviewed by
DMEA OPERATING COMMITTEE
10-18-54
(date)

DMEA 3293

INTRODUCTION

The Aztec Mining Company, Farmington, New Mexico, have applied (DMEA 3293) to the Defense Minerals Exploration Administration for assistance to explore for uranium ore on the Chipmunk claim group, McIntyre canyon area, secs. 34 and 35, T. 45 N., R. 19 W., Slick Rock district, San Miguel County, Colo. (fig. 1). They propose to explore the property by drilling about 90 holes at an estimated cost of $33,400. Costs include $25,000 for 10,000 feet of core drilling at $2.50 per foot, and $8,400 for 600 hours of bulldozer work at $14 per hour. The applicants propose to drill a line of about 50 holes, each 75 feet deep, 100 feet behind the mine and parallel to the rim, a parallel line of about 25 holes, each 100 feet deep, 250 feet behind this, and a third parallel line of about 15 holes, each 200 feet deep, 250 feet behind the second line of holes.

The claims were examined on May 7, 1954, in company with R. R. McLellan, U. S. Bureau of Mines representative, and Carl J. Eaton and W. B. Colbert, claim owners and executives of the applicant company.

Exploration on the Chipmunk claim group may lead to the discovery of ore deposits the size of, or larger than, that already mined at the claims, and a modified program of exploration is recommended. The possibility of new ore discoveries is suggested by the amount of production from the Chipmunk No. 1 mine, the favorable nature of the ore-bearing rock at the mine, and the presence of ore showings nearby in the area.

PRODUCTION

The claim owners report a production of 179 tons of ore, containing an average 0.6 percent U_3O_8 and 2.6 percent V_2O_5, from a mine on the Chipmunk No. 1 (original) mining claim. One wagon-drill hole near the mine (figs. 2 and 3) passed through 4 feet of mineralized rock assaying 0.15 percent U_3O_8.

GEOLOGY

A map was made of the mine (fig. 3). It is based in part on a field survey and in part on data furnished by the claim owners. The mine is at the base of a 60-foot thick sandstone that is probably the top sand bed of the Salt Wash member of the Morrison formation in this area. Locally, the sediments are approximately horizontal.

The carnotite-type ore in the Chipmunk No. 1 (original) claim occurs as a series of northwest-trending rolls (plan map and sections, fig. 3). The northwest trend is the general trend of rolls in the Slick Rock district. Essentially all of the mineable ore has been removed from the mine. About a quarter of a mile east of the Chipmunk claims, in a lower sandstone in the Salt Wash member, is the Blue Black claim that has small but high-grade showings of corvusite-type ore.

Criteria which have been established in the Slick Rock district for favorable ore zones in the Salt Wash member are: gray (or light buff)--not reddish brown--sandstone at least 20 feet thick, greenish gray--not red--mudstone in the sandstone, at least 0.3 feet of greenish gray mudstone below the sandstone above red mudstone, and carbon in the gray sandstone and/or greenish gray mudstone. In the vicinity of the mine the lower half of the thick sandstone has been altered from light reddish brown to light gray. A basal 10-foot section of the sandstone contains many splits of greenish-gray mudstone (sections, fig. 3); below the sandstone there is as much as 4 feet of greenish-gray mudstone above red mudstone. Thirty feet northwest of the mine, and probably no more than 30 feet southeast of the southeast end of the largest ore roll in the mine, there is no greenish gray mudstone visible in or immediately below the sandstone. Mudstone splits 20 feet above the ore are red. In the mine the sandstone and mudstone contain fragments, seams, and films of carbon and sparse amounts of copper carbonates. Some eucairite (?) and chalcocite (?) are visible in the mine (fig. 3).

The favorable nature of the ground in the vicinity of the Chipmunk No. 1 (original) claim, and the presence of ore elsewhere in the area of the claim suggest the likelihood of nearby occurrences of ore of the size of that mined at the claim. The possibility exists that exploration may reveal larger deposits; the area has had no exploration whatsoever and there is little basis for a prediction as to the ultimate size of ore deposits in the area--they could be as large as any in the so-called Uravan Mineral belt.

PROPOSED EXPLORATION

Three fences of diamond-drill (core) holes are proposed on the slope above the mine, normal to the northwest trend of the rolls in the mine. In the Slick Rock district trends of favorable ground generally are reflected in trends of ore rolls, and the fences are oriented to intercept such possible trends (cf. the wagon-drill hole drilled by the applicants, fig. 3, which verifies the suggested trend). Because of the limited extent of favorable ground in the vicinity of the mine, the fences should be spaced 250 feet apart, and the hole centers along the fences should be 125 feet apart (fig. 2). The recommended exploration should determine the position and extent of possible favorable ground north of the mine. Criteria for favorable ore zones are listed in the section on Geology.

Fifteen drill holes, totalling about 1500 feet, are adequate for the above program. Except for hole No. 1, all holes passing through favorable ore zones should be drilled about 5 feet into underlying red mudstone. Hole No. 1 should be drilled 100 feet below the base of the known ore-bearing sandstone to prospect for deeper ore-bearing zones. The estimated depths of the recommended drill holes are given in the following table:

Drill hole No.	Plug depth*	Cored interval	Total depth
1		135	135
2		50	50
3		70	70
4		70	70
5	20	70	90
6		50	50
7	20	70	90
8	30	70	100
9		60	60

Drill hole No.	Plug depth*	Cored interval	Total depth
10	40	70	110
11	50	70	120
12	30	70	100
13	40	70	110
14	75	70	145
15	95	70	165
Total	400	1,065	1,465

*It is suggested that the interval above the ore-bearing sandstone be drilled by other than coring methods, inasmuch as core recovery is unimportant in this interval and the extra expense of core drilling is not warranted.

CONCLUSIONS

Although the 10,000 feet of core drilling in 90 holes proposed by the applicants does not seem warranted by the nature of the known ore deposit, a modified program of exploration with about 1,500 feet of core drilling in 15 holes is considered feasible. The drilling is planned to disclose possible new areas or to extend the known area of favorable ground.

If favorable ground is indicated by the drilling, additional exploration will be recommended. This exploration should be drilling on 62.5-foot centers within the favorable ground. Any holes penetrating rock of ore grade during the initial or any subsequent stage of drilling should be offset on 25-foot centers; this close spacing is required because of the small size of roll type ore bodies, and is warranted by the shallow drilling that is required.

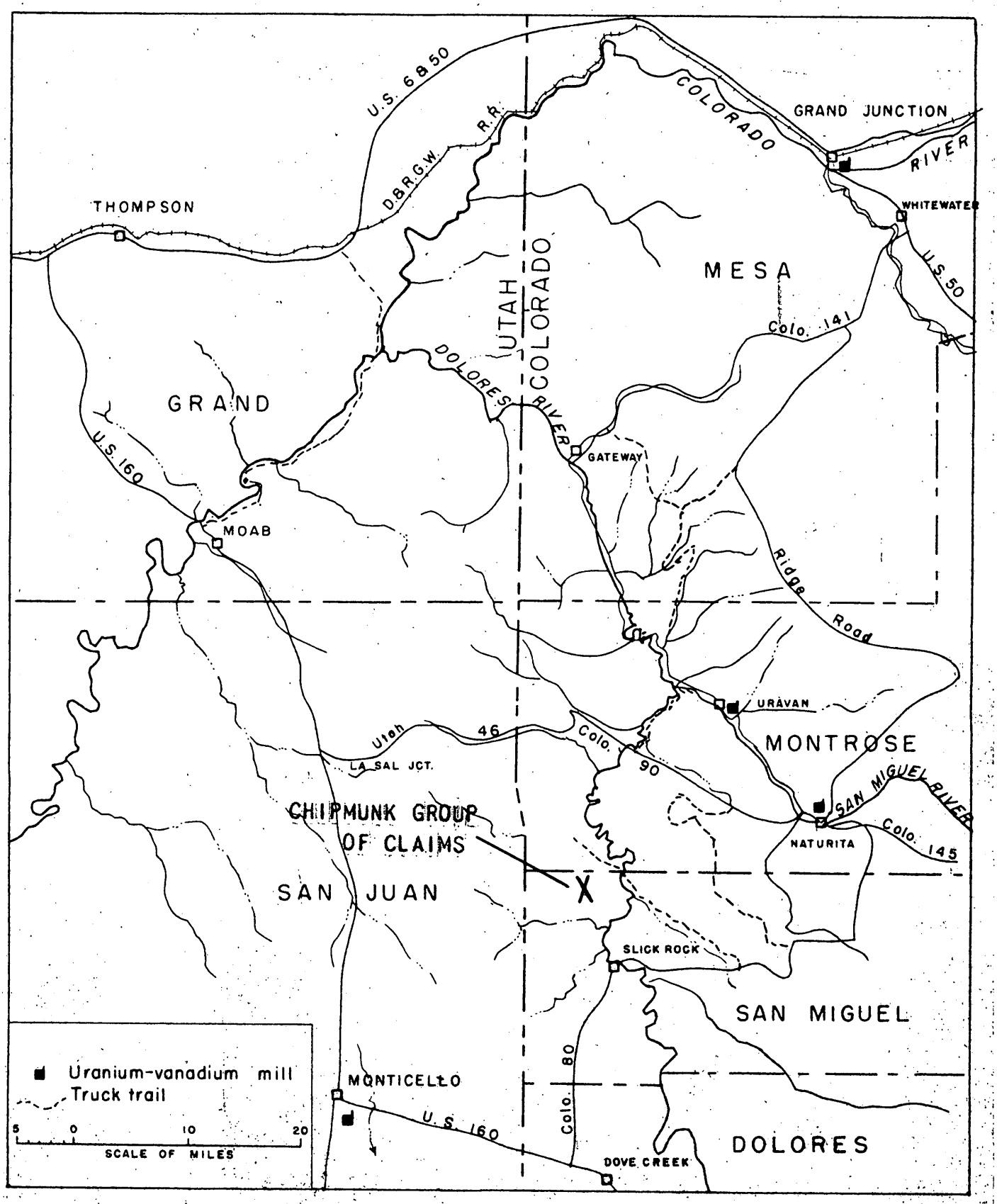


Figure 1. SKETCH MAP OF PART OF COLORADO PLATEAU SHOWING APPROXIMATE LOCATION OF CHIPMUNK GROUP OF CLAIMS, SAN MIGUEL COUNTY, COLORADO

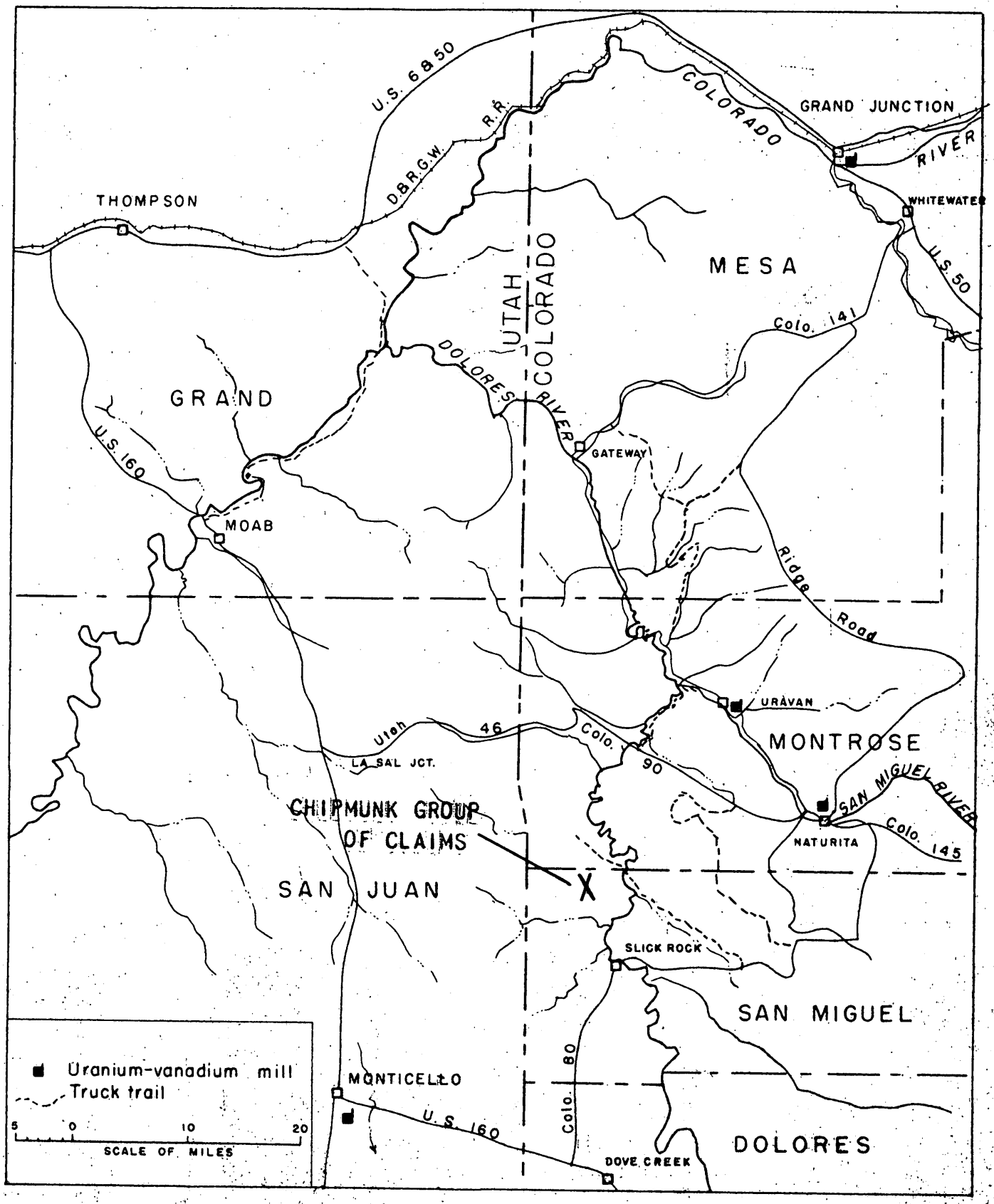
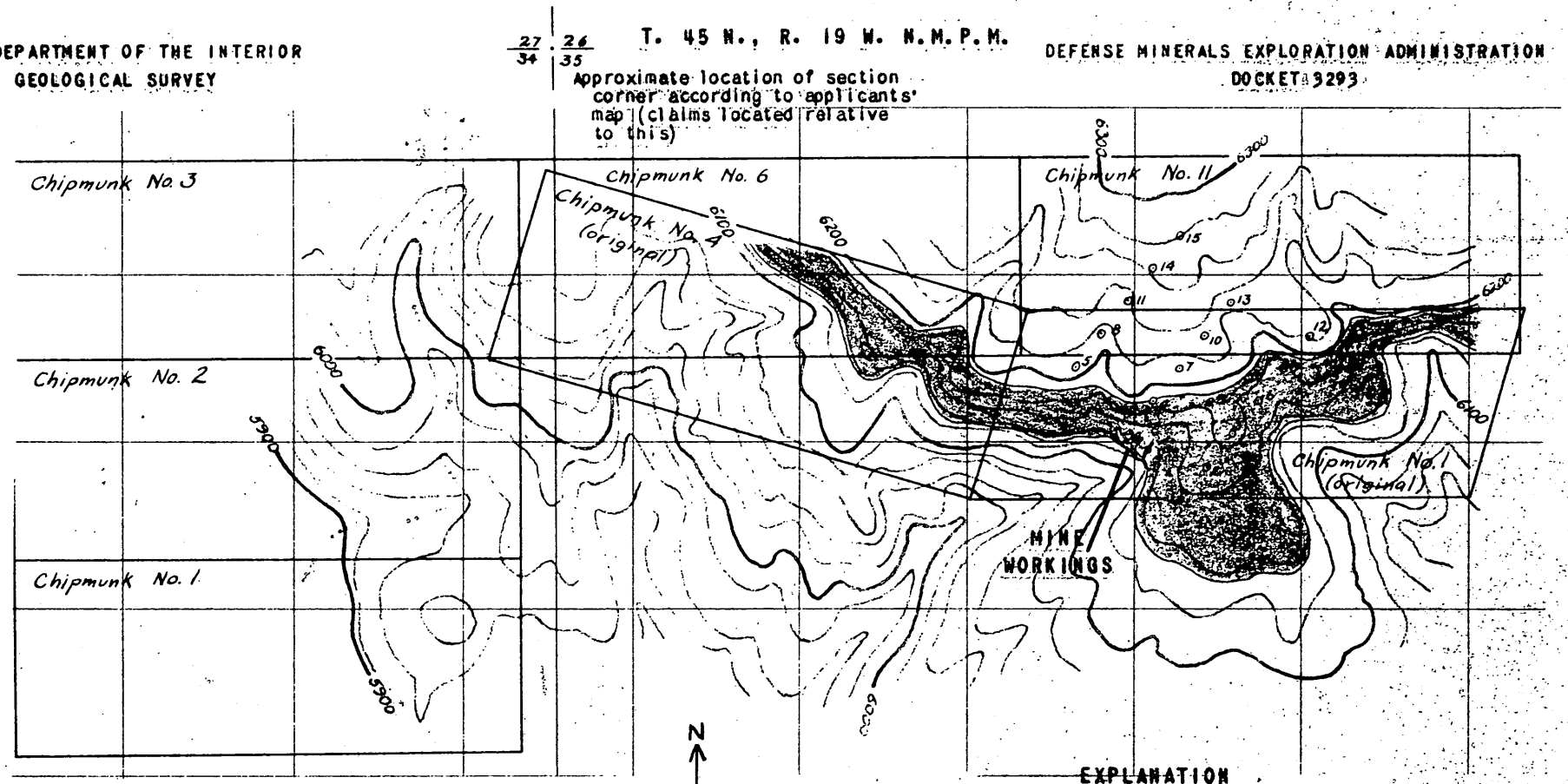


Figure 1. SKETCH MAP OF PART OF COLORADO PLATEAU SHOWING APPROXIMATE LOCATION OF CHIPMUNK GROUP OF CLAIMS, SAN MIGUEL COUNTY, COLORADO

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET 3293



SCALE 1" - 500 FEET
CONTOUR INTERVAL 20 FEET

TOPOGRAPHY FROM U.S. GEOLOGICAL SURVEY QUADRANGLE MAP, HORSE RANGE MESA

CLAIM LINES ARE APPROXIMATELY LOCATED RELATIVE TO TOPOGRAPHY

Geology by D.R. Shawe

EXPLANATION

APPROXIMATE OUTCROP OF TOP SALT WASH SANDSTONE LENS

ORE (RED; MINED OUT) AND MINE WORKINGS

MINERALIZED WAGON DRILL HOLE

PROPOSED LOCATION OF DIAMOND DRILL (CORE) HOLE

Figure 2. SKETCH MAP OF PART OF HORSE RANGE MESA QUADRANGLE SHOWING LOCATIONS OF PROPOSED EXPLORATION DRILL HOLES ON THE CHIPMUNK GROUP OF CLAIMS, AZTEC MINING CO. SAN MIGUEL COUNTY, COLORADO

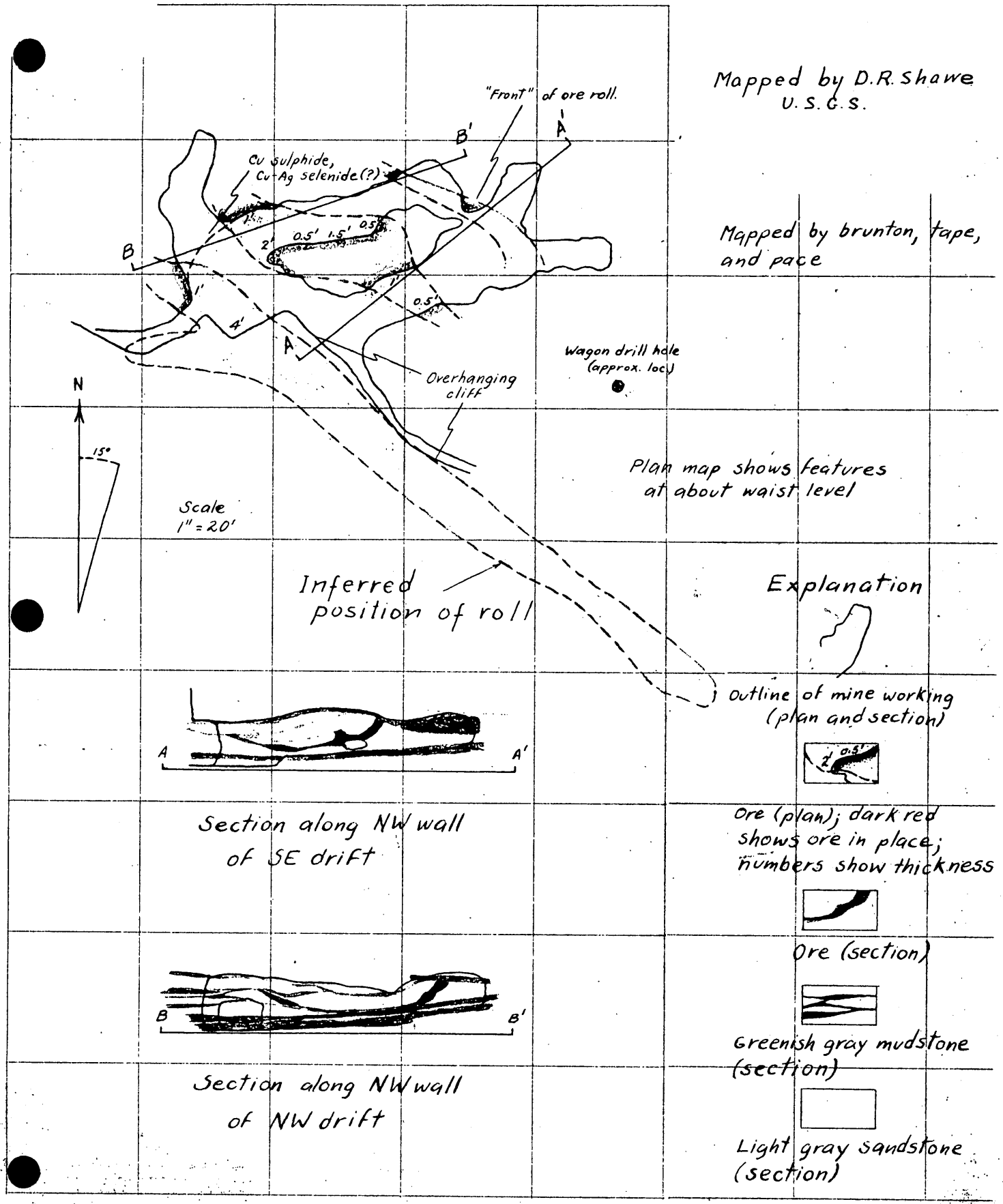


Figure 3. SKETCH MAP SHOWING DETAILS OF MINE WORKINGS ON CHIPMUNK NO. 1 (ORIGINAL) CLAIM, AZTEC MINING CO., SAN MIGUEL COUNTY, COLORADO

DMEA 3293

CHIPMUNK GROUP
ARVEN MINING COMPANY
SAN MIGUEL COUNTY, COLO.

Engineering Report

By R. E. McLellan
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE

10-18-54
(date)

DMRA 3293

CHIPMUNK GROUP
AZTEC MINING COMPANY
SAN MIGUEL COUNTY, COLO.

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Location, topography, and physical features	2
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Mineable ore reserves	4
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Exploration and development	4
Mining and milling equipment and other facilities	4
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Summary of costs	8
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Recommendations	8

ILLUSTRATIONS

Figure	Follows page
1. Location map, Chipmunk group, Aztec Mining Co., San Miguel County, Colo	2
2. Sketch map of part of Horse Range Mesa Quadrangle showing locations of proposed exploration drill holes on the Chipmunk group of claims, Aztec Mining Co., San Miguel County, Colo	*
3. Sketch map showing details of mine workings on Chipmunk No. 1 (original) claim, Aztec Mining Co., San Miguel County, Colo	*

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*See figures with geologic report.

DMEA 3293

CHIPMUNK GROUP
AZTEC MINING COMPANY
SAN MIGUEL COUNTY, COLO.

ENGINEERING REPORT

By R. R. McLellan

INTRODUCTION

The Aztec Mining Company of Farmington, N. Mex., applied to the Defense Minerals Exploration Administration for assistance to explore for uranium on the Chipmunk Nos. 1 through 7 claims in San Miguel County, Colo. The company proposed a program of diamond drilling to consist of 90 holes totaling 10,000 feet of surface core drilling at an estimated cost of $33,400.00, including $8,400.00 for bulldozer road work and drill site preparation.

The property was examined on May 7, 1954, by Defense Minerals Exploration Administration field representatives accompanied by W. B. Colbert and C. J. Eaton of the Aztec Mining Company. It was concluded that the property shows sufficient indications of uranium mineralization to justify a modified exploration program consisting of 15 diamond drill holes at an estimated cost of $6,737.00--Government participation 75 percent, or $5,052.75.

ACKNOWLEDGMENTS

W. B. Colbert and C. J. Eaton guided the inspecting team to the mine and provided them with all available information concerning the property.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Chipmunk group of claims is on the Grassy Hills ridge which separates Little Gypsum Valley from McIntire Canyon, secs. 34 and 35, T. 45 N., R. 19 W., New Mexico principal meridian, San Miguel County, Colo. (fig. 1). The claims are most readily accessible from Utah by leaving U. S. Highway 160 about 19 miles north of Monticello, Utah, and traveling east on the Dry Valley road into Colorado and over Island Mesa to Grassy Hills. The distance from Monticello to the mine is approximately 49 miles. A second and considerably less desirable route leaves the Little Gypsum Valley road 17.5 miles south of the junction with Colorado State Highway 90. The access road winds 5 miles up the south wall of Little Gypsum Canyon to the top of Grassy Hills and to the Chipmunk claims overlooking McIntire Canyon.

The area is semiarid and rugged. Steep canyons are on all sides except to the west which rises through a series of cliffs and benches to the top of Island Mesa. All supplies and equipment must be transported to the area by truck. The most accessible points of supply are Monticello and Moab, Utah, 49 and 68 miles, respectively. Water for mining and diamond drilling may be obtained from a reservoir and a spring within 3 miles of the mine. Electricity is not available in the area. Manpower is plentiful and a camp will be established at the mine. Milling facilities are available at Monticello, Utah.

HISTORY AND PRODUCTION

The claims considered for exploration were located by M. E. Miller and Emory G. Earl during 1952 and 1953 and were sold to the Aztec Mining Company on October 27, 1953. A total of 179 tons of ore

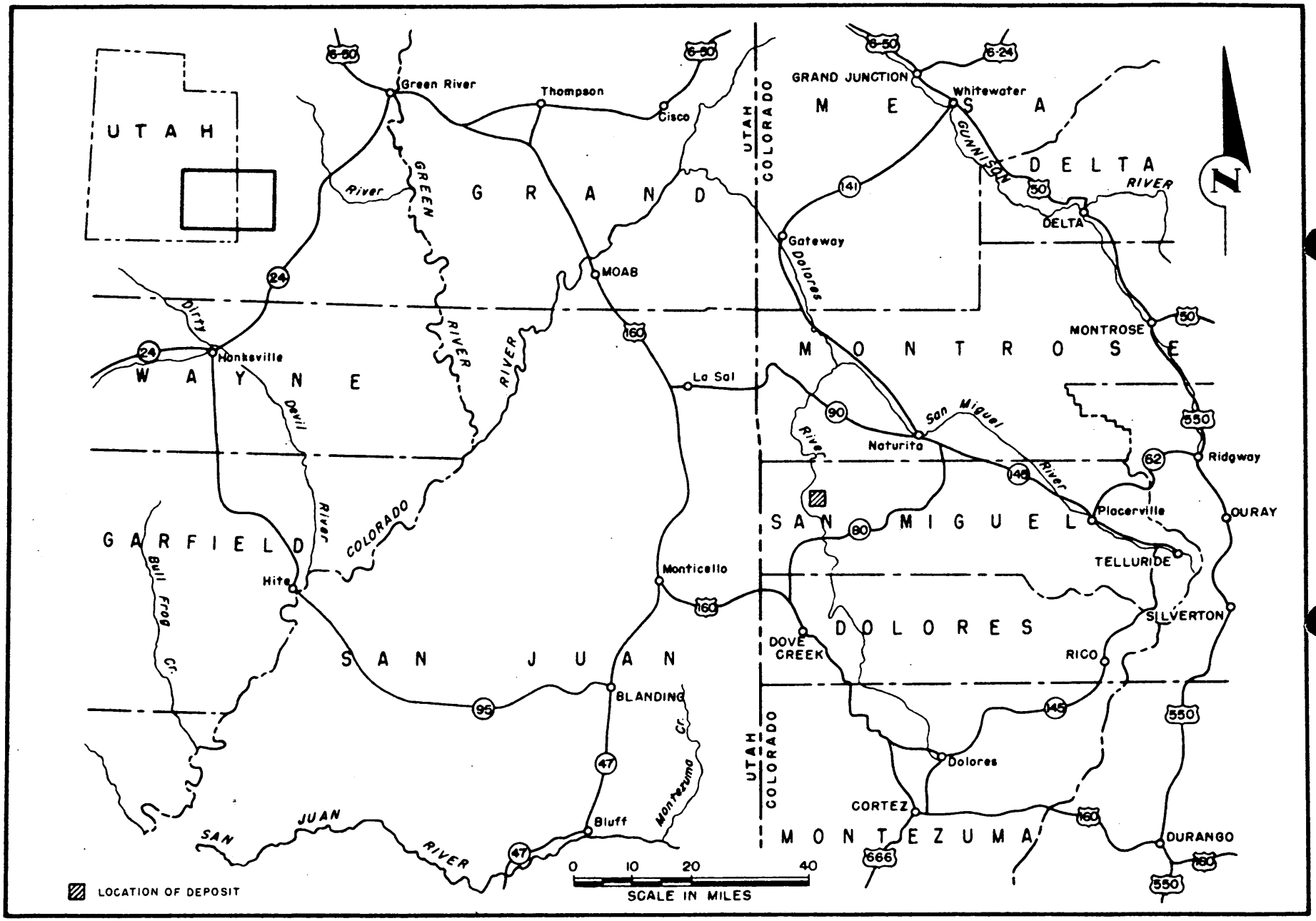

FIGURE 1 - LOCATION MAP, CHIPMUNK GROUP, AZTEC MINING CO., SAN MIGUEL COUNTY, COLO. (DMEA 3293)

averaging 0.60 percent U_3O_8 and 2.60 percent V_2O_5 has been produced from the single group of workings on the Chipmunk No. 1 (original) claim. After developing one deposit, the ore pinched out in all directions and the operators ceased work.

OWNERSHIP AND EXTENT

Claims Chipmunk No. 1 (original) and Chipmunk No. 4 (original) are owned by the applicant company (fig. 2 with the geologic report). The remaining 5 claims, Chipmunk Nos. 1, 2, 3, 6, and 11, are leased from the Atomic Energy Commission under Circular 7. There appears to be no question concerning the validity of ownership.

DESCRIPTION OF THE DEPOSITS

Uranium and vanadium mineralization was first discovered in a rim outcrop of the Salt Wash member of the Morrison formation. Upon stripping the overburden and blasting away several feet of rimrock, a northeast-trending roll was encountered which reached a maximum thickness of about 5 feet and a length of about 100 feet. The width of the deposit probably did not exceed 15 feet. About 12 feet of the tapering edge of a second roll is well exposed in one of the short crosscuts. This fringe zone, having a maximum thickness of 2 feet, appears to be quite heavily impregnated with carnotite, vanadium, and carbon. Remnants of a smaller roll are visible a few feet from the farthest point of advance of the mine workings. All three rolls are roughly parallel and in section can be spanned with a 50-foot tape (fig. 3 with the geologic report).

MINEABLE ORE RESERVES

The mine is depleted of mineable reserves at present. Portions of the fringe area of the deposit can be recovered as ore if the existing workings are utilized for future development work.

PRESENT STATUS

Exploration and Development

The workings presently consist of about 150 feet of rim stripping to a maximum depth of about 25 feet, and 3 short crosscuts into the rim for an aggregate distance of approximately 130 feet. An attempt was made to explore the area with a wagon drill but excessive moisture in the formation caused termination of the work with one unfinished hole. No diamond drilling or other exploration has been done to date.

Mining and Milling Equipment and Other Facilities

With the exception of a company-owned wagon drill, all mining equipment had been removed from the property. There are no existing buildings or other facilities and any ore produced would have to be transported to the nearest treatment plant at Monticello, Utah, 49 miles distant.

PROJECT PROPOSALS, WITH COSTS

The applicant company proposed to core drill three rows of holes parallel to the rim rock exposed on the Chipmunk Nos. 1 (original), 4, 6, and 11 claims. The first row, consisting of 50 holes averaging 75 feet in depth, is to be drilled 100 feet behind the rim. The second row, consisting of 25 holes averaging 100 feet in depth, is to be

drilled 250 feet behind the first row. The third row, consisting of 15 holes averaging 200 feet in depth, to be drilled 250 feet behind the second row. The company estimates that contract core drilling will cost $25,000.00 or $2.50 per foot. In addition to the drilling, the company has requested 600 hours of bulldozing for roads and drill sites at a cost of $14.00 per hour or a total of $8,400.00. According to the application, no expenses were considered except those for drilling and bulldozing. The company estimated that the program would cost $33,400.00, with Government participation or 75 percent or $25,050.00.

It was pointed out to the company representatives that many additional costs would be involved that had not been considered in the application such as those for supervision, sampling and assaying, core boxes, and engineering or geological work. Also, the company failed to consider the fact that the cost of a considerable portion of the drill footage should have been calculated at the rate of $3.50 per foot rather than at a straight rate of $2.50 per foot for plug bit drilling. In general, the cost of the program as proposed by the company was underestimated and the program itself appears to be of a larger scope than is justified by the apparent size of the deposits thus far encountered on the claims. The company representatives agreed to accept a modified program of exploration which is believed by the examining team to be better suited to prospecting for the elongate type of deposit as developed in the Chipmunk mine. The recommended exploration consists of 3 fences totaling 15 holes to be drilled on the slope above the mine normal to the northwest trend of the exposed

deposits (fig. 2 with the geologic report). The fences should be spaced 250 feet apart and the holes should be drilled at intervals of 185 feet. All drilling will be confined to the Chipmunk No. 1 (original) and the Chipmunk No. 11 claims as illustrated. One hole (No. 1) should be drilled 100 feet below the base of the known ore-bearing sandstone to prospect for deeper ore horizons. Following are the estimated depths for 15 holes totaling 1,500 feet of core and plug drilling:

Drill Hole No.	Plug depth* (feet)	Cored interval (feet)	Total depth (feet)
1	--	135	135
2	--	50	50
3	--	70	70
4	--	70	70
5	20	70	90
6	--	50	50
7	20	70	90
8	30	70	100
9	--	60	60
10	40	70	110
11	50	70	120
12	30	70	100
13	40	70	110
14	75	70	145
15	95	70	165
	400	1,065	1,465 (rounded to 1,500 feet)

*Footages listed in this column can be drilled with a plug bit as the intervals will be above the ore horizon; consequently, the added expense of recovering core will be eliminated.

Costs for the above drilling program, requiring about 1 month's time, are estimated as follows:

Independent contracts:		
1,100 feet core drilling at $3.50 per foot	$3,850.00	
400 feet plug drilling at $2.50 per foot	1,000.00	
48 hours bulldozing at $14.00 per hour	672.00	
Total		$5,522.00
Labor and supervision:		
1 geologist-engineer, 1-1/2 months at $500.00 per month	750.00	
Total		750.00
Operating materials and supplies:		
Fuel for truck or Jeep	100.00	
Core boxes	70.00	
Miscellaneous	50.00	
Total		220.00
Operating equipment:		
1 Jeep or pickup truck at $35.00 per month	35.00	
1 Geiger counter with probe (rental)	60.00	
Total		95.00
Miscellaneous:		
Sampling and analysis--approximately 30 combination uranium and vanadium assays at $5.00 each	150.00	
Total		150.00
Total cost of project		$6,737.00
Cost per foot for 1,500 feet of drilling		$4.491

One drill should complete the above program in a month's time, barring breakdowns. Bulldozing and drilling can be accomplished simultaneously.

Summary of Costs

Independent contracts	$5,522.00
Labor and supervision	750.00
Operating materials and supplies	220.00
Operating equipment	95.00
Miscellaneous	150.00
Total cost of project	$6,737.00
Total cost per foot for 1,500 feet of drilling	$4.491
Government participation at 75 percent	$5,052.75

CONCLUSIONS

The Chipmunk claims show sufficient uranium and vanadium mineralization to justify a limited amount of surface core drilling exploration. The objective of the exploration will be to disclose possible new ore-bearing horizons at depth and to extend the known area of favorable ground from the rim workings. By drilling a series of fences normal to the apparent trend of the exposed ore rolls, it may be possible to locate additional parallel deposits. The ore is extremely limited; consequently, an extensive drilling program, as proposed by the applicant, based on available information does not appear justified at the present time.

RECOMMENDATIONS

The exploration program recommended for approval consists of 3 fences totaling 15 holes (estimated as 1,500 feet) to be drilled on the slope above the Chipmunk mine workings on the Chipmunk No. 1 (original) and Chipmunk No. 11 claims normal to the northwest trend of the rolls exposed in the mine (fig. 2 with the geologic report).

The fences are to be spaced 250 feet apart and the holes will be drilled at intervals of 125 feet. One hole, designated as No. 1 on the geologic map, will be drilled 100 feet below the base of the known ore-bearing sandstone to prospect for possible deeper ore horizons. Plug bit (non-core) drilling will be permissible above the ore horizon in some holes. All core will be boxed until geologic logs can be made. Mineralized sections will be saved and split for assay and storage. Following are the estimated depths for the hole locations indicated on figure 2 with the geologic report:

Hole No.	Plug depth* (feet)	Cored interval (feet)	Total depth (feet)
1	--	135	135
2	--	50	50
3	--	70	70
4	--	70	70
5	20	70	90
6	--	50	50
7	20	70	90
8	30	70	100
9	--	60	60
10	40	70	110
11	50	70	120
12	30	70	100
13	40	70	110
14	75	70	145
15	95	70	165
Total	400	1,065	1,465 (rounded to 1,500 feet)

*These footages can be drilled with a plug bit to eliminate the added expense of recovering core in the section above the ore horizon.

A short-term, unit-cost contract is suggested.

In the event favorable ground is encountered by the drilling, the possibility of a more extensive program of exploration should be considered, providing the company requests such assistance.

ky

9/16/54 gla

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

Defense Minerals Administration
RECEIVED
SEP 15 1954

224 New Customhouse
Denver 2, Colorado

September 9, 1954

Memorandum

To: Administrator, Defense Minerals Exploration Administration

From: DMEA Field Team, Region IV

Subject: Report of Examination, DMEA Docket 3293 (Uranium), Aztec Mining Company, Chipmunk Group, San Miguel County, Colorado.

The application for Government assistance in exploration work estimated to cost $6,732.00, has been approved by us and a contract is being prepared.

Government participation will be 75 percent, or $5,049.00.

Four copies of the Final Report will be forwarded with your copy of the contract.

W. H. King

W. H. King

E. N. Hawkman

for A. H. Koschmann

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

224 New Customhouse
Denver 2, Colorado

August 27, 1954.

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA.

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-3293 (Uranium), Aztec Mining Company, Chipmunk claims, San Miguel County, Colorado.

Reference is made to the second paragraph of your letter dated April 5, 1954 on the subject docket.

The Region IV Field Team will recommend 1500 feet of drilling at a total cost of $6,737.00. Since this amount is within their delegated authority will you please teletype advice if we should prepare the contract.

The copy of the application in this office does not contain the Circular No. 7 AEC lease and if it was included by the applicant we are wondering if it is in your file.

W H King
W. H. King

HMC:cwm

cc: Docket
Administrator, DMEA
WMTraver
AHKoschmann
Chron.

9/1/54
Region IV authorized to write contract