DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

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DMA Docket No. 2869

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Routing Slip

To:	Code 700, Room 4640	Date	2/5/53
To:	Oper. Com.	Date	8-28-53
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FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
AUG 28 1953

Mr. George S. Elmore, President
American Mining and Development Company
Suite 206 American Building
1317 F. Street N. W.
Washington, D. C.

Re: Docket No. DMEA-2869 (Uranium)
Ball Prop. Lease
Fall River County, South Dakota

Dear Mr. Elmore:

Reference is made to your application for Government aid on the proposed exploration project estimated to cost $54,178.95.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding material of acceptable grade and in quantities that will significantly improve the mineral supply position for the National Defense Program.

A careful study of your application and data available to this Agency and an examination of the property concerned reveal that the probability of disclosing mirable ore reserves by your proposed exploration program is not sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

If future work at your property reveals evidence which could materially alter this opinion, please be assured we will be glad to consider a new application.

Sincerely yours,

C. O. Mittendorf

Administrator

FLKnouse/db
8-28-53
cc to: Adm. Reading File
Docket
Messrs: H.D.Keiser, Room. 3641
A.P.Butler, Jr., Rm. 3206, GSA
Ellis
Knouse
DMEA Field Team, Region V (2)

8-28-53

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

AB

August 28, 1953

SUMMARY OF PROPOSED PROJECT

Docket No. DMEA-2869
Applicant: American Mining & Development Co.
Subject: Denial of application
Commodity: Uranium
Location of property: Fall River County, S. Dakota. Region V
Amount of application: $56,478.95
Date of application: November 14, 1952
Outline of project: The Applicant proposes 12,000 feet of bulldozer stripping and 1,000 ft. of adit to be driven to expose and explore concentrations of carnotite in sandstone of the Lakota formation.

Field Team Report and Recommendations: Dated January 28, 1953
The application was filed with Region V, DMEA Field Team. A field examination was made on December 23, 1952, and a Field Team report prepared by E. O. Binyon, Bureau of Mines Engineer, and J.A.Redden, Geologist, of the Geological Survey, before the application was transmitted to Washington. The application and the Field Team's report were received simultaneously by the Washington Office, on February 4, 1953. The Field Team report recommended a modified program and reduced the amount of the exploration. A two-phase program was recommended totalling $6,090.00. The revised proposal consisted of a scintillometer survey as a first phase and the second phase consisted of stripping 2,000 linear feet of vein where favorable anomolies were found and a small amount of adit on exposed mineralization.

Commodity Members' Comments on Field Team Report:

Bureau of Mines: H. D. Keiser, dated February 17, 1953.
Recommended that action of the application and Field Team report be held in abeyance until evidence was submitted from the field to indicate that the application was discussed with the Atomic Energy Commission representative at Hot Springs, South Dakota.

Geological Survey: A. P. Butler, Jr., dated February 17, 1953.
Concurred in the recommendation that assistance for exploration, as set forth in the Field Team report, be granted. However, before final approval, believed it would be desirable for the Field Team to review the proposed plan with members of the local staff of the Atomic Energy Commission to determine if the AEC cared to make any suggestions, because members of the AEC staff had examined the property and is interested in encouraging exploration in and production from this general area.

Further action by Rare & Misc. Metals Division Engineer: F. L. Knouse

On February 19, 1953, Mr. Knouse discussed this application, the Field Team report, and the recommendations made by the USGS and USBM Commodity Committee members in Washington, with the Executive Officer, DMEA Field Team, Region V. He was requested to discuss the application and the proposed work with the AEC field representative and formally advise Washington that the project had been cleared with AEC. On July 7, 1953, Mr. Knouse again contacted the Executive Officer, Region V and requested a check with AEC to determine whether or not a radiometric survey had been made of this area that would change the work recommended by the Field Team report, because considerable time had elapsed since the preparation of the report and because the AEC representative in Washington had indicated that a program to survey the area was to have been undertaken by AEC since the Field Team report was written.

Meanwhile, there were numerous contacts with the Applicant's Washington representative, Mr. George Elmore, concerning the submission of properly signed Owner's Consent to Lien forms, and extension of lease agreement, etc. These documents were delivered to the Washington DMEA office by the Applicant's Washington representative on July 6, 1953.

On July 30, 1953, the Division received Mr. Needham's memorandum to the Operating Committee, dated July 27, 1953, enclosing copy of memorandum to himself from the examining team, Messrs. E. O. Binyon, Bureau of Mines engineer, and J. A. Redden, Geological Survey, dated July 23, 1953, which served as a supplement to the Field Team report submitted in January of 1953. This supplemental memorandum stated that the application and area were both discussed with members of the AEC at Hot Springs, South Dakota. The AEC considered the area favorable for exploration. However, the Field Team report contained no reference to this discussion.

The supplemental report further stated that the radiometric surveys mentioned by Mr. Knouse in his telephone conversation with Mr. Needham on February 19, 1953, presumably referred to airborne surveys,

since, to the knowledge of the examining team, the AEC had not run a detailed ground scintillometer check of the area. They also stated that in favorable area, additional scintillometer work on the ground, as recommended in the Field Team Report, might be required in an area where the exposures are limited or not present at all.

In view of later developments, the field representatives desired to change the original recommendations submitted in the report. Additional exploration and geological investigation by private companies and Government agencies had indicated that the known minable deposits were confined to the Fall River formation. Although the original discovery of uranium in the Fall River County area was in the Lakota formation, additional work had failed to disclose any significant ore bodies in that formation. Occurrences in massive sandstone in the Lakota formation are not uncommon, but rarely does the mineralization extend for more than a few feet, or at most a relatively short distance horizontally. Accordingly, the examining team stated, it was believed that the possibility of a discovery of a minable deposit was slight. These conclusions on the unfavorability of exploring the Lakota formation in this area was largely based on discussions with the Geologic Survey personnel assigned to work in the Fall River area.

Recommendation: It was recommended that the entire application be denied on the basis of insufficient geologic evidence for the exploration.

Commodity Members' Comments on supplemental report:

Geological Survey: A. P. Butler, Jr., August 11, 1953.
Concurs with the revised recommendation that the application be denied.

Bureau of Mines: H. D. Keiser, dated August 24, 1953.
After discussing the subject supplemental report with Mr. Joseph O. Hosted, the AEC representative, recommends that the application be denied.

Rare & Misc. Metals Division Engineer: F. L. Knouse

Comments: Denial letter prepared on basis of above recommendations.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare & Misc. Metals Division

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

August 28, 1953

SUMMARY OF PROPOSED PROJECT

Docket No. DMEA-2869
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Subject: Denial of application
Commodity: Uranium
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Geological Survey: A. P. Butler, Jr., dated February 17, 1953.
Concurred in the recommendation that assistance for exploration, as set forth in the Field Team report, be granted. However, before final approval, believed it would be desirable for the Field Team to review the proposed plan with members of the local staff of the Atomic Energy Commission to determine if the AEC cared to make any suggestions, because members of the AEC staff had examined the property and is interested in encouraging exploration in and production from this general area.

Further action by Rare & Misc. Metals Division Engineer: F. L. Knouse

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since, to the knowledge of the examining team, the AEC had not run a detailed ground scintillometer check of the area. They also stated that in favorable area, additional scintillometer work on the ground, as recommended in the Field Team Report, might be required in an area where the exposures are limited or not present at all.

In view of later developments, the field representatives desired to change the original recommendations submitted in the report. Additional exploration and geological investigation by private companies and Government agencies had indicated that the known minable deposits were confined to the Fall River formation. Although the original discovery of uranium in the Fall River County area was in the Lakota formation, additional work had failed to disclose any significant ore bodies in that formation. Occurrences in massive sandstone in the Lakota formation are not uncommon, but rarely does the mineralization extend for more than a few feet, or at most a relatively short distance horizontally. Accordingly, the examining team stated, it was believed that the possibility of a discovery of a minable deposit was slight. These conclusions on the unfavorability of exploring the Lakota formation in this area was largely based on discussions with the Geologic Survey personnel assigned to work in the Fall River area.

Recommendation: It was recommended that the entire application be denied on the basis of insufficient geologic evidence for the exploration.

Commodity Members' Comments on supplemental report:

Geological Survey: A. P. Butler, Jr., August 11, 1953.
Concurs with the revised recommendation that the application be denied.

Bureau of Mines: H. D. Keiser, dated August 24, 1953.
After discussing the subject supplemental report with Mr. Joseph O. Hosted, the AEC representative, recommends that the application be denied.

Rare & Misc. Metals Division Engineer: F. L. Knouse

Comments: Denial letter prepared on basis of above recommendations.

Ernest Wm. Ellis, Chief
Rare & Misc. Metals Division

8/26/53 gla

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

Department of the Interior
Bureau Limited Distribution
RECEIVED
AUG 26 1953

August 24, 1953

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: Field Team supplementary report, DMEA Docket No. 2869, American Mining & Development Co., P. O. Box 862, Hot Springs, South Dakota.

I have reviewed the subject report and discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the report be approved, and that the application for an exploration loan be denied.

H. D. Keiser

H. D. Keiser

Attachments - 2

913

STANDARD FORM NO. 64

8/17/53 gla

Office Memorandum • UNITED STATES GOVERNMENT

RECEIVED
AUG 14 1953

TO : E. Wm. Ellis, DMEA Member,
Uranium Commodity Committee

DATE: August 11, 1953

FROM : A. P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Supplementary information from Field Team, DMEA Docket 2869 (uranium) American Mining and Development Co., applicant, Damsite and other claim groups, Fall River Co., South Dakota.

In a supplementary memorandum of July 23, concerning the property identified in the subject above, the Field Team points out:

1. That the showings of uranium are in the Lakota formation.

2. That all mineable deposits in the area are in the overlying Fall River formation.

3. That occurrences in the Lakota are small and spotty.

Because of the foregoing relations the Field Team believes that its original favorable recommendations should be changed to a recommendation of denial.

Their conclusion was reached after discussion with Geological Survey personnel engaged in comprehensive study of uranium deposits in the area.

Recommendation

In view of the supplementary information submitted by the Field Team examiners, I concur with the revised recommendation that Government assistance for exploration be denied.

Copy to E. Wm. Ellis (2)

Arthur P. Butler, Jr.

JB

IN REPLY REFER TO:

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

August 11, 1953

E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

A. P. Butler, Jr., USGS Member, Uranium Commodity Committee

Supplementary information from Field Team, DMEA Docket 2869 (uranium) American Mining and Development Co., applicant, Ramsite and other claim groups, Tall River Co., South Dakota.

In a supplementary memorandum of July 23, concerning the property identified in the subject above, the Field Team points out:

1. That the showings of uranium are in the Lakota formation

2. That all mineable deposits in the area are in the overlying Fall River formation

3. That occurrences in the Lakota are small and spotty.

Because of the foregoing relations the Field Team believes that its original favorable recommendations should be changed to a recommendation of denial.

Their conclusion was reached after discussion with Geological Survey personnel engaged in comprehensive study of uranium deposits in the area.

Recommendation

In view of the supplementary information submitted by the Field Team examiners, I concur with the revised recommendation that Government assistance for exploration be denied.

Copy to E. Wm. Ellis (2)

IN REPLY REFER TO:

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

August 11, 1953

E. Wm. Ellis, DMEA Member,
Uranium Commodity Committee

A. P. Butler, Jr., USGS Member, Uranium Commodity Committee

Supplementary information from Field Team, DMEA Docket 2869 (uranium) American Mining and Development Co., applicant, Ramsite and other claim groups, Fall River Co., South Dakota.

In a supplementary memorandum of July 23, concerning the property identified in the subject above, the Field Team points out:

1. That the showings of uranium are in the Lakota formation

2. That all mineable deposits in the area are in the overlying Fall River formation

3. That occurrences in the Lakota are small and spotty.

Because of the foregoing relations the Field Team believes that its original favorable recommendations should be changed to a recommendation of denial.

Their conclusion was reached after discussion with Geological Survey personnel engaged in comprehensive study of uranium deposits in the area.

Recommendation

In view of the supplementary information submitted by the Field Team examiners, I concur with the revised recommendation that Government assistance for exploration be denied.

Copy to E. Wm. Ellis (2)

8/10/53 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1953

~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

July 27, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.
Attention: Mr. F. L. Knouse

From: A. B. Needham, Executive Officer, Field Team, Region V

Subject: DMEA Docket 2869, American Mining and Development Co., Fall River County, S. Dak.

Pursuant to your telephone call regarding the subject docket, here is a letter from the field team, which will serve as a supplement to the report made on this application last January.

You will note that although they have discussed the application with members of the A.E.C., who were at that time in accordance, later developments by private industry has precluded a favorable report at this time. The field team recommends now that the application be denied.

A. B. Needham
Executive Officer, Field Team
Region V

Attachments - 2

cc: C. E. Dutton

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

Defense Minerals Administration
RECEIVED
JUL 23 1953

July 23, 1953

Memorandum

To: A. B. Needham, Executive Officer, DMEA Field Team, Region V

From: J. A. Redden, U.S.G.S., and E. O. Binyon

Subject: Docket No. 2869, American Mining and Development Co., Fall River County, S. Dak.

This is in reply to your memorandum requesting a supplement to the field team's report to include a discussion of the application with members of the AEC as well as any change that may be made in the recommendations because of later radiometric suveys by the AEC in the vicinity of the property.

The application and area were both discussed with members of the AEC at Hot Springs. They considered the area favorable for exploration. However, the report contained no reference to this discussion as was the case with all the earlier field team reports on exploration for uranium in the Edgemont district.

The radiometric surveys you mention presumably refers to airborne surveys, since to our knowledge AEC has not run a detailed ground scintillometer check of the area. In favorable area, additional scintillometer work on the ground, as recommended in the report, may be required in an area where the exposures are limited or not present at all.

Since the field teams report was submitted late in January and no notice of the action on the application had been received, it was assumed the application had been denied.

In view of later developments, the field wishes to change the original recommendations submitted in the report. Additional exploration and geological investigation by private companies and Government agencies has indicated thus far that the known mineable deposits are confined to the Fall River formation. Although the original discovery of uranium in the Fall River County area was in the Lakota formation, additional work has failed to disclose any significant ore bodies in that formation. Occurrences in massive sandstone in the Lakota formation are not uncommon, but rarely does the mineralization extend for more than a few feet, or at most a relatively short distance horizontally. It is believed that the possibility of a discovery of a mineable deposit are slight.

Reviewed by
DMEA OPERATING COMMITTEE
8-5-53
(date)

The above conclusions on the unfavorability of exploring the Lakota formation in this area is largely based on discussions with Geologic Survey personnel assigned to work in the Fall River area.

It is recommended that the entire Application by the American Mining and Development Company be denied on the basis of insufficient geologic evidence for the exploration.

/s/ E. O. Binyon

E. O. Binyon
J. A. Redden

cc: Reg. Director, Region V
J. A. Redden
Files

/ C O P Y /

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

July 27, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D.C.
Attention: Mr. F. L. Knouse

From: A. B. Needham, Executive Officer, Field Team, Region V

Subject: DMEA Docket 2869, American Mining and Development Co., Fall River County, S. Dak.

Pursuant to your telephone call regarding the subject docket, here is a letter from the field team, which will serve as a supplement to the report made on this application last January.

You will note that although they have discussed the application with members of the A. E. C., who were at that time in accordance, later developments by private industry has precluded a favorable report at this time. The field team recommends now that the application be denied.

A. B. Needham
Executive Officer, Field Team
Region V

Attachments -2

cc: C. E. Dutton

Reviewed by
DMEA OPERATING COMMITTEE
8-5-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

/ C O P Y /

July 23, 1953

Memorandum

To: A. B. Needham, Executive Officer, DMEA Field Team, Region V

From: J. A. Redden, U.S.G.S., and E. O. Binyon

Subject: Docket No. 2869, American Mining And Development Co., Fall River County, S. Dak.

This is in reply to your memorandum requesting a supplement to the field team's report to include a discussion of the application with members of the AEC as well as any change that may be made in the recommendations because of later radiometric surveys by the AEC in the vicinity of the property.

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In view of later developments, the field wishes to change the original recommendations submitted in the report. Additional exploration and geological investigation by private companies and Government agencies has indicated thus far that the known mineable deposits are confined to the Fall River formation. Although the original discovery of uranium in the Fall River County area was in the Lakota formation, additional work has failed to disclose any significant ore bodies in that formation. Occurrences in massive sandstone in the Lakota formation are not uncommon, but rarely does the mineralization extend for more than a few feet, or at most a relatively short distance horizontally. It is believed that the possibility of a discovery of a mineable deposit are slight.

Reviewed by
DMEA OPERATING COMMITTEE
8-5-53
(date)

/C O P Y/

The above conclusions on the unfavorability of exploring the Lakota formation in this area is largely based on discussions with Geologic Survey personnel assigned to work in the Fall River area.

It is recommended that the entire Application by the American Mining and Development Company be denied on the basis of insufficient geologic evidence for the exploration.

/s/ E. O. Binyon

E. O. Binyon
J. A. Redden

cc: Reg. Director, Region V
J. A. Redden
Files

7/30/53 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1953

July 27, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.
Attention: Mr. F. L. Knouse

From: A. B. Needham, Executive Officer, Field Team, Region V

Subject: DMEA Docket 2869, American Mining and Development Co., Fall River County, S. Dak.

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You will note that although they have discussed the application with members of the A.E.C., who were at that time in accordance, later developments by private industry have precluded a favorable report at this time. The field team now recommends that the application be denied.

A. B. Needham
Executive Officer, Field Team
Region V

Attachments - 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

c o p y
Defense Minerals Administration
RECEIVED
JUL 28 1953

July 23, 1953

Memorandum

To: A. B. Needham, Executive Officer, DMEA Field Team, Region V

From: J. A. Redden, U.S.G.S., and E. O. Binyon

Subject: Docket No. 2869, American Mining and Development Co., Fall River County, S. Dak.

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/s/ E. O. Binyon

E. O. Binyon
J. A. Redden

cc: Reg. Director, Region V
J. A. Redden
Files

Re: Telephone call with B.B. Neelkamp
Region V
Docket No 2869- (Wisconsin)
American Mining and Dev. Co.

1- Requested case and proposed work be discussed with A.E.C. and formal clearance forwarded to this office having their approval.

2. Also check with A.E.C. to determine if a radiometric survey has been made of this area that would change the work recommended by F.T. Report as considerable time has elapsed since the report was written and I understand from Joe Hartnagel a program to survey the area was on the program since F.T. Report was written

JPK.
7-7-53

Ra-36566

1. Require evidence that proposal was discussed with P.E.C. and they approve proposal.

MF-200
(June 1951)
(Revised Feb. 1952)

DOCKET No. DMEA 2869

COMMODITY Uranium

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

EXPLORATION PROJECT CONTRACT [1]

IT IS AGREED this ________ day of ________, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] American Mining and Development company. A Delaware Corporation. Suite 206 American Bldg. 1317 F Street N.W. Washington, D.C.

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 South Dakota, County of Fall River, described as follows: [3] Known as the Ball Bros. LEASE located approximately 23 miles Southeasterly from Hot Springs. Property is comprised of 21 unpatented lode mining claims as follows: Southside Nos 1 2 & 3, Damsite NOS. 1-7 inclusive, Whitewood No. 1, Hillside Nos. 1-4 inclusive; and Lower Chilson NOS. 1-6 inclusive, as shown on the attached Map Exhibit "B" and Individual Claim recording data appended as ANNEX II attached hereto and made a part of this contract

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:~~

(b) That the Operator is a lessee, in possession and entitled to possession, and the Owner's Consent to Lien is attached.

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 ________ 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 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.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(b) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(c) *Government may inspect.*—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 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(a) The costs of the project in which the Government will participate are limited to the following:

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related initial allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—Repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance and payroll taxes.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

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[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*) The Government's payments in all cases will be based on actual, necessary costs (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(*c*) No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes) or any other indirect costs, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred 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 costs incurred 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.

(*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 operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, 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 as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(*a*) The Government will pay ________________ percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $________________, which is ________ percent of $____________________, 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 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.

(*b*) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *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 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.

ARTICLE 10. *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 11. *Title to and disposition of property.*—All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

ARTICLE 12. *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. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* ____________________

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

[illegible signature]
(Operator)

By [signature] DMEA

By ____________________

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

____

U. S. GOVERNMENT PRINTING OFFICE 16—66328-1

[CORPORATE SEAL]

American Mining and Development Company
Exploration Project Contract
Ball Bros Lease
Fall River County, South Dakota,
Docket No DMEA. 2869

ANNEX II

Consisting of 21 contiguous lode mining claims as shown on the attached map Exhibit "B" locations of these claims are recorded in the Office of the County Recorder of Fall River County, South Dakota as follows:

Claim Names	Location Section No.	Black Hills B.+M. Township & Range	Book	Page
Southside, 1, 2, & 3	31	T.8S.-R4E	31-M.	64 & 65
Danielle 1, 2, 3, 4, 5, 6, & 7	"	" "	"	276, 277, 61, 62, & 63
Whitewood 1	"	" "	"	68
Hillside 1, 2, 3, & 4	6	T.9.S R4E	"	69 & 70
Lower Chilson, 1, 2, 3, 4, 5 & 6	31 & 6	T-8.S R4E T.9.S R4E	"	65, 66, 67 & 68

Said claims being located in an unorganized mining district in said County and State.

Exploration Project Contract
American Mining & Development Company
Docket NO. 3MEA 2869

Exhibit "A"

Description of the work

The purpose of this work is to explore the [redacted] / the Lakota Sandstone formation lying this [redacted] property for uranium bearing ore. The exploration shall be done by

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of South Dakota, County of Fall River, described as follows:1/

Name of Claim	Location Section	Township	Book	Page
Southside 1,2,3	31	T8SR4E	31M	64,65
Damsite 1,2,3,4,5,6,7	31	T8SR4E	31M	276,277,61,62,63
Whitewood 1	31	T8SR4E	31M	68
Hillside 1,2,3,4	6	T9SR4E	31M	69,70
Lower Chilson 1,2,3,4,5,6	31 & 6	(T8SR4E (T9SR4E	31M	65,66,67,68

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

2/ American Mining and Development Company

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

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

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ _____, or ten years have elapsed from the date of the contract.

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

Dated this 1st day of July, 1953.

Richard W. Ball [Seal]

Bessie Mae Ball [Seal]

Stanley E. Ball [Seal]

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

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

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

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

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 six 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) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

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

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

(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, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(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.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of South Dakota, County of Fall River, described as follows:1/

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Southside 1,2,3	31	T8SR4E	31M	64,65
Damsite 1,2,3,4,5,6,7	31	T8SR4E	31M	276,277,61,62,63
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which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ American Mining and Development Company

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

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

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ _____, or ten years have elapsed from the date of the contract.

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

Dated this 1st day of July, 1953.

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4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

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MF-203

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Southside 1,2,3	31	T8SR4E	31M	64,65
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Whitewood 1	31	T8SR4E	31M	68
Hillside 1,2,3,4	6	T9SR4E	31M	69,70
Lower Chilson 1,2,3,4,5,6	31 & 6	(T8SR4E (T9SR4E	31M	65,66,67,68

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

2/ American Mining and Development Company

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

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

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ _____, or ten years have elapsed from the date of the contract.

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

Dated this 1st day of July, 1953.

Richard W. Ball [Seal]

Bessie Mae Ball [Seal]

Stanley E. Ball [Seal]

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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 six 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) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

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

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

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(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.

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MF-203

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MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of SOUTH DAKOTA, County of FALL RIVER, described as follows:1/

IN A LEASE AND OPTION AGREEMENT DATED 27TH SEPTEMBER 1952, AND RECORDED IN REGISTER OF DEEDS BOOK MSC 31 PAGES 473, 474, 475, 476 OFFICIAL RECORDS OF SAID COUNTY

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

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WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

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Dated this 26TH day of FEBRUARY, 1953.

Richard W Ball [Seal]

Stanley E Ball [Seal]

By wife of Richard W Ball [Seal]

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Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of SOUTH DAKOTA, County of FALL RIVER, described as follows:1/

IN A LEASE AND OPTION AGREEMENT DATED 27TH SEPTEMBER 1952, AND RECORDED IN REGISTER OF DEEDS BOOK MSC 31 PAGES 473, 474, 475, 476 OFFICIAL RECORDS OF SAID COUNTY

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

2/ AMERICAN MINING AND DEVELOPMENT COMPANY

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

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

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 50,831.06, or ten years have elapsed from the date of the contract.

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

Dated this 26th day of FEBRUARY, 195 3

Richard W. Ball [Seal]

Stanley C. Ball [Seal]

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

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(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.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

LEASE AND OPTION AGREEMENT

This lease and option to purchase, made and entered into as of this 1st day of July, 1953, by and between Stanley E. Ball and (A Single Person) (husband and wife) and Richard W. Ball and Bessie Mae Ball, (husband and wife) of Edgemont, South Dakota, Lessor, and American Mining and Development Company, a Delaware Corporation, Lessee, WITNESSETH:

Article I
Description of the Property

The Lessor warrants that he is the sole and lawful owner of the hereinafter described property, and, for and in consideration of the sum of Three Hundred Dollars ($300.00) to him in hand paid receipt of which is hereby acknowledged, and for and in consideration of the royalties and rentals to be paid by Lessee and of the covenants and agreements of the Lessee hereinafter set forth does hereby lease, let and demise unto the Lessee, its successors and assigns upon the terms and conditions hereinafter set forth which are hereby accepted by the Lessee:

A contiguous group of lode claims, which Lessor warrants his ownership thereof, and further warrants that he has fully met every requirement of the United States of America and the State of South Dakota in locating said 21 claims and made up of the following:

Name of Claim	Location Section	Township	Book	Page
Southside 1,2,3	31	T8SR4E	31M	64,65
Damsite 1,2,3,4,5,6,7	31	T8SR4E	31M	276,277,61,62,63
Whitewood 1	31	T8SR4E	31M	68
Hillside 1,2,3,4	6	T9SR4E	31M	69,70
Lower Chilson 1,2,3,4,5,6	31 and 6	(T8SR4E (T9SR4E	31M	65,66,67,68

The location of these claims are recorded in the office of the County Recorder of Fall River County, South Dakota, in the book and on the pages set forth above, said claims being located in an unorganized mining district of said county and state.

Article II
Term of Lease and Option

The term of this lease, unless sooner forfeited, cancelled, terminated or surrendered, shall be for nine (9) months from the date of execution thereof.

Article III
Possession and Control of Property

The Lessee shall have and it is hereby given and granted the right to enter into and take over immediately the sole and exclusive possession and control of said claims, and the whole and every part thereof, and to test, prospect, explore, develop, mine and control same, and to mine, and control same, and to mine, extract and remove from said property the ores and minerals therein and appurtenances belonging thereto, and to treat, mill, ship, sell or otherwise dispose of same and to receive the full proceeds therefrom less the royalties payable to the Lessor as stipulated in Article V hereof.

Article IV
Entry, Manner of Work and Conformity with Laws

The Lessee agrees to take possession of and to start work on said property on or before December 1, 1952, and to promptly and diligently carry on mining operations, causing all exploration, development, and mining to be done in a careful minerlike fashion, and in accordance with the mining laws and regulations of the United States and the State of South Dakota. Assessment work shall be performed by Lessee and recorded annually in Lessor's name.

Article V
Payments to Lessor

The Lessee agrees to pay the Lessor the following sums for the purchase of said claims on the dates set forth:

One Thousand ($1000.00) Dollars on or before January 1, 1954
Two Thousand ($2000.00) Dollars on or before March 31, 1954
Two Thousand ($2000.00) Dollars on or before June 30, 1954

and when aforesaid payments have been paid to Lessor, the Lessee shall become the sole owner of said claims, and shall be delivered a quit claim deed to said claims by Lessor, said deed to be executed concurrently

with this lease and option, and placed in escrow in Hot Springs, South Dakota, at the First National Bank, together with a copy of this lease and option. It is further understood and agreed that the Lessee will pay to the Lessor royalties on all ores, minerals and other products mined, removed and sold from said property as follows:

Five (5%) percent of the net depot, mill, or other returns from production by the 10th of each calendar month on the returns received by Lessee during the preceding calendar month.

"Net depot, mill or other returns" is defined as the net proceeds derived from the sale of ore or other products. For the purpose of calculating royalties, all development and haulage payments by the Atomic Energy Commission shall be excluded from said net returns.

Article VI
Protection from Liens and Damages

Lessee shall keep said property and the whole and every part thereof free and clear from liens for labor done or performed on said property or materials furnished on or for said property, and will save and keep harmless the Lessor from all costs, loss, or damage which may arise by reason of injury to any persons employed by the Lessee in or upon said property or any part thereof or which may arise by reason of injury to any person, livestock or other property which are directly attributable to Lessee's operation.

Article VII
Payment of Taxes

The Lessee shall pay, when and due and before delinquent all taxes upon said property falling due during the term of this lease and while the same is in full force and effect, and shall pay, when due, and before delinquent, all taxes levied or assessed against any and all personal property, machinery and equipment placed upon said property by Lessee during the term of this lease.

Article VII(a)
Standing Timber

Lessee agrees to pay Lessor for all standing timber used or injured by Lessee, in accordance with the valuation set thereon by a representative of the United States Forestry Service.

Article VIII
Insurance

Lessee shall carry at all times during the life of this lease Workman's Compensation, liability and other insurance required by the laws and mining regulations of the State of South Dakota.

Article IX
Reports and Maps

Lessee shall furnish to Lessor quarterly reports with copies of the logs of drill holes on the property and with such sample or assay maps as may be made showing the position and values of samples taken on said property, together with maps showing the work done during such period.

Article X
Inspection

The duly authorized representative of Lessor shall be permitted to enter into and upon said property and workings of Lessee at all reasonable times for the purpose of inspection, and to inspect the books and records of production and sale of products of which Lessor agrees to keep full and accurate accounts.

Article XI
Forfeiture Clause

The failure of Lessee to make or cause to be made or cause to be made payment herein provided for, or to keep or perform any obligation on his part to be kept or performed, according to the terms and provisions hereof, shall, at the election of the Lessor, work a forfeiture hereof provided the Lessor shall give to the Lessee a written notice of his intention to declare a forfeiture of this lease and to terminate same on account thereof, specifying the particular default or defaults relied upon by him, and that Lessee shall have sixty (60) days after receipt of said notice in which to make good and cure such defaults, in which event there shall be no forfeiture thereof.

Article XII
Surrender of Lease

The Lessee expressly reserves the right to cancel, terminate and surrender this agreement and to relinquish all rights, and privileges hereunder at any time during the life hereof after having given to the Lessor thirty (30) days' written notice of his intention and fully discharged all obligations previously incurred.

Article XIII
Forces Beyond Control of Lessee

If the Lessee shall be delayed at any time in keeping or performing any agreement on his part to be kept or performed according to the terms and provisions hereof, by strikes, floods, lockouts, fire, orders from Government, or any constituted authority thereof, or any causes beyond the control of Lessee, such delay shall not be deemed a breach of this lease or a default on the part of the Lessee constituting a cause for forfeiture provided that during any such periods of delay the Lessee continues to pay all taxes as herein provided. It being expressly understood that said delays will advance the dates of payments as set forth in Article V by a period equal to the period of said delay.

Article XIV
Surrender of Property by Lessee

In the event of a valid forfeiture, surrender or other termination of this lease, the Lessee will immediately surrender to the Lessor peaceable possession of said property and the whole and every part thereof.

Article XV
Removal of Equipment, etc., by Lessee

The Lessee shall have, and is hereby given and granted sixty (60) days after a valid forfeiture, surrender or other termination of this lease, to remove from said property all stocks, merchandise, materials, tools, machinery and accessories thereto, piping, wiring, mine cars, and all other machinery, equipment and structures erected or placed on said property by Lessee, together with all ore broken in the mine workings, provided, that the Lessee is not at that time in default in any respect to any payments due to lessor up to the effective date of surrender.

Article XVI
Governmental Assistance

In the event that the Lessee shall apply for financial or other assistance from Federal Agencies for the purpose of exploring and developing said properties, the Lessor herewith grants consent to Lessee to obtain such assistance, and on request of Lessee, agrees to promptly execute the agreement required by said agencies from claim owners.

Article XVII
Inurement

Time is of the essence of this lease. The terms, provisions, covenants and agreements herein contained shall extend to, be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

Article XVIII
Notices

All notices herein provided for shall be given by mail, at the following addresses, until otherwise changed by written request of the parties hereto, to-wit:

To the Lessor: Richard W. Ball

To the Lessee: American Mining & Development Company

IN WITNESS WHEREOF, the Lessor and Lessee have caused their names to be hereunto subscribed, in duplicate counterparts, as of the day and year first above written.

Richard W. Ball
Richard W. Ball

Bessie Mae Ball
(wife)

Stanley E. Ball
Stanley E. Ball

(wife)
LESSOR

AMERICAN MINING & DEVELOPMENT COMPANY

Attest: Charles R. Rudolph
Charles R. Rudolph
Vice President

By Richard D. Rudolph
Richard D. Rudolph
President

LESSEE

STATE OF SOUTH DAKOTA)
) SS.
COUNTY OF FALL RIVER)

Being of sound mind and body, I do personally swear that Stanley E. Ball and (Alinda Benson) (husband and wife) and Richard W. Ball Bessie Mae Ball (husband and wife) appeared before me and are the persons whose signatures are on the attached.

Dated this 1st day of July, 1953.

(SEAL)

NOTARY PUBLIC, FALL RIVER COUNTY, S. DAK.
My Commission Expires Apr. 2, 1957

Notary Public

STATE OF ~~SOUTH DAKOTA~~ Wyoming)
) SS.
COUNTY ~~OF FALL RIVER~~ of Weston)

I, Norma K. York, a Notary Public, in and for said County in the state aforesaid, do hereby certify that Richard D. Rudolph of Newcastle, Wyoming, to me personally known as the President of American Mining and Development Company, and also known to me as the person whose name is affixed to the foregoing instrument appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as the free and voluntary act and deed of the said American Mining and Development Company, a Delaware Corporation, for the consideration and purpose therein set forth and that he was duly authorized to execute same by the Board of Directors, of said Corporation.

IN WITNESS WHEREOF, I have set my hand and seal hereto, this 3rd day of July A. D., 1953

(SEAL)

Norma K. York
Notary Public

My commission expires May 29, 1957

LEASE AND OPTION AGREEMENT

This lease and option to purchase, made and entered into as of this 1st day of July, 1953, by and between Stanley E. Ball and (A Single Person) (husband and wife) and Richard W. Ball and Bessie Mae Ball (husband and wife) of Edgemont, South Dakota, Lessor, and American Mining and Development Company, a Delaware Corporation, Lessee, WITNESSETH:

Article I
Description of the Property

The Lessor warrants that he is the sole and lawful owner of the hereinafter described property, and, for and in consideration of the sum of Three Hundred Dollars ($300.00) to him in hand paid receipt of which is hereby acknowledged, and for and in consideration of the royalties and rentals to be paid by Lessee and of the covenants and agreements of the Lessee hereinafter set forth does hereby lease, let and demise unto the Lessee, its successors and assigns upon the terms and conditions hereinafter set forth which are hereby accepted by the Lessee:

A contiguous group of lode claims, which Lessor warrants his ownership thereof, and further warrants that he has fully met every requirement of the United States of America and the State of South Dakota in locating said 21 claims and made up of the following:

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Lower Chilson 1,2,3,4,5,6	31 and 6	(T8SR4E (T9SR4E	31M	65,66,67,68

The location of these claims are recorded in the office of the County Recorder of Fall River County, South Dakota, in the book and on the pages set forth above, said claims being located in an unorganized mining district of said county and state.

Article II
Term of Lease and Option

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Article III
Possession and Control of Property

The Lessee shall have and it is hereby given and granted the right to enter into and take over immediately the sole and exclusive possession and control of said claims, and the whole and every part thereof, and to test, prospect, explore, develop, mine and control same, and to mine, and control same, and to mine, extract and remove from said property the ores and minerals therein and appurtenances belonging thereto, and to treat, mill, ship, sell or otherwise dispose of same and to receive the full proceeds therefrom less the royalties payable to the Lessor as stipulated in Article V hereof.

Article IV
Entry, Manner of Work and Conformity with Laws

The Lessee agrees to take possession of and to start work on said property on or before December 1, 1952, and to promptly and diligently carry on mining operations, causing all exploration, development, and mining to be done in a careful minerlike fashion, and in accordance with the mining laws and regulations of the United States and the State of South Dakota. Assessment work shall be performed by Lessee and recorded annually in Lessor's name.

Article V
Payments to Lessor

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One Thousand ($1000.00) Dollars on or before January 1, 1954
Two Thousand ($2000.00) Dollars on or before March 31, 1954
Two Thousand ($2000.00) Dollars on or before June 30, 1954

and when aforesaid payments have been paid to Lessor, the Lessee shall become the sole owner of said claims, and shall be delivered a quit claim deed to said claims by Lessor, said deed to be executed concurrently

with this lease and option, and placed in escrow in Hot Springs, South Dakota, at the First National Bank, together with a copy of this lease and option. It is further understood and agreed that the Lessee will pay to the Lessor royalties on all ores, minerals and other products mined, removed and sold from said property as follows:

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Article XII
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The Lessee expressly reserves the right to cancel, terminate and surrender this agreement and to relinquish all rights, and privileges hereunder at any time during the life hereof after having given to the Lessor thirty (30) days' written notice of his intention and fully discharged all obligations previously incurred.

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Article XIV
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Article XVI
Governmental Assistance

In the event that the Lessee shall apply for financial or other assistance from Federal Agencies for the purpose of exploring and developing said properties, the Lessor herewith grants consent to Lessee to obtain such assistance, and on request of Lessee, agrees to promptly execute the agreement required by said agencies from claim owners.

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Article XVIII
Notices

All notices herein provided for shall be given by mail, at the following addresses, until otherwise changed by written request of the parties hereto, to-wit:

To the Lessor: Richard W. Ball

To the Lessee: American Mining & Development Company

IN WITNESS WHEREOF, the Lessor and Lessee have caused their names to be hereunto subscribed, in duplicate counterparts, as of the day and year first above written.

Richard W. Ball
Richard W. Ball

Bessie Mae Ball
(wife)

Stanley E. Ball
Stanley E. Ball

(wife)
LESSOR

AMERICAN MINING & DEVELOPMENT COMPANY

Attest: Charles R. Rudolph
Charles R. Rudolph
Vice President

By Richard D. Rudolph
Richard D. Rudolph
President

LESSEE

STATE OF SOUTH DAKOTA)
) SS.
COUNTY OF FALL RIVER)

Being of sound mind and body, I do personally swear that Stanley E. Ball and Ulangle Ferron (husband and wife) and Richard W. Ball Bruce Mae Ball (husband and wife) appeared before me and are the persons whose signatures are on the attached.

Dated this 18th day of July, 1953.

(SEAL)

NOTARY PUBLIC, FALL RIVER COUNTY, S. DAK.
My Commission Expires Apr. 2, 1957

J Berit Felton
Notary Public

STATE OF WYOMING)
) SS.
COUNTY OF WESTON)

I, Norma K. Yerk, a Notary Public, in and for said County in the state aforesaid, do hereby certify that Richard O. Rudolph of Newcastle, Wyoming, to me personally known as the President of American Mining and Development Company, and also known to me as the person whose name is affixed to the foregoing instrument appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as the free and voluntary act and deed of the said American Mining and Development Company, a Delaware Corporation, for the consideration and purpose therein set forth and that he was duly authorized to execute same by the Board of Directors, of said Corporation.

IN WITNESS WHEREOF, I have set my hand and seal hereto, this 3rd day of July A. D., 1953

(SEAL)

Norma K. Yerk
Notary Public

My commission expires May 29, 1957

LEASE AND OPTION AGREEMENT

This lease and option to purchase, made and entered into as of this 1st day of July, 1953, by and between Stanley E. Ball and 'A Single Person) (husband and wife) and Richard A. Ball and Bessie Mae Ball, (husband and wife) of Edgemont, South Dakota, Lessor, and American Mining and Development Company, a Delaware Corporation, Lessee, WITNESSETH:

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Lower Chilson 1,2,3,4,5,6	31 and 6	(T8SR4E (T9SR4E	31M	65,66,67,68

The location of these claims are recorded in the office of the County Recorder of Fall River County, South Dakota, in the book and on the pages set forth above, said claims being located in an unorganized mining district of said county and state.

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Possession and Control of Property

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Surrender of Lease

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Richard W. Ball
Richard W. Ball

Bessie Mae Ball
(wife)

Stanley E. Ball
Stanley E. Ball

(wife)
LESSOR

AMERICAN MINING & DEVELOPMENT COMPANY

Attest: Charles R. Rudolph
Charles R. Rudolph
Vice President

By Richard D. Rudolph
Richard D. Rudolph
President

LESSEE

STATE OF SOUTH DAKOTA }
COUNTY OF FALL RIVER } SS.

Being of sound mind and body, I do personally swear that Stanley R. Ball and H. Lenore Lemon (husband and wife) and Richard W. Ball Bessie Mae Ball (husband and wife) appeared before me and are the persons whose signatures are on the attached.

Dated this 1st day of July, 1953.

(SEAL)

J. Burgthorn
Notary Public

NOTARY PUBLIC, FALL RIVER COUNTY, S. DAK.
My Commission Expires Apr. 2, 1957

STATE OF WYOMING }
COUNTY OF WESTON } SS.

I, Norma K. York, a Notary Public, in and for said County in the state aforesaid, do hereby certify that Richard D. Rudolph of Newcastle, Wyoming, to me personally known as the President of American Mining and Development Company, and also known to me as the person whose name is affixed to the foregoing instrument appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as the free and voluntary act and deed of the said American Mining and Development Company, a Delaware Corporation, for the consideration and purpose therein set forth and that he was duly authorized to execute same by the Board of Directors, of said Corporation.

IN WITNESS WHEREOF, I have set my hand and seal hereto, this 3rd day of July A. D., 1953

(SEAL)

Norma K. York
Notary Public

My commission expired May 29, 1957

LEASE AND OPTION AGREEMENT

This lease and option to purchase, made and entered into as of this 1st day of July, 1953, by and between Stanley E. Ball and (A Single Person) (husband and wife) and Richard W. Ball and Bessie Mae Ball, (husband and wife) of Edgemont, South Dakota, Lessor, and American Mining and Development Company, a Delaware Corporation, Lessee, WITNESSETH:

Article I
Description of the Property

The Lessor warrants that he is the sole and lawful owner of the hereinafter described property, and, for and in consideration of the sum of Three Hundred Dollars ($300.00) to him in hand paid receipt of which is hereby acknowledged, and for and in consideration of the royalties and rentals to be paid by Lessee and of the covenants and agreements of the Lessee hereinafter set forth does hereby lease, let and demise unto the Lessee, its successors and assigns upon the terms and conditions hereinafter set forth which are hereby accepted by the Lessee:

A contiguous group of lode claims, which Lessor warrants his ownership thereof, and further warrants that he has fully met every requirement of the United States of America and the State of South Dakota in locating said 21 claims and made up of the following:

Name of Claim	Location Section	Township	Book	Page
Southside 1,2,3	31	T8SR4E	31M	64,65
Damsite 1,2,3,4,5,6,7	31	T8SR4E	31M	276,277,61,62,63
Whitewood 1	31	T8SR4E	31M	68
Hillside 1,2,3,4	6	T9SR4E	31M	69,70
Lower Chilson 1,2,3,4,5,6	31 and 6	(T8SR4E (T9SR4E	31M	65,66,67,68

The location of these claims are recorded in the office of the County Recorder of Fall River County, South Dakota, in the book and on the pages set forth above, said claims being located in an unorganized mining district of said county and state.

Article II
Term of Lease and Option

The term of this lease, unless sooner forfeited, cancelled, terminated or surrendered, shall be for nine (9) months from the date of execution thereof.

Article III
Possession and Control of Property

The Lessee shall have and it is hereby given and granted the right to enter into and take over immediately the sole and exclusive possession and control of said claims, and the whole and every part thereof, and to test, prospect, explore, develop, mine and control same, and to mine, and control same, and to mine, extract and remove from said property the ores and minerals therein and appurtenances belonging thereto, and to treat, mill, ship, sell or otherwise dispose of same and to receive the full proceeds therefrom less the royalties payable to the Lessor as stipulated in Article V hereof.

Article IV
Entry, Manner of Work and Conformity with Laws

The Lessee agrees to take possession of and to start work on said property on or before December 1, 1952, and to promptly and diligently carry on mining operations, causing all exploration, development, and mining to be done in a careful minerlike fashion, and in accordance with the mining laws and regulations of the United States and the State of South Dakota. Assessment work shall be performed by Lessee and recorded annually in Lessor's name.

Article V
Payments to Lessor

The Lessee agrees to pay the Lessor the following sums for the purchase of said claims on the dates set forth:

One Thousand ($1000.00) Dollars on or before January 1, 1954
Two Thousand ($2000.00) Dollars on or before March 31, 1954
Two Thousand ($2000.00) Dollars on or before June 30, 1954

and when aforesaid payments have been paid to Lessor, the Lessee shall become the sole owner of said claims, and shall be delivered a quit claim deed to said claims by Lessor, said deed to be executed concurrently

with this lease and option, and placed in escrow in Hot Springs, South Dakota, at the First National Bank, together with a copy of this lease and option. It is further understood and agreed that the Lessee will pay to the Lessor royalties on all ores, minerals and other products mined, removed and sold from said property as follows:

Five (5%) percent of the net depot, mill, or other returns from production by the 10th of each calendar month on the returns received by Lessee during the preceding calendar month.

"Net depot, mill or other returns" is defined as the net proceeds derived from the sale of ore or other products. For the purpose of calculating royalties, all development and haulage payments by the Atomic Energy Commission shall be excluded from said net returns.

Article VI
Protection from Liens and Damages

Lessee shall keep said property and the whole and every part thereof free and clear from liens for labor done or performed on said property or materials furnished on or for said property, and will save and keep harmless the Lessor from all costs, loss, or damage which may arise by reason of injury to any persons employed by the Lessee in or upon said property or any part thereof or which may arise by reason of injury to any person, livestock or other property which are directly attributable to Lessee's operation.

Article VII
Payment of Taxes

The Lessee shall pay, when and due and before delinquent all taxes upon said property falling due during the term of this lease and while the same is in full force and effect, and shall pay, when due, and before delinquent, all taxes levied or assessed against any and all personal property, machinery and equipment placed upon said property by Lessee during the term of this lease.

Article VII(a)
Standing Timber

Lessee agrees to pay Lessor for all standing timber used or injured by Lessee, in accordance with the valuation set thereon by a representative of the United States Forestry Service.

Article VIII
Insurance

Lessee shall carry at all times during the life of this lease Workman's Compensation, liability and other insurance required by the laws and mining regulations of the State of South Dakota.

Article IX
Reports and Maps

Lessee shall furnish to Lessor quarterly reports with copies of the logs of drill holes on the property and with such sample or assay maps as may be made showing the position and values of samples taken on said property, together with maps showing the work done during such period.

Article X
Inspection

The duly authorized representative of Lessor shall be permitted to enter into and upon said property and workings of Lessee at all reasonable times for the purpose of inspection, and to inspect the books and records of production and sale of products of which Lessor agrees to keep full and accurate accounts.

Article XI
Forfeiture Clause

The failure of Lessee to make or cause to be made or cause to be made payment herein provided for, or to keep or perform any obligation on his part to be kept or performed, according to the terms and provisions hereof, shall, at the election of the Lessor, work a forfeiture hereof provided the Lessor shall give to the Lessee a written notice of his intention to declare a forfeiture of this lease and to terminate same on account thereof, specifying the particular default or defaults relied upon by him, and that Lessee shall have sixty (60) days after receipt of said notice in which to make good and cure such defaults, in which event there shall be no forfeiture thereof.

Article XII
Surrender of Lease

The Lessee expressly reserves the right to cancel, terminate and surrender this agreement and to relinquish all rights, and privileges hereunder at any time during the life hereof after having given to the Lessor thirty (30) days' written notice of his intention and fully discharged all obligations previously incurred.

Article XIII
Forces Beyond Control of Lessee

If the Lessee shall be delayed at any time in keeping or performing any agreement on his part to be kept or performed according to the terms and provisions hereof, by strikes, floods, lockouts, fire, orders from Government, or any constituted authority thereof, or any causes beyond the control of Lessee, such delay shall not be deemed a breach of this lease or a default on the part of the Lessee constituting a cause for forfeiture provided that during any such periods of delay the Lessee continues to pay all taxes as herein provided. It being expressly understood that said delays will advance the dates of payments as set forth in Article V by a period equal to the period of said delay.

Article XIV
Surrender of Property by Lessee

In the event of a valid forfeiture, surrender or other termination of this lease, the Lessee will immediately surrender to the Lessor peaceable possession of said property and the whole and every part thereof.

Article XV
Removal of Equipment, etc., by Lessee

The Lessee shall have, and is hereby given and granted sixty (60) days after a valid forfeiture, surrender or other termination of this lease, to remove from said property all stocks, merchandise, materials, tools, machinery and accessories thereto, piping, wiring, mine cars, and all other machinery, equipment and structures erected or placed on said property by Lessee, together with all ore broken in the mine workings, provided, that the Lessee is not at that time in default in any respect to any payments due to lessor up to the effective date of surrender.

Article XVI
Governmental Assistance

In the event that the Lessee shall apply for financial or other assistance from Federal Agencies for the purpose of exploring and developing said properties, the Lessor herewith grants consent to Lessee to obtain such assistance, and on request of Lessee, agrees to promptly execute the agreement required by said agencies from claim owners.

Article XVII
Inurement

Time is of the essence of this lease. The terms, provisions, covenants and agreements herein contained shall extend to, be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

Article XVIII
Notices

All notices herein provided for shall be given by mail, at the following addresses, until otherwise changed by written request of the parties hereto, to-wit:

To the Lessor: Richard W. Ball

To the Lessee: American Mining & Development Company

IN WITNESS WHEREOF, the Lessor and Lessee have caused their names to be hereunto subscribed, in duplicate counterparts, as of the day and year first above written.

Richard W. Ball
Richard W. Ball

Bessie Mae Ball
(wife)

Stanley E. Ball
Stanley E. Ball

(wife)
LESSOR

AMERICAN MINING & DEVELOPMENT COMPANY

Attest: Charles R. Rudolph
Charles R. Rudolph
Vice President

By Richard D. Rudolph
Richard D. Rudolph
President

LESSEE

STATE OF SOUTH DAKOTA)
) SS.
COUNTY OF FALL RIVER)

Being of sound mind and body, I do personally swear that Stanley E. Ball and J. Dwight Peaco (husband and wife) and Richard W. Ball Bessie May Ball (husband and wife) appeared before me and are the persons whose signatures are on the attached.

Dated this 1st day of July, 1953.

(SEAL)

J. Berchtelson
Notary Public

NOTARY PUBLIC, FALL RIVER COUNTY, S. DAK.
My Commission Expires Apr. 2, 1957

- - - - - -

STATE OF ~~SOUTH DAKOTA~~ Wyoming)
) SS.
COUNTY OF ~~FALL RIVER~~ Weston)

I, Norma K. York a Notary Public, in and for said County in the state aforesaid, do hereby certify that Richard D. Rudolph of Newcastle, Wyoming, to me personally known as the President of American Mining and Development Company, and also known to me as the person whose name is affixed to the foregoing instrument appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as the free and voluntary act and deed of the said American Mining and Development Company, a Delaware Corporation, for the consideration and purpose therein set forth and that he was duly authorized to execute same by the Board of Directors, of said Corporation.

IN WITNESS WHEREOF, I have set my hand and seal hereto, this 3rd day of July A. D., 1953

(SEAL)

Norma K. York
Notary Public

My commission expires May 29, 1957

4-7-53

Today I talked with Mr. Shawve and requested either a power of Attorney authorizing Mrs Richard W. Ball to sign "owner's consent to Lien" for Richard W. Ball and Stanley C. Ball or else Executed "owner's consent to Lien" forms signed by both parties.

6-18-53

Mr. Charles R Rudolph called at office today. Re this case - he was instructed to furnish properly executed "owners consent to Lien" and copy of lease from land owner extending time to 10 years.

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

February 17, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 18 1953

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: K. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: Application and field team report, DMEA Docket No. 2269, American Mining & Development Co., P. O. Box 862, Hot Springs, South Dakota.

I have reviewed the subject application and field team report and have discussed said application and report with Joseph O. Hosted, representative of the Atomic Energy Commission.

The report does not present evidence that the application was discussed with Howard S. Stafford, Chief, Hot Springs Sub-Office, Atomic Energy Commission, at Hot Springs, South Dakota, or with his representative.

It is recommended that action on the subject application and field team report be held in abeyance until evidence is received from the field team that the application was discussed with Mr. Stafford or his representative.

The subject field team report has been forwarded to the Chief, Minerals Division, Bureau of Mines, in accord with the routing slip attached thereto.

K. D. Keiser

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 19 1953

E. Wm. Ellis, DMEA Member
Uranium Commodity Committee

February 17, 1953

Arthur F. Butler, Jr., USGS Member
Uranium Commodity Committee

Application and Field Team Report DMEA Docket 2869 (Uranium) American Mining and Development Co., applicant: Washington 4, D. C. Ball Bros. lease, Ramsite and other claim groups, Sec. 31, T8 S., and Sec. 4 and T9 S, R.4 E, Fall River Co. S. Dakota.

I have reviewed the application identified above, in which the applicant proposes 12,000 feet of bulldozer stripping and 1,000 ft. of adit driving to expose and explore concentrations of carnotite in sandstone of the Lakota formation, and the Field Team report in which the examiners suggest a modified form and reduced amount of exploration. The revised proposal consists in a scintillometer survey as a first phase and stripping 2,000 linear feet and a small amount of adit driving in a second phase, if results of the first phase warrant.

Samples collected by members of the staff of the Atomic Energy Commission from a few showings on the applicants property contain 0.13 to 0.96 percent U_3O_8. A few sacks of ore are stockpiled.

The known occurrences on this property are small and spottily distributed; nevertheless, the presence of ore-grade material, at least 1 foot thick, appears to warrant some exploration to search for additional occurrences and to determine the quality and extent of the most promising of these.

I believe the proposals made in the Field Team report are suitable, and I concur with the recommendation that assistance for exploration, as set forth in the Field Team report, be granted in the amount of the Government's proportionate share of $6,090.00. Before final approval, however, I believe it would be desirable for the Field Team to review the proposed plan with members of the local staff of the Atomic Energy Commission to determine if the AEC cares to make any suggestions, because members of the AEC staff have examined the property and the AEC is interested in encouraging exploration in and production from this general area.

A. F. Butler, Jr.

Copy to E.W. Ellis

2/19/53 gla

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

February 17, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 18 1953

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: Application and field team report, DMEA Docket No. 2869, American Mining & Development Co., P. O. Box 862, Hot Springs, South Dakota.

I have reviewed the subject application and field team report and have discussed said application and report with Joseph O. Hosted, representative of the Atomic Energy Commission.

The report does not present evidence that the application was discussed with Howard S. Stafford, Chief, Hot Springs Sub-Office, Atomic Energy Commission, at Hot Springs, South Dakota, or with his representative.

It is recommended that action on the subject application and field team report be held in abeyance until evidence is received from the field team that the application was discussed with Mr. Stafford or his representative.

The subject field team report has been forwarded to the Chief, Minerals Division, Bureau of Mines, in accord with the routing slip attached thereto.

H D Keiser

H. D. Keiser

STANDARD FORM NO. 64

2/19/53 gla

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member
Uranium Commodity Committee

DATE: February 17, 1953

FROM : Arthur P. Butler, Jr., USGS Member
Uranium Commodity Committee

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 19 1953

SUBJECT : Application and Field Team Report DMEA Docket 1296 (Uranium) American Mining and Development Co., applicant: Washington 4, D. C. Ball Bros. lease, Ramsite and other claim groups, Sec. 31, T8 S., and Sec. 4 and T9 S, R.4 E, Fall River Co. S. Dakota.

I have reviewed the application identified above, in which the applicant proposes 12,000 feet of bulldozer stripping and 1,000 ft. of adit driving to expose and explore concentrations of carnotite in sandstone of the Lakota formation, and the Field Team report in which the examiners suggest a modified form and reduced amount of exploration. The revised proposal consists in a scintillometer survey as a first phase and stripping 2,000 linear feet and a small amount of adit driving in a second phase, if results of the first phase warrant.

Samples collected by members of the staff of the Atomic Energy Commission from a few showings on the applicants property contain 0.13 to 0.96 percent U_3O_8. A few sacks of ore are stockpiled.

The known occurrences on this property are small and spottily distributed; nevertheless, the presence of ore-grade material, at least 1 foot thick, appears to warrant some exploration to search for additional occurrences and to determine the quality and extent of the most promising of these.

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Arthur P. Butler, Jr.
A. P. Butler, Jr.

Copy to E.W. Ellis

February 5, 1953

Mr. George S. Elmore, President
American Mining and Development
Company
Suite 206, American Building
Washington, D. C.

Subject: DMEA-2869
Re: Exploration Assistance
Ball Brothers Lease

My dear Mr. Elmore:

The receipt of your application dated November 14, 1952 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2869 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2869 in any future correspondence relating to your application.

Sincerely yours,

R. E. ADAMS

Robert E. Adams
Chief, Operations Control
and Statistics Division

25451

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

February 5, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region V

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region V.

DMEA - 2869 American Mining & Development Company

R. E. ADAMS

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

33980

2/16/53 gla

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
[redacted]
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

February 2, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, Field Team, Region V

Subject: American Mining & Development Co., Ball Brothers Lease, Fall River County, S. Dak., Application and Field Report

Here are the original and two copies of an application from the American Mining & Development Co. for exploration of uranium in Fall River County, S. Dak., together with the original and two copies of Form MF-100 General Technical Data and the original and three copies of the Field Team's report recommending exploration in two phases to the extent of $6,090.00.

/s/ A. B. Needham
A. B. Needham
Executive Officer, Field Team
Region V

Attachment

Recd and by
DMEA [illegible]

2-13-53
(date)

dmea 2869

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION V

Ball Brothers Lease

Fall River County, S. Dak.

E. O. Binyon, Mining Engineer
U. S. Bureau of Mines

J. A. Redden, Geologist
U. S. Geological Survey

January 29, 1953

Reviewed by
DMEA OPERATIONS DEPARTMENT
2-13-53
(date)

FIELD TEAM REPORT ON EXAMINATION

of

BALL BROTHERS LEASE

Docket No.: 2869
Applicant : American Mining & Development Co.
Commodity : Uranium (carnotite)

The applicant is the American Mining and Development Co., Suite 206, American Bldg., 1317 "F" Str. N. W., Washington, D. C. P. O. Blakemore, P. O. Box 862, Hot Springs, S. Dak. is the resident manager.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The property, known as the Ball Brothers Lease, is approximately 10 miles east of Edgemont, Fall River County, S. Dak. in sec. 31, T. 8 S., R. 4 E., and secs. 5 and 6, T. 9 S., R. 4 E., B.H.B.M.

An examination was made by the field team on December 23, 1952 and approximately 2 hours was spent in examining the property. On January 2, 1953 the application and suggested changes were discussed with P. B. Blakemore, Resident Manager, who was in full agreement with the recommendations as outlined in the report.

It was concluded that additional preliminary work with a scintillometer was necessary and that the present showings on the property do not warrant an exploration program as extensive as outlined in the accompanying application.

The field team recommends that the exploration be conducted in two phases. Under Phase I a radiometric survey, preferably by scintillometer, shall be made of the area or the so-called favorable horizons to establish anomalies.

If, in the opinion of the field team, the areas with anomalies disclosed under Phase I of the project warrant additional work, then the favorable showings will be explored by a limited amount of bulldozing and drifting under Phase II. The total maximum cost of the project shall not exceed $6,090.

NAME, LOCATION, AND OWNERSHIP OF THE PROPERTY

The property known as the Ball Brothers Lease comprises a group of 21 unpatented mining claims which are held under a lease and option agreement between Richard W. Ball and Stanley E. Ball, the lessor, and the company. The lease and option and Landlord's Subordination Agreement are included with the application.

The claims are in sec. 31, T. 8 S., R. 4 E., and secs. 5 and 6, T. 9 S., R. 4 E., B.H.B.M., and are approximately 9 miles by road slightly northeast of Edgemont, Fall River County, S. Dak. Access to the property is by way of U. S. highway 85A to the Gull Ranch, then over 2 miles of poor to fair dirt road. Except for short periods during the winter months the claims are accessible the year around.

GEOLOGY

The applicant's properties were visited by the field team on December 23, 1952. The applicant's local representative, Mr. Blakemore, was not available at that time but was contacted on January 2, 1953.

Four known occurrences of uranium mineralization are plotted in green on the applicant's maps. Two of these occurrences, locations 1 and 3, have been opened up by blasting and bulldozer trenching and are fairly well exposed.

Location 1 consists of a vertical cliff of about 30 feet in height which has been blasted off for an estimated depth of 10 feet and a width of 25 feet. A few thin stringers of carnotite less than six inches thick are exposed in the face, but according to available information, the mineralization now exposed is much less spectacular than the original outcrop. About six cement sacks of ore are piled near the face. It visually appears that some of the carnotite mineralization has moved and stained faces of the cut since the blasting was originally done less than a year ago. The sandstone is fairly massive and is apparently basal Lakota, about 20 feet above the Morrison contact.

Location 3 consists of a side hill bulldozer cut that extends longitudinally for about 60 feet. Scattered seams and disseminated carnotite are exposed for only about 20 feet and with a maximum vertical exposure of about 3 feet. This mineralization is also reported to have been considerably more promising on the surface exposure. The ore is mainly in fractures and along bedding planes in relatively massive 1- to 3-feet thick beds of porous sandstone containing many liese-gang ring-type bands due to iron staining. The sandstone is from near the base of the Lakota and is estimated to be about 20 feet above the Morrison contact. Slumping may have affected the relative position of the ore. Approximately 10 cement sacks of ore are piled along the bulldozer cut.

The carnotite shows at locations 2 and 4 are less spectacular and have not been as extensively prospected due to the topography. The show at location 4 is probably not in place.

Mr. Blakemore stated that he had picked up float in a couple of places near locations 3 and 4, but that it apparently came from a horizon that has been removed from the narrow table due north of locations 2 and 3. For this reason the applicant proposes to prospect an upper horizon in the Lakota formation.

The carnotite exposures on the applicant's properties are not as favorable as some that have been examined. The rapid pinching out of the ore in the two most extensively explored mineralized areas is somewhat reminiscent of the many fine surface exposures in Craven Canyon, most of which did not extend any distance into the cliffs.

PAST OPERATIONS

Other than two side hill cuts at locations 1 and 3, as shown on the map, and dozing a part of the road from the Gull ranch to the claims, no work has been done and there has been no production from the property.

DESCRIPTION OF THE PROJECT

The project, as outlined in the accompanying application, was discussed with the applicant's representative, Mr. F. B. Blakemore. He is in agreement with the proposal to modify the project, and if the results of the proposed project as set for below prove favorable, then he will submit an application for additional exploration of the property.

A two-phase program is recommended. Under Phase I a radiometric survey with scintillometer shall be made of the area by a competent instrument man-geologist. The more favorable horizons or anomalies as disclosed by the survey are then to be explored under Phase II by the most feasible methods, bulldozing and/or short adits as agreed to by the applicant and the field team.

However, the work under Phase II shall be started only if, in the opinion of the field team, the results of Phase I are favorable.

The information obtained from either or both phases shall be made available to the Bureau of Mines.

As it is difficult to establish unit costs for the work under Phase II, it is further recommended that the long form contract be used.

ALLOWABLE COST OF THE PROJECT

Phase I - Radiometric Survey

Instrument man (geologist)	- $50 per day, 10 days	$500.00
Helper	- $15 per day, 10 days	150.00
Horses	- $10 per day, 10 days	100.00
		$750.00

Phase II

Independent Contract		$2,000.00
Bulldozer @ $100 per day for 20 days		
Approximately 2,000 feet of side hill cuts		
Labor		1,743.20
2 miners @ $13.80 each per day for 30 days	$ 828.00	
2 helpers @ $11.92 each per day for 30 days (Includes overtime)	715.20	
	$ 1543.20	
Supervision and consultants (Part time)	200.00	
	1743.20	
Operating materials and supplies		800.00
Powder, caps, and fuse	$ 240.00	
Timber @ $65.00/M	75.00	
Gas, oil, grease - motor vehicles	100.00	
Gas, oil, grease - compressor & equipment	125.00	
Bits and steel	125.00	
Miscellaneous supplies - wheelbarrows, shovels, etc.	135.00	
	$ 800.00	
Operating Equipment:		
To be purchased		None
To be rented:		
2 - 105 c.f.m. compressors @ $165/mo.		331.20
2 - jackhammers with airlegs, complete		131.50
Furnished by the operator:		
1 - Pickup truck, estimated value $1,500, 1/60 per mo.		25.00
1 - Station wagon, estimated value $2,000, 1/60 per mo.		33.00
Miscellaneous		176.10
Repairs, parts etc.	$ 50.00	
Analyses	50.00	
Payroll taxes	26.10	
Workmen's Compensation (3 mos. minimum policy)	50.00	
	$176.10	
Contingencies		100.00
Phase II Total		$ 5,340.00
Phase I Total		750.00
Total for project		$ 6,090.00
Government's share at 90 percent		$ 5,481.00

dmea 2869

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

February 2, 1953

Memorandum

To: Operating Committee, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, Field Team, Region V

Subject: American Mining & Development Co., Ball Brothers Lease, Fall River County, S. Dak., Application and Field Report

Here are the original and two copies of an application from the American Mining & Development Co. for exploration of uranium in Fall River County, S. Dak., together with the original and two copies of Form MF-100 General Technical Data and the original and three copies of the Field Team's report recommending exploration in two phases to the extent of $6,090.00.

A. B. Needham
Executive Officer, Field Team
Region V

Attachment

DMEW-2869

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION V

Ball Brothers Lease

Fall River County, S. Dak.

E. O. Binyon, Mining Engineer
U. S. Bureau of Mines

J. A. Redden, Geologist
U. S. Geological Survey

January 28, 1953

FIELD TEAM REPORT ON EXAMINATION

of

BALL BROTHERS LEASE

Docket No.: 2869
Applicant : American Mining & Development Co.
Commodity : Uranium (carnotite)

The applicant is the American Mining and Development Co., Suite 206, American Bldg., 1317 "F" Str. N. W., Washington, D. C. P. O. Blakemore, P. O. Box 862, Hot Springs, S. Dak. is the resident manager.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The property, known as the Ball Brothers Lease, is approximately 10 miles east of Edgemont, Fall River County, S. Dak. in sec. 31, T. 8 S., R. 4 E., and secs. 5 and 6, T. 9 S., R. 4 E., B.H.B.M.

An examination was made by the field team on December 23, 1952 and approximately 2 hours was spent in examining the property. On January 2, 1953 the application and suggested changes were discussed with P. B. Blakemore, Resident Manager, who was in full agreement with the recommendations as outlined in the report.

It was concluded that additional preliminary work with a scintillometer was necessary and that the present showings on the property do not warrant an exploration program as extensive as outlined in the accompanying application.

The field team recommends that the exploration be conducted in two phases. Under Phase I a radiometric survey, preferably by scintillometer, shall be made of the area or the so-called favorable horizons to establish anomalies.

If, in the opinion of the field team, the areas with anomalies disclosed under Phase I of the project warrant additional work, then the favorable showings will be explored by a limited amount of bulldozing and drifting under Phase II. The total maximum cost of the project shall not exceed $6,090.

NAME, LOCATION, AND OWNERSHIP OF THE PROPERTY

The property known as the Ball Brothers Lease comprises a group of 21 unpatented mining claims which are held under a lease and option agreement between Richard W. Ball and Stanley E. Ball, the lessor, and the company. The lease and option and Landlord's Subordination Agreement are included with the application.

The claims are in sec. 31, T. 8 S., R. 4 E., and secs. 5 and 6, T. 9 S., R. 4 E., B.H.B.M., and are approximately 9 miles by road slightly northeast of Edgemont, Fall River County, S. Dak. Access to the property is by way of U. S. highway 85A to the Gull Ranch, then over 2 miles of poor to fair dirt road. Except for short periods during the winter months the claims are accessible the year around.

GEOLOGY

The applicant's properties were visited by the field team on December 23, 1952. The applicant's local representative, Mr. Blakemore, was not available at that time but was contacted on January 2, 1953.

Four known occurrences of uranium mineralization are plotted in green on the applicant's maps. Two of these occurrences, locations 1 and 3, have been opened up by blasting and bulldozer trenching and are fairly well exposed.

Location 1 consists of a vertical cliff of about 30 feet in height which has been blasted off for an estimated depth of 10 feet and a width of 25 feet. A few thin stringers of carnotite less than six inches thick are exposed in the face, but according to available information, the mineralization now exposed is much less spectacular than the original outcrop. About six cement sacks of ore are piled near the face. It visually appears that some of the carnotite mineralization has moved and stained faces of the cut since the blasting was originally done less than a year ago. The sandstone is fairly massive and is apparently basal Lakota, about 20 feet above the Morrison contact.

Location 3 consists of a side hill bulldozer cut that extends longitudinally for about 60 feet. Scattered seams and disseminated carnotite are exposed for only about 20 feet and with a maximum vertical exposure of about 3 feet. This mineralization is also reported to have been considerably more promising on the surface exposure. The ore is mainly in fractures and along bedding planes in relatively massive 1- to 3-feet thick beds of porous sandstone containing many liese-gang ring-type bands due to iron staining. The sandstone is from near the base of the Lakota and is estimated to be about 20 feet above the Morrison contact. Slumping may have affected the relative position of the ore. Approximately 10 cement sacks of ore are piled along the bulldozer cut.

The carnotite shows at locations 2 and 4 are less spectacular and have not been as extensively prospected due to the topography. The show at location 4 is probably not in place.

Mr. Blakemore stated that he had picked up float in a couple of places near locations 3 and 4, but that it apparently came from a horizon that has been removed from the narrow table due north of locations 2 and 3. For this reason the applicant proposes to prospect an upper horizon in the Lakota formation.

The carnotite exposures on the applicant's properties are not as favorable as some that have been examined. The rapid pinching out of the ore in the two most extensively explored mineralized areas is somewhat reminiscent of the many fine surface exposures in Craven Canyon, most of which did not extend any distance into the cliffs.

PAST OPERATIONS

Other than two side hill cuts at locations 1 and 3, as shown on the map, and dozing a part of the road from the Gull ranch to the claims, no work has been done and there has been no production from the property.

DESCRIPTION OF THE PROJECT

The project, as outlined in the accompanying application, was discussed with the applicant's representative, Mr. P. B. Blakemore. He is in agreement with the proposal to modify the project, and if the results of the proposed project as set for below prove favorable, then he will submit an application for additional exploration of the property.

A two-phase program is recommended. Under Phase I a radiometric survey with scintillometer shall be made of the area by a competent instrument man-geologist. The more favorable horizons or anomalies as disclosed by the survey are then to be explored under Phase II by the most feasible methods, bulldozing and/or short adits as agreed to by the applicant and the field team.

However, the work under Phase II shall be started only if, in the opinion of the field team, the results of Phase I are favorable.

The information obtained from either or both phases shall be made available to the Bureau of Mines.

As it is difficult to establish unit costs for the work under Phase II, it is further recommended that the long form contract be used.

ALLOWABLE COST OF THE PROJECT

Phase I - Radiometric Survey

Instrument man (geologist)	- $50 per day, 10 days	$500.00
Helper	- $15 per day, 10 days	150.00
Horses	- $10 per day, 10 days	100.00
		$750.00

Phase II

Independent Contract		$2,000.00
Bulldozer @ $100 per day for 20 days		
Approximately 2,000 feet of side hill cuts		
Labor		1,743.20
2 miners @ $13.80 each per day for 30 days	$ 828.00	
2 helpers @ $11.92 each per day for 30 days (Includes overtime)	715.20	
	$ 1543.20	
Supervision and consultants (Part time)	200.00	
	1743.20	
Operating materials and supplies		800.00
Powder, caps, and fuse	$ 240.00	
Timber @ $65.00/M	75.00	
Gas, oil, grease - motor vehicles	100.00	
Gas, oil, grease - compressor & equipment	125.00	
Bits and steel	125.00	
Miscellaneous supplies - wheelbarrows, shovels, etc.	135.00	
	$ 800.00	
Operating Equipment:		
To be purchased		None
To be rented:		
2 - 105 c.f.m. compressors @ $165/mo.		331.20
2 - jackhammers with airlegs, complete		131.50
Furnished by the operator:		
1 - Pickup truck, estimated value $1,500, 1/60 per mo.		25.00
1 - Station wagon, estimated value $2,000, 1/60 per mo.		33.00
Miscellaneous		176.10
Repairs, parts etc.	$ 50.00	
Analyses	50.00	
Payroll taxes	26.10	
Workmen's Compensation (3 mos. minimum policy)	50.00	
	$176.10	
Contingencies		100.00
Phase II Total		$ 5,340.00
Phase I Total		750.00
Total for project		$ 6,090.00
Government's share at 90 percent		$ 5,481.00

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

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

Not to be filled in by applicant

Docket No. dmea 2869
Metal or Mineral
Date Received 2-4-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: American Mining and Development Company, Suite 206 American Bldg., 1317 F. Street N. W., Washington D. C. and P. O. Box 862, Hot Springs, S. Dak. a Delaware Corporation

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract 21 Mining claims located in Sec. 31, T 8 S, R 4 E and Sec. 5 and 6, T 9 S, R 4 E, Fall River County, South Dakota See maps.

(*b*) State any mine name by which the property is known. Ball Brothers, lease

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise lessee with option to purchase

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Agreement attached.

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Book 31M, P 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 276, 277.

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

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

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

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

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

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 60 days and be completed within 10 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[x] Money [x] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated 14 November 1952, 195

AMERICAN MINING AND DEVELOPMENT CO.

George S. Elmore
(Applicant)

By President

SE 3 / 234

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

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

MF-103

American Mining and Development Co.
Suite 206, American Building
1317 F. Street N.W.
Washington, D. C.

1.(c)

George S. Elmore, President
Suite 206, American Bldg.
1317 F Street N.W.
Washington, D. C.

Charles R. Rudolph, Vice President
5500 Wriley Road N.W.
Washington, D. C.

Margaret Bracken, Secretary
Suite 206, American Bldg.
1317 F. Street N.W.
Washington, D. C.

4.(a) Approx. 300 ft. open cuts made at applicant's expense. Accessible.
(b) A few tons of carnotite ore only, approx. 0.2% U_3O_8
(c) Almost flat bedded sandstone. Carnotite ore and "float" has been found in numerous places. See copy AEC report attached.
(d) 2½ miles poor dirt road to U.S. Highway Alt. 85-18. 7½ miles to AEC ore purchasing depot at Edgemont, S. D. a supply and residence point. 23 miles to Hot Springs, S. D., supply and residence point.
(e) Adequate manpower, materials, equipment, water - no power available.

5.(a) Carnotite (uranium ore)
(b) Phase I - 12,000 feet side hill bulldozing along 3 favorable strategraphic horizons. Unit cost $2.53 per foot. If results of bulldozing warrant, follow at once with:
Phase II - 1,000 feet short tunnels, crosscuts and raises to explore ore showing. Unit cost $26.09 per foot.
(c) 60 days. Phase I - 6 months $ 30,390.31
Phase II - 4 months 26,088.64
Total $ 56,478.95
(d) All officers have had business experience in petroleum production and legal work. Superintendent: Graduate Mining and Metallurgical engineer with 35 years wide experience.

6. Phase I

(a) 120 days bulldozer @ $100.00/days	$ 12,000.00
(b) Drilling and blasting boulders	3,444.00
1 miner, $1.50/hr., 1 helper $1.37½/hr.	
6 day week, Saturday 1½ time, 24 wks.	
6 Mo. Supt., $700.00/mo.	4,200.00
Engineering and Consultants	1,200.00
(c) Air piping	30.00
Gasoline and lubricants	1,200.00
Explosives	960.00
(d) Rented: 1 Air Compressor, 6 mo. $165.60/mo.	993.60
Rented: 1 Jackhammer 6 mo. $47.55/mo.	285.30
Owned: Pickup truck, use allow. 6 mo., $100/mo	600.00
Owned: Station wagon, use allow. 6 mo., $100/mo.	600.00
(e) None	
(f) None	
(g) Sampling and Assaying	1,200.00
Accounting	300.00

(continued, next attached sheet)

MF-103

American Mining and Development Co.
Suite 206, American Building
1317 F Street, N.W.
Washington, D. C.

	Workmen's Comp. and Emp. Liab. Ins.	500.00	
	Payroll Taxes	114.66	
	Total	$ 27,627.56	
(h)	Contingencies 10% of total	2,762.75	$ 30,390.31

Unit Cost $2.53/ft.

7. (a) Yes
(b) Cash and owned equipment

Phase II

6. (a) None
(b) (48 hour week, overtime included)

	2 miners, $1.50/hr., 100 shifts each	$ 2,592.00	
	2 helpers, $1.37½/hr., 100 shifts each	2,464.00	
	2 slushers, $1.37½/hr., 100 shifts each	2,464.00	
	4 months supervision, $700 month	2,800.00	
	Engineering and consultants	400.00	
(c)	Air and water lines	600.00	
	Ventilation tubing	300.00	
	Timbering	3,000.00	
	Gasoline and lubricants	600.00	
	Explosives	1,400.00	
(d)	Rented 2 air compressors, 4 mo. @ $165.60/mo.	1,324.80	
	Purchased 2 jackhammers with JL4 leg. $545 ea.	1,090.00	
	Purchased 2 sets air and water hose	130.00	
	Purchased 2 sets drill steel and bits	47.35	
	Purchased 2 double drum slushers, $450.00 ea.	900.00	
	Purchased 2 scrapers, cable and access.	600.00	
	Owned: Pickup truck, use allow. 4 mo., $100 mo.	400.00	
	Owned: Station wagon, use allow. 4 mo., $100 mo.	400.00	
(e)	None		
(f)	None		
(g)	Repairs and Maintenance	500.00	
	Sampling and assaying	1,000.00	
	Accounting	200.00	
	Workmen's Comp. Emp Liab. Ins.	350.00	
	Payroll taxes	154.80	$23,716.95
(h)	Contingencies 10% of total	2,371.69	$26,088.64

Unit cost $26.09/ft.

7. (a) Yes
(b) Cash and owned equipment.

LEASE AND OPTION AGREEMENT

This lease and option to purchase, made and entered into as of this 27 day of September 1952, by and between Stanley E. Ball and Richard W. Ball of Edgemont, South Dakota, Lessor, and American Mining and Development Company, a Delaware Corporation, Lessee,

WITNESSETH:

Article I
Description of the Property

The Lessor warrants that he is the sole and lawful owner of the hereinafter described property, and, for and in consideration of the sum of Three Hundred Dollars ($300.00) to him in hand paid receipt of which is hereby acknowledged, and for and in consideration of the royalties and rentals to be paid by lessee and of the covenants and agreements of the lessee hereinafter set forth does hereby lease, let and demise unto the Lessee, its successors and assigns upon the terms and conditions hereinafter set forth which are hereby accepted by the lessee:

A contiguous group of lode claims, which lessor warrants his ownership thereof, and further warrants that he has fully met every requirement of the United States of America and the State of South Dakota in locating said 21 claims and made up of the following:

Name of Claim	Location Section	Township	Book	Page
Southside 1,2,3	31	T8SR4E	31M	64,65
Damsite 1,2,3,4,5,6,7,	31	T8SR4E	31M	276,277,61,62,63,
Whitewood 1	31	T8SR4E	31M	68
Hillside 1,2,3,4,	6	T9SR4E	31M	69,70
Lower Chilson 1,2,3,4,5,6	31 and 6	(T8SR4E (T9SR4E	31M	65,66,67,68

The location of these claims are recorded in the office of the County Recorder of Fall River County, South Dakota, in the book and on the pages set forth above, said claims being located in an unorganized mining district of said county and state.

ARTICLE II Term of Lease and Option

The term of this lease, unless sooner forfeited, cancelled, terminated or surrendered, shall be for 9 months from the date of execution thereof.

ARTICLE III Possession and Control of Property

The Lessee shall have and it is hereby given and granted the right to enter into and take over immediately the sole and exclusive possession and control of said claims, and the whole and every part thereof, and to test,

prospect, explore, develop, mine and control same, and to mine, ~~and control same, and to mine~~, extract and remove from said property the ores and minerals therein and appurtenances belonging thereto, and to treat, mill, ship, sell or otherwise dispose of same and to receive the full proceeds therefrom less the royalties payable to the Lessor as stipulated in Article V. hereof. O.K. MS.

ARTICLE IV Entry, Manner of Work & Conformity with Laws

The Lessee agrees to take possession of and to start work on said property on or before December 1, 1952, and to promptly and diligently carry on mining operations, causing all exploration, development, and mining to be done in a careful minerlike fashion, and in accordance with the mining laws and regulations of the United States and the State of South Dakota. Assessment work shall be performed by Lessee and recorded annually in Lessor's name.

ARTICLE V Payments to Lessor

The lessee agrees to pay the lessor the following sums for the purchase of said claims on the dates set forth:

One Thousand ($1000.00) Dollars on or before January 1, 1953

Two Thousand ($2000.00) Dollars on or before March 31, 1953

Two Thousand ($2000.00) Dollars on or before June 30, 1953

and when aforesaid payments have been paid to lessor, the lessee shall become the sole owner of said claims, and shall be delivered a quit claim deed to said claims by lessor, said deed to be executed concurrently with this lease and option, and placed in escrow in Hot Springs, S. D. at 1st National Bank, together with a copy of this lease and option. It is further understood and agreed that the lessee will pay to the lessor royalties on all ores, minerals and other products mined, removed and sold from said property as follows:

Five (5) percent of the net depot, mill, or other returns from production by the 10th of each calendar month on the returns received by lessee during the preceding calendar month.

"Net depot, mill or other returns" is defined as the net proceeds derived from the sale of ore or other products. For the purpose of calculating royalties, all development and haulage payments by the Atomic Energy Commission shall be excluded from said net returns.

ARTICLE VI Protection from Liens & Damages

Lessee shall keep said property and the whole and every part thereof free and clear from liens for labor done or performed on said property or materials furnished on or for said property, and will save and keep harmless the Lessor from all costs, loss, or damage which may arise by reason of injury to any persons employed by the Lessee in or upon said property or any part thereof or which may arise by reason of injury to any person, livestock or other property which are directly attributable to Lessee's operation.

ARTICLE VII Payment of Taxes

The Lessee shall pay, when and due and before delinquent all taxes upon said property falling due during the term of this lease and while the same is in full force and effect, and shall pay, when due, and before delinquent, all taxes levied or assessed against any and all personal property, machinery and equipment placed upon said property by Lessee during the term of this lease.

ARTICLE VII (a) Standing Timber

Lessee agrees to pay Lessor for all standing timber used or injured by Lessee, in accordance with the valuation set thereon by a representative of the U. S. Forestry Service.

ARTICLE VIII Insurance

Lessee shall carry at all times during the life of this lease Workmans Compensation, liability and other insurance required by the laws and mining regulations of the State of South Dakota.

Article IX Reports and Maps

Lessee shall furnish to Lessor quarterly reports with copies of the logs of drill holes on the property and with such sample or assay maps as may be made showing the position and values of samples taken on said property, together with maps showing the work done during such period.

ARTICLE X Inspection

The duly authorized representative of Lessor shall be permitted to enter into and upon said property and workings of Lessee at all reasonable times for the purpose of inspection, and to inspect the books and records of production and sale of products of which Lessor agrees to keep full and accurate accounts.

ARTICLE XI Forfeiture Clause

The failure of Lessee to make or cause to be made or cause to be made payment herein provided for, or to keep or perform any obligation on his part to be kept or performed, according to the terms and provisions hereof, shall, at the election of the Lessor, work a forfeiture hereof provided the Lessor shall give to the Lessee a written notice of his intention to declare a forfeiture of this lease and to terminate same on account thereof, specifying the particular default or defaults relied upon by him, and that Lessee shall have sixty (60) days after receipt of said notice in which to make good and cure such defaults, in which event there shall be no forfeiture thereof.

ARTICLE XII Surrender of Lease

The Lessee expressly reserves the right to cancel, terminate and surrender this agreement and to relinquish all rights, and privileges hereunder at any time during the life hereof after having given to the Lessor thirty (30) days written notice of his intention and fully dishharged all obligations previously incurred.

ARTICLE XIII Forces beyond control of Lessee

If the lessee shall be delayed at any time in keeping or performing any agreement on his part to be kept or performed according to the terms and provisions hereof, by strikes, floods, lockouts, fire, orders from Government, or any constituted authority thereof, or any causes beyond the control of lessee, such delay shall not be deemed a breach of this lease or a default on the part of the lessee constituting a cause for forfeiture provided that during any such periods of delay the lessee continues to pay all taxes as herein provided. It being expressly understood that said delays will advance the dates of payments as set forth in Article V by a period equal to the period of said delay.

ARTICLE XIV Surrender of Property by Lessee

In the event of a valid forfeiture, surrender or other termination of this lease, the Lessee will immediately surrender to the Lessor peaceable possession of said property and the whole and every part thereof.

ARTICLE XV Removal of Equipment, etc., by Lessee

The Lessee shall have, and is hereby given and granted sixty (60) days after a valid forfeiture, surrender or other termination of this lease, to remove from said property all stocks, merchandise, materials, tools, machinery and accessories thereto, piping, wiring, mine cars, and all other machinery, equipment and structures erected or placed on said property by Lessee, together with all ore broken in the mine workings, provided, that the Lessee is not at that time in default in any respect to any payments due to lessor up to the effective date of surrender.

ARTICLE XVI Governmental Assistance

In the event that the Lessee shall apply for financial or other assistance from Federal Agencies for the purpose of exploring and developing said properties, the Lessor herewith grants consent to Lessee to obtain such assistance, and on request of Lessee, agrees to promptly execute the agreement required by said agencies from claim owners.

ARTICLE XVII Inurement

Time is of the essence of this lease. The terms, provisions, covenants and agreements herein contained shall extend to, be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

ARTICLE XVIII Notices

All notices herein provided for shall be given by mail, at the following addresses, until otherwise changed by written request of the parties hereto, to-wit:

To the Lessor:

To the Lessee: American Mining & Development Company

In Witness whereof, the Lessor and Lessee have caused their names to be hereunto subscribed, in duplicate counterparts, as of the day and year first above written.

/s/ Richard W. Ball
/s/ Stanley E. Ball
LESSOR

Attest:
Charles H. Rudolph
Vice President

"No Corporate Seal Attached"

American Mining & Development Company
By George S. Elmore
President
LESSEE

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF FALL RIVER)

Being of sound mind and body, I do personally swear that Stanley E. Ball and Richard W. Ball appeared before me and are the persons whose signatures are on the attached.

Dated this 27 day of September, 1952.

My Commission Expires
September 30, 1952. (SEAL)

/s/ G. R. Brown
Notary Public

State of South Dakota)
)
County of Fall River)

I, G. R. Brown, a Notary Public, in and for said County in the state aforesaid, do hereby certify that George S. Elmore, of Washington, D. C. to me personally known as the President of American Mining and Development Company, and also known to me as the person whose name is affixed to the foregoing instrument appeared before me this day in person and acknowledged that he signed, sealed and delivered said instrument as the free and voluntary act and deed of the said American Mining and Development Company, a Delaware Corporation, for the consideration and purposes therein set forth and that he was duly authorised to execute same by the Board of Directors, of said Corporation.

In witness whereof, I have set my hand and seal hereto, this 1 day of October A.D. 1952.

My Commission Expires
September 30, 1956. (SEAL)

/s/ G. R. Brown
Notary Public

Filed for record October 2nd, 1952 at 2:30 P.M., and recorded in Book 31 Misc., on Pages 473-474-475-476.

/s/ Mary E. Bingham
Register of Deeds

C
O
P
Y

MF 200(A)

EXHIBIT A

Operator

American Mining and Development Co.
Suite 206, American Building
1317 F Street, N.W.
Washington, D.C.

PHASE I

12,000 feet sidehill bulldozing
Estimated Unit Cost $2.53 per foot
Total Cost Phase I (12,000 x $2.53) $ 30,390.31

PHASE II (if warranted)

1,000 feet of short 6 ft. x 7 ft. tunnels
Cross cuts, raises to explore
Showings
Estimated Unit Cost $26.08864 per foot
Total Cost Phase II (1,000 x $26.08864) 26,088.64

Grand Total $ 56,478.95

Government's Participation	$ 50,831.06
Operator's participation	5,647.89
Total	$ 56,478.95

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Fall River, State of South Dakota, described in a certain Exploration Project Contract dated _____, 195__, between _____, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated _____ 27 September 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

Dated this 14th day of November, 195.2

Richard Ball
Stanley Ball

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Fall River, State of South Dakota, described in a certain Exploration Project Contract dated _____, 195__, between _____, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated 27 September 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

Dated this 14th day of November, 195 2

Richard Ball
Stanley Ball
by K.B.

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Fall River, State of South Dakota, described in a certain Exploration Project Contract dated _____, 195__, between _____, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated 27 September 1952, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

Dated this 14th day of November, 195 2

Richard Ball
Stanley Ball
by K.B.

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA

FOR USE UNDER THE

DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dmea 2869

Date received 2-4-53

American Mining and Development Co.
1317 F Street N.W.
Washington 4, D. C.
Field Office, P. O. Box 862
Hot Springs, South Dakota

Name and address of applicant

Date 14 November 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? Crude carnotite ore
   (*b*) What are the byproducts, if any? None
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts. } None
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly). 300 feet, side hill cuts.

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity. Inapplicable.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. 7 mi. to AEC Ore Depot, Edgemont, S.D.
   (*b*) Mining district. Unorganized.
   (*c*) Township, Section, Range. T 8 and 9 S, R 4 E, Secs. 31, 6.
   (*d*) County, State. Fall River County, South Dakota.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Applicant has mined a few tons of surface ore.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production 2 months

   If not in production or operation, estimated date when production will begin at once if results of explorations are successful.
6. Experience of operators: Directors have wide experience in exploration of petroleum business.
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
	REFER ATTACHED SHEET						
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$ 250,000	$ 13,800	$ 1	13,800	0
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: A few tons stockpiled

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. Inapplicable

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. Carnotite covering sandstone grains in sedimentary sandstones of Dakota and Lakots formations. See USGS, Edgemont Folio No. 108 by Darton and Smith.

8. (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
George S. Elmore Suite 206 American Bldg. 1317 F Street NW Washington, D. C.	President D.	0	over $100,000	7,500	None	None	None
Charles R. Rudolph 550 Wriley Road NW Washington, D.C.	Vice President D.	0	$100,000	2,000	"	"	"
Richard D. Rudolph Newcastle, Wyo.	D	0	$100,000	2,300	"	"	"
S. Howard Rudolph Atlantic, Iowa	D	)	—	1,000	"	"	"
P. B. Blakemore Box 862 Hot Springs, S. Dak.	Manager D	$8,400	—	1,000	"	"	"
Total		$8,400		13,800			

October 29, 1952

Mr. Page B. Blakemore, Manager
American Mining and Development Co.
P. O. Box 862
Hot Springs, South Dakota

SUBJECT: FACTUAL INFORMATION REGARDING CERTAIN CLAIMS IN THE EDGEMONT MINING DISTRICT, SOUTH DAKOTA

In response to your request for factual data, which is on file in this office, we are submitting the available data on the following claims:

CLAIM	Sec.	Twp.	Range	Book	Page
Southside 1,2,3	31	T8S	R4E	31M	64-65
Damsite 1,2,3,4, 5,6,7	31	T8S	R4E	31M	276,277, 61,62,63
Whitewood 1	31	T8S	R4E	31M	68
Hillside 1,2,3,4	6	T9S	R4E	31M	69,70
Lower Chilson 1,2,3, 4,5,6	31/6	T8/9S	R4E	31M	65,66, 67,68

Owners: Ball Bros. (Stanley and Richard), Edgemont, S.D.
Lessee: American Mining and Development Company
P. O. Box 862, Hot Springs, South Dakota
Type of Lease: Lease and Option to Purchase.

The Commission makes no representation or warranty as to the completeness or accuracy of the information presented and makes no recommendation concerning it.

The ground covered by the claims noted above is included in several eqrly general reports. The most complete of this group is the "Edgemont Folio", Geologic Atlas of the United States, Folio #108, By N. H. Darton and W. S. Tangier Smith, 1904.

The first general report on carnotite deposits of the area was "The Carnotite Prospects of the Craven Canyon Area, Fall River County, South Dakota" by Page and Redden, U. S. Geological Survey Circular 175, 1952. The first report by geologists of the Atomic Energy Commision in the Area was "Carnotite Deposits Near Edgemont, South Dakota" by Baker, Smith, and Rapaport, RMO-881, 192. Both of these papers are available for distribution to the public; Circular 175 from the Geological Survey and RMO-881 from this office.

Reconnaissance reports on the Damsite #2 and Damsite #5 have been written by R. H. Olson of this office. We have no other reports at this date on any specific claim nor exposure on this ground. Mr. Olson's reports are abstracted below.

Damsite 2

Two exposures were examined. At the first, three channel samples were cut; all showed weak radioactivity and are described as follows:

Sample F 12014 represents approximately a one-foot stratigraphic interval. The rock is very fine-grained, well-sorted sandstone, containing alternating bleached and limonite-stained bands which are at random orientations to bedding. Mineralized bands commonly follow the limonite bands. Assay results were eU_3O_8:0.59; $\%U_3O_8$:0.96; $\%V_2O_5$:0.13 (all assays are noted in this manner: eU_3O_8 represents the radiometric assay and indicates equivalent uranium oxide; $\%U_3O_8$ represents the chemical or wet assay and indicates the percentage of uranium oxide; eU_3O_8 and $\%U_3O_8$ will be equal only when the ore is in equilibrium; $\%V_2O_5$ represents the chemical assay for vanadium and indicates the percentage of vanadium oxide).

Sample F 12015 was cut about five feet west of F 12014 and represents a stratigraphic interval of 15 inches. The rock description is the same as for F 12014 except that the mineralized bands (carnotite type) follow the bleached and limonite-stained bands more closely that in F 12014. Assay results of F 12015 were eU_3O_8: 0.71; $\%U_3O_8$:0.93; $\%V_2O_5$:0.14.

Sample F 12016 was cut 30 feet above and 30 feet west of F 12015 and represents a stratigraphic interval of one foot. The rock is bleached, very fine-grained, well-sorted sandstone with a few limonite bands which follow bedding poorly. Visibly mineralized portions follow the bedding more closely. Assay results were eU_3O_8:0.77; V_2O_5:0.13.

The deposit is in the Lower Cretaceous Lakota formation. Carnotite-type minerals are seen over a face eight feet long with average thickness of one foot. Much of the carnotite comprises "paint" along joint surfaces and renders difficult any visual estimate of grade. The host rock is very fine-grained, well-sorted sandstone with alternating bleached and limonite-stained bands at random orientations to the bedding. Carnotite commonly follows these bands and is as commonly associated with the bleached areas as with the limonitic portions. Very dense gray siltstone underlies the mineralized sandstone but has not been mineralized. The underlying impermeable material provides a definite ore control at least locally. Several additional mineralized spots were observed in the immediate vicinity but were neither described nor sampled.

The second exposure on the Damsite #2 lies across the canyon, approximately 20 feet topographically below the first exposure. No estimate was made of the relative stratigraphic position although the deposit is in the Lakota formation. Carnotite-type minerals are visible for 20 feet laterally with an average thickness of six inches. Sample F 12017 is a composite of two samples which, together, are representative of the deposit as a whole. The sample cuts were taken one foot apart and represent a stratigraphic interval of one foot. The host rock is white, fine-to very fine-grained, well-sorted, sandstone with some carbonaceous material. Local concentrations of limonitic material and carnotite were observed, although no apparent relation exists between the two minerals. Assay results of sample F 12107 were eU_3O_8:0.24, $\%U_3O_8$:0.34, $\%V_2O_5$:0.47.

Damsite #5

Two samples were cut from the exposure on this claim. Sample 11049, a channel cut across a stratigraphic interval of one foot, was assayed with the following results: eU_3O_8:0.84; $\%U_3O_8$:0.99; $\%V_2O_5$:0.15. Sample 11050 was sent to New York for mineralogical determination but no result has been received to date.

The outcrop is in Lower Cretaceous Lakota formation. Carnotite is present laterally for 175 feet alon g the slope, mostly at the same horizon. The mineralization followed the bedding locally and overall, although departures are common. The mineralized rock is less than one foot in average thickness along the major bed and minor zones have been noted above and below. The ore is in a white, fine- to very fine-grained, well-sorted sandstone with rounded grains. The carnotite appears as isolated flecks, less commonly in streaks which follow bedding. The host rock is locally weakly cross-bedded at a low angle but is mostly flat bedded.

If we can assist you further as the work in the area progresses, please do not hesitate to call upon us.

Very truly yours,

/s/ Howard S. Stafford

Howard S. Stafford, Chief
Hot Springs Sub-Office

HSO:JWK:dh

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve. Inapplicable

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows: Inapplicable

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)	None				
Indicated (probable)	None				

(*c*) If placer: Inapplicable

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: 2½ miles poor dirt road, 5 miles paved highway to AEC Depot, Edgemont, S.D.
Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Well, adequate, all seasons.
State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power: None available.
State amount of power used, rate per hour, and source thereof.

16. Labor: 1 miner, 1 helper
State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:
rented compressor and drill, small tools.
Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.
None.

CERTIFICATION

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

AMERICAN MINING AND DEVELOPMENT CO.
(Name of company)

By George S Elmore
(Signature of authorized official)

14 November 1952
(Date)

President
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

S. (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
George S. Elmore Suite 200 American Bld. 1317 F Street NW Washington, D. C.	President D.	0	over $100,000	7,500	None	None	None
Charles R. Rudolph 550 Wriley Road NW Washington, D.C.	Vice President D.	0	$100,000	2,000	"	"	"
Richard D. Rudolph Newcastle, Wyo.	D	0	$100,000	2,300	"	"	"
S. Howard Rudolph Atlantic, Iowa	D	)	—	1,000	"	"	"
P. D. Blakemore Box 862 Hot Springs, S. Dak.	Manager D	$8,400	—	1,000	"	"	"
Total		$8,400		13,800			

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dmea 2869

Date received 2-4-53

[illegible]

Name and address of applicant

Date [illegible]

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? [illegible]
   (*b*) What are the byproducts, if any? None
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts. None
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly). [illegible]

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity. [illegible]
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. [illegible]
   (*b*) Mining district. [illegible]
   (*c*) Township, Section, Range. [illegible]
   (*d*) County, State. [illegible]
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. [illegible]
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production 2 months

   If not in production or operation, estimated date when production will begin [illegible]
6. Experience of operators: [illegible]

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$ [illegible]	$ [illegible]	$ 2	[illegible]	0
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: [illegible]

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. [illegible]

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. [illegible]

October 29, 1952

Mr. Page B. Blakemore, Manager
American Mining and Development Co.
P. O. Box 862
Hot Springs, South Dakota

SUBJECT: FACTUAL INFORMATION REGARDING CERTAIN CLAIMS IN THE EDGEMONT MINING DISTRICT, SOUTH DAKOTA

In response to your request for factual data, which is on file in this office, we are submitting the available data on the following claims:

CLAIM	Sec.	Twp.	Range	Book	Page
Southside 1,2,3	31	T6S	R4E	31M	64-65
Densite 1,2,3,4, 5,6,7	31	T6S	R4E	31M	276,277, 61,62,63
Whitewood 1	31	T6S	R4E	31M	66
Hillside 1,2,3,4	6	T7S	R4E	31M	69,70
Lower Chilson 1,2,3, 4,5,6	31/6	T6/7S	R4E	31M	65,66, 67,68

Owners: Ball Bros. (Stanley and Richard), Edgemont, S.D.
Lessee: American Mining and Development Company
P. O. Box 862, Hot Springs, South Dakota
Type of Lease: Lease and Option to Purchase.

The Commission makes no representation or warranty as to the completeness or accuracy of the information presented and makes no recommendation concerning it.

The ground covered by the claims noted above is included in several early general reports. The most complete of this group is the "Edgemont Folio", Geologic Atlas of the United States, Folio #108, By N. H. Darton and W. S. Tangier Smith, 1904.

The first general report on carnotite deposits of the area was "The Carnotite Prospects of the Craven Canyon Area, Fall River County, South Dakota" by Dave and Redden, U. S. Geological Survey Circular 175, 1952. The first report by geologists of the Atomic Energy Commision in the Area was "Carnotite Deposits Near Edgemont, South Dakota" by Baker, Smith, and Rapaport, RMO-881, 192. Both of these papers are available for distribution to the public; Circular 175 from the Geological Survey and RMO-881 from this office.

Reconnaissance reports on the Damsite #2 and Damsite #5 have been written by R. N. Olson of this office. We have no other reports at this date on any specific claim nor exposure on this ground. Mr. Olson's reports are abstracted below.

Damsite 2

Two exposures were examined. At the first, three channel samples were cut; all showed weak radioactivity and are described as follows:

Sample F 12014 represents approximately a one-foot stratigraphic interval. The rock is very fine-grained, well-sorted sandstone, containing alternating bleached and limonite-stained bands which are at random orientations to bedding. Mineralized bands commonly follow the limonite bands. Assay results were eU_3O_8:0.59; $\%U_3O_8$:0.96; $\%V_2O_5$:0.13 (all assays are noted in this manner: eU_3O_8 represents the radiometric assay and indicates equivalent uranium oxide; $\%U_3O_8$ represents the chemical or wet assay and indicates the percentage of uranium oxide; eU_3O_8 and $\%U_3O_8$ will be equal only when the ore is in equilibrium; $\%V_2O_5$ represents the chemical assay for vanadium and indicates the percentage of vanadium oxide).

Sample F 12015 was cut about five feet west of F 12014 and represents a stratigraphic interval of 15 inches. The rock description is the same as for F 12014 except that the mineralized bands (carnotite type) follow the bleached and limonite-stained bands more closely that in F 12014. Assay results of F 12015 were eU_3O_8: 0.71; $\%U_3O_8$:0.93; $\%V_2O_5$:0.14.

Sample F 12016 was cut 30 feet above and 30 feet west of F 12015 and represents a stratigraphic interval of one foot. The rock is bleached, very fine-grained, well-sorted sandstone with a few limonite bands which follow bedding poorly. Visibly mineralized potions follow the bedding more closely. Assay results were eU_3O_8:0.77; V_2O_5:0.13.

The deposit is in the Lower Cretaceous Lakota formation. Carnotite-type minerals are seen over a face eight feet long with average thickness of one foot. Much of the carnotite comprises "paint" along joint surfaces and renders difficult any visual estimate of grade. The host rock is very fine-grained, well-sorted sandstone with alternating bleached and limonite-stained bands at random orientations to the bedding. Carnotite commonly follows these bands and is as commonly associated with the bleached areas as with the limonitic portions. Very dense gray siltstone underlies the mineralized sandstone but has not been mineralized. The underlying impermeable material provides a definite ore control at least locally. Several additional mineralized spots were observed in the immediate vicinity but were neither described nor sampled.

The second exposure on the Densite #2 lies across the canyon, approximately 20 feet topographically below the first exposure. No estimate was made of the relative stratigraphic position although the deposit is in the Lakota formation. Carnotite-type minerals are visible for 20 feet laterally with an average thickness of six inches. Sample F 12017 is a composite of two samples which, together, are representative of the deposit as a whole. The sample cuts were taken one foot apart and represent a stratigraphic interval of one foot. The host rock is white, fine- to very fine-grained, well-sorted, sandstone with some carbonaceous material. Local concentrations of limonitic material and carnotite were observed, although no apparent relation exists between the two minerals. Assay results of sample F 12107 were eU_3O_8:0.24, $\%U_3O_8$:0.34, $\%V_2O_5$:0.47.

Densite #5

Two samples were cut from the exposure on this claim. Sample 11049, a channel cut across a stratigraphic interval of one foot, was assayed with the following results: eU_3O_8:0.84; $\%U_3O_8$:0.99; $\%V_2O_5$:0.15. Sample 11050 was sent to New York for mineralogical determination but no result has been received to date.

The outcrop is in Lower Cretaceous Lakota formation. Carnotite is present laterally for 175 feet along the slope, mostly at the same horizon. The mineralization followed the bedding locally and overall, although departures are common. The mineralized rock is less than one foot in average thickness along the major bed and minor zones have been noted above and below. The ore is in a white, fine- to very fine-grained, well-sorted sandstone with rounded grains. The carnotite appears as isolated flecks, less commonly in streaks which follow bedding. The host rock is locally weakly cross-bedded at a low angle but is mostly flat bedded.

If we can assist you further as the work in the area progresses, please do not hesitate to call upon us.

Very truly yours,

/s/ Howard S. Stafford

Howard S. Stafford, Chief
Hot Springs Sub-Office

HSO:JWK:dh

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve. [illegible]

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows: [illegible]

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)	None				
Indicated (probable)	None				

(*c*) If placer: [illegible]

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: [illegible]
Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: [illegible]
State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power: [illegible]
State amount of power used, rate per hour, and source thereof.

16. Labor: [illegible]
State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:
[illegible]
Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain. None.

CERTIFICATION

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

[illegible]
(Name of company)

By George S. Elmore
(Signature of authorized official)

14 November 1952
(Date)

President
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

1. (a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
George S. Elmore Suite 200 American Bld. 1317 F Street NW Washington, D. C.	President D.	0	over $100,000	7,500	None	None	None
Charles R. Rudolph 550 Whitley Road NW Washington, D.C.	Vice President D.	0	$100,000	2,000	"	"	"
Richard D. Rudolph Newcastle, Wyo.	D	0	$100,000	2,300	"	"	"
S. Howard Rudolph Atlantic, Iowa	D	)	—	1,000	"	"	"
F. T. Blakemore Box 862 Hot Springs, S. Dak.	Manager D	38,400	—	2,000	"	"	"
Total		38,400		13,800			

Form MF-100
(May 1951)

U. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dmea 2869

Date received 2-4-53

American Mining and Development Co.
1317 F Street N.W.
Washington 4, D. C.
Field Office, P. O. Box 662
Hot Springs, South Dakota

Name and address of applicant

Date 14 November 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? Crude columbite ore
   (*b*) What are the byproducts, if any? None
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts. } None
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly). 300 feet, side hill cuts.

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity. Inapplicable.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. 7 mi. to ARC Ore Depot, Hermosa, S.D.
   (*b*) Mining district. Unorganized.
   (*c*) Township, Section, Range. T 5 and 6 S, R 6 E, Secs. 31, 6.
   (*d*) County, State. Fall River County, South Dakota.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. Applicant has mined a few tons of surface ore.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production 2 months

   If not in production or operation, estimated date when production will begin at once if results of explorations are successful.
6. Experience of operators: Directors have wide experience in exploration of/ [illegible]

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$ 250,000	$ 13,000	$ 1	13,000	0
Preferred stock	$	$	$		

*Indicate period covered.

10. Production: A few tons stockpiled

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. Inapplicable

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves. Carnotite covering sandstone grains in [illegible] sandstones of Dakota and Lakota formations. See USGS, Bulletin Radio No. 108 by Barton and Smith.

16-63762-1

October 29, 1952

Mr. Page B. Blakemore, Manager
American Mining and Development Co.
P. O. Box 862
Hot Springs, South Dakota

SUBJECT: FACTUAL INFORMATION REGARDING CERTAIN CLAIMS IN THE EDGEMONT MINING DISTRICT, SOUTH DAKOTA

In response to your request for factual data, which is on file in this office, we are submitting the available data on the following claims:

CLAIM	Sec.	Twp.	Range	Book	Page
Southside 1,2,3	31	T9S	R4E	31M	64-65
Densite 1,2,3,4, 5,6,7	31	T8S	R4E	31M	276,277, 61,62,63
Whitewood 1	31	T8S	R4E	31M	68
Hillside 1,2,3,4	6	T9S	R4E	31M	69,70
Lower Chilson 1,2,3, 4,5,6	31/6	T8/9S	R4E	31M	65,66, 67,68

Owners: Ball Bros. (Stanley and Richard), Edgemont, S.D.
Lessee: American Mining and Development Company
P. O. Box 862, Hot Springs, South Dakota
Type of Lease: Lease and Option to Purchase.

The Commission makes no representation or warranty as to the completeness or accuracy of the information presented and makes no recommendation concerning it.

The ground covered by the claims noted above is included in several early general reports. The most complete of this group is the "Edgemont Folio", Geologic Atlas of the United States, Folio #106, By N. H. Darton and W. S. Tangier Smith, 1904.

The first general report on carnotite deposits of the area was "The Carnotite Prospects of the Craven Canyon Area, Fall River County, South Dakota" by Page and Redden, U. S. Geological Survey Circular 175, 1952. The first report by geologists of the Atomic Energy Commission in the Area was "Carnotite Deposits Near Edgemont, South Dakota" by Baker, Smith, and Rosenport, RME-081, 1952. Both of these papers are available for distribution to the public: Circular 175 from the Geological Survey and RME-081 from this office.

Reconnaissance reports on the Dansite #2 and Dansite #5 have been written by R. H. Olson of this office. We have no other reports at this date on any specific claim nor exposure on this ground. Mr. Olson's reports are abstracted below.

Dansite 2

Two exposures were examined. At the first, three channel samples were cut; all showed weak radioactivity and are described as follows:

Sample F 12014 represents approximately a one-foot stratigraphic interval. The rock is very fine-grained, well-sorted sandstone, containing alternating bleached and limonite-stained bands which are at random orientations to bedding. Mineralized bands commonly follow the limonite bands. Assay results were eU_3O_8:0.59; $\%U_3O_8$:0.96; $\%V_2O_5$:0.13 (all assays are noted in this manner: eU_3O_8 represents the radiometric assay and indicates equivalent uranium oxide; $\%U_3O_8$ represents the chemical or wet assay and indicates the percentage of uranium oxide; eU_3O_8 and $\%U_3O_8$ will be equal only when the ore is in equilibrium; $\%V_2O_5$ represents the chemical assay for vanadium and indicates the percentage of vanadium oxide).

Sample F 12015 was cut about five feet west of F 12014 and represents a stratigraphic interval of 15 inches. The rock description is the same as for F 12014 except that the mineralized bands (carnotite type) follow the bleached and limonite-stained bands more closely that in F 12014. Assay results of F 12015 were eU_3O_8: 0.71; $\%U_3O_8$:0.93; $\%V_2O_5$:0.14.

Sample F 12016 was cut 30 feet above and 30 feet west of F 12015 and represents a stratigraphic interval of one foot. The rock is bleached, very fine-grained, well-sorted sandstone with a few limonite bands which follow bedding poorly. Visibly mineralized portions follow the bedding more closely. Assay results were eU_3O_8:0.77; V_2O_5:0.13.

The deposit is in the Lower Cretaceous Lakota formation. Carnotite-type minerals are seen over a face eight feet long with average thickness of one foot. Much of the carnotite comprises "paint" along joint surfaces and renders difficult any visual estimate of grade. The host rock is very fine-grained, well-sorted sandstone with alternating bleached and limonite-stained bands at random orientations to the bedding. Carnotite commonly follows these bands and is as commonly associated with the bleached areas as with the limonitic portions. Very dense gray siltstone underlies the mineralized sandstone but has not been mineralized. The underlying impermeable material provides a definite ore control at least locally. Several additional mineralized spots were observed in the immediate vicinity but were neither described nor sampled.

The second exposure on the Dansite #2 lies across the canyon, approximately 20 feet topographically below the first exposure. No estimate was made of the relative stratigraphic position although the deposit is in the Lakota formation. Carnotite-type minerals are visible for 20 feet laterally with an average thickness of six inches. Sample F 12017 is a composite of two samples which, together, are representative of the deposit as a whole. The sample cuts were taken one foot apart and represent a stratigraphic interval of one foot. The host rock is white, fine-to very fine-grained, well-sorted, sandstone with some carbonaceous material. Local concentrations of limonitic material and carnotite were observed, although no apparent relation exists between the two minerals. Assay results of sample F 12017 were eU_3O_8:0.24, $\%U_3O_8$:0.34, $\%V_2O_5$:0.47.

Vanadite #5

Two samples were cut from the exposure on this claim. Sample 11049, a channel cut across a stratigraphic interval of one foot, was assayed with the following results: V_2O_5:0.84; U_3O_8:0.99; ZrO_2:0.15. Sample 11050 was sent to New York for mineralogical determination but no result has been received to date.

The outcrop is in Lower Cretaceous Lakota formation. Carnotite is present laterally for 175 feet along the slope, mostly at the same horizon. The mineralization followed the bedding locally and overall, although departures are common. The mineralized rock is less than one foot in average thickness along the major bed and minor zones have been noted above and below. The ore is in a white, fine- to very fine-grained, well-sorted sandstone with rounded grains. The carnotite appears as isolated flecks, less commonly in streaks which follow bedding. The host rock is locally weakly cross-bedded at a low angle but is mostly flat bedded.

If we can assist you further as the work in the area progresses, please do not hesitate to call upon us.

Very truly yours,

/s/ Howard S. Stafford

Howard S. Stafford, Chief
Hot Springs Sub-Office

HSS:JWW:dh

(*b*) If deposit is other than plac

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve. Inapplicable

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows: Inapplicable

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)	None				
Indicated (probable)	None				

(*c*) If placer: Inapplicable

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads: 2½ miles poor dirt road, 5 miles paved highway to ATC Depot, Elgerent, S.D.
Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply: Well, adequate, all seasons.
State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power: None available.
State amount of power used, rate per hour, and source thereof.

16. Labor: 1 miner, 1 helper
State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:
rental compressor and drill, small tools.
Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.
None.

CERTIFICATION

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

AMERICAN MINING AND DEVELOPMENT CO.
(Name of company)

By George S. Elmore
(Signature of authorized official)

14 November 1952
(Date)

President
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

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

Not to be filled in by applicant

Docket No. dmea 2869
Metal or Mineral
Date Received 2-4-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: American Mining and Development Company, Suite 206 American Bldg., 1317 F. Street N. W., Washington D. C. and P. O. Box 662, Hot Springs, S. Dak. a Delaware Corporation

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract 21 Mining claims located in Sec. 31, T 8 S, R 4 E and Sec. 5 and 6, T 9 S, R 4 E, Fall River County, South Dakota See Maps.

(*b*) State any mine name by which the property is known. Ball Brothers, lease

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise lessee with option to purchase

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Agreement attached.

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Book 314, P 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 276, 277.

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

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

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

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

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

16—66551-1

2/9/53

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 60 days and be completed within 10 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated 14 November 1952, 195__

AMERICAN MINING AND DEVELOPMENT CO.

George S. Elmore
(Applicant)

By President

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

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

MR-103

American Mining and Development Co.
Suite 206, American Building
1317 F. Street N.W.
Washington, D. C.

1.(c)
George S. Elmore, President
Suite 206, American Bldg.
1317 F Street N.W.
Washington, D. C.

Charles R. Rudolph, Vice President
5500 Wriley Road N.W.
Washington, D. C.

Margaret Bracken, Secretary
Suite 206, American Bldg.
1317 F. Street N.W.
Washington, D. C.

4.(a) Approx. 30 ft. open cuts made at applicant's expense. Accessible.
(b) A few tons of carnotite ore only, approx. 0.2% U_3O_8
(c) Almost flat bedded sandstone. Carnotite ore and "float" has been found in numerous places. See copy AEC report attached.
(d) 2½ miles poor dirt road to U.S. Highway Alt. 85-18. 7½ miles to AEC ore purchasing depot at Edgemont, S. D. a supply and residence point. 23 miles to Hot Springs, S. D., supply and residence point.
(e) Adequate manpower, materials, equipment, water - no power available.

5.(a) Carnotite (uranium ore)
(b) Phase I - 12,000 feet side hill bulldozing along 3 favorable strategraphic horizons. Unit cost $2.53 per foot. If results of bulldozing warrant, follow at once with:
Phase II - 1,000 feet short tunnels, crosscuts and raises to explore ore showing. Unit cost $26.09 per foot.
(c) 60 days. Phase I - 6 months $ 30,390.31
Phase II - 4 months 26,088.64
Total $ 56,478.95
(d) All officers have had business experience in petroleum production and legal work. Superintendent: Graduate Mining and Metallurgical engineer with 35 years wide experience.

6. Phase I

(a) 120 days bulldozer @ $100.00/days	$ 12,000.00
(b) Drilling and blasting boulders	3,444.00
1 miner, $1.50/hr., 1 helper $1.37½/hr.	
6 day week, Saturday 1½ time, 24 wks.	
6 No. Supt., $700.00/mo.	4,200.00
Engineering and Consultants	1,200.00
(c) Air piping	30.00
Gasoline and lubricants	1,200.00
Explosives	960.00
(d) Rented: 1 Air Compressor, 6 mo. $165.60/mo.	993.60
Rented: 1 Jackhammer 6 mo. $47.55/mo.	285.30
Owned: Pickup truck, use allow. 6 mo., $100/mo	600.00
Owned: Station wagon, use allow. 6 mo., $100/mo.	600.00
(e) None	
(f) None	
(g) Sampling and Assaying	1,200.00
Accounting	300.00

(continued, next attached sheet)

MF-103

American Mining and Development Co.
Suite 200, American Building
1317 F Street, N.W.
Washington, D. C.

Workmen's Comp. and Emp. Liab. Ins.	500.00	
Payroll Taxes	114.66	
Total	$ 27,627.56	
(h) Contingencies 10% of total	2,762.75	$ 30,390.31

Unit Cost $2.53/ft.

7. (a) Yes
   (b) Cash and owned equipment

Phase II

6. (a) None
   (b) (48 hour week, overtime included)

2 miners, $1.50/hr., 100 shifts each	$ 2,592.00	
2 helpers, $1.37½/hr., 100 shifts each	2,464.00	
2 slushers, $1.37½/hr., 100 shifts each	2,464.00	
4 months supervision, $700 month	2,800.00	
Engineering and consultants	400.00	
(c) Air and water lines	600.00	
Ventilation tubing	300.00	
Timbering	3,000.00	
Gasoline and lubricants	600.00	
Explosives	1,400.00	
(d) Rented 2 air compressors, 4 mo. @ $165.60/mo.	1,324.80	
Purchased 2 jackhammers with JL4 leg. $545 ea.	1,090.00	
Purchased 2 sets air and water hose	130.00	
Purchased 2 sets drill steel and bits	47.35	
Purchased 2 double drum slushers, $450.00 ea.	900.00	
Purchased 2 scrapers, cable and access.	600.00	
Owned: Pickup truck, use allow. 4 mo., $100 mo.	400.00	
Owned: Station wagon, use allow. 4 mo., $100 mo.	400.00	
(e) None		
(f) None		
(g) Repairs and Maintenance	500.00	
Sampling and assaying	1,000.00	
Accounting	200.00	
Workmen's Comp. Emp. Liab. Ins.	350.00	
Payroll taxes	154.80	$23,716.95
(h) Contingencies 10% of total	2,371.69	$26,088.64

Unit cost $26.09/ft.

7. (a) Yes
   (b) Cash and owned equipment.

MF 200(A) EXHIBIT A

Operator

American Mining and Development Co.
Suite 206, American Building
1317 F Street, N.W.
Washington, D.C.

PHASE I

12,000 feet sidehill bulldozing Estimated Unit Cost $2.53 per foot Total Cost Phase I (12,000 x $2.53)	$ 30,390.31

PHASE II (if warranted)

1,000 feet of short 6 ft. x 7 ft. tunnels Cross cuts, raises to explore Showings Estimated Unit Cost $26.08864 per foot Total Cost Phase II (1,000 x $26.08864)	26,088.64
Grand Total	$ 56,478.95

Government's Participation	$ 50,831.06
Operator's participation	5,647.89
Total	$ 56,478.95

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1953

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

Not to be filled in by applicant

Docket No. dmea 2869
Metal or Mineral
Date Received 2-4-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: [illegible] Mining and Development Company, [illegible] 1227 G Street N. W., Washington 5, D. C. and P. O. Box 650, [illegible], D. C. a Delaware Corporation

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract [illegible] located in Sec. 32, T. [illegible], R. 4, [illegible] and Sec. 5 and 6, T. [illegible], R. 4, [illegible] County, South Dakota. See map.

(*b*) State any mine name by which the property is known. [illegible], Lease

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lease with option to purchase

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Document attached.

(*e*) If you own the land, describe any liens or encumbrances on it None [illegible]

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Book [illegible], P. [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible].

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

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

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

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

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

5. *The exploration project.*—(*a*) [redacted] the mineral or minerals for which you wis[redacted] explore .....
Cassiterite (tin ore)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 60 days and be completed within 30 months from the date of an exploration project contract.

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

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

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

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

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

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

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

☒ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

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Dated 14 November 1952, 195...

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George S. Elmore
(Applicant)

By President

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

MR-103

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(b) A few tons of carnotite ore only, approx. 0.2% U_3O_8
(c) Almost flat bedded sandstone. Carnotite ore and "float" has been found in numerous places. See copy AEC report attached.
(d) 2½ miles poor dirt road to U.S. Highway Alt. 85-16. 7½ miles to AEC ore purchasing depot at Edgemont, S. D. a supply and residence point. 23 miles to Hot Springs, S. D., supply and residence point.
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Phase II - 1,000 feet short tunnels, crosscuts and raises to explore ore showing. Unit cost $26.00 per foot.
(c) 60 days. Phase I - 6 months $ 30,390.31
Phase II - 4 months 26,080.64
Total $ 56,470.95
(d) All officers have had business experience in petroleum production and legal work. Superintendent: Graduate Mining and Metallurgical engineer with 35 years wide experience.

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(b) Drilling and blasting boulders 3,444.00
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6 day week, Saturday 1½ time, 24 wks.
6 Mo. Supt., $700.00/mo. 4,200.00
Engineering and Consultants 1,200.00
(c) Air piping 30.00
Gasoline and lubricants 1,200.00
Explosives 960.00
(d) Rented: 1 Air Compressor, 6 mo. $165.60/mo. 993.60
Rented: 1 Jackhammer 6 mo. $47.55/mo. 285.30
Owned: Pickup truck, use allow. 6 mo., $100/mo 600.00
Owned: Station wagon, use allow. 6 mo., $100/mo. 600.00
(e) None
(f) None
(g) Sampling and Assaying 1,200.00
Accounting 300.00

(continued, next attached sheet)

MR-103

American Mining and Development Co.
Suite 204, American Building
1317 F Street, N.W.
Washington, D. C.

Workmen's Comp. and Emp. Liab. Inc.	500.00	
Payroll Taxes	114.00	
Total	$ 27,627.56	
(h) Contingencies 10% of total	2,762.75	$ 30,390.31

Unit Cost $2.53/ft.

7. (a) Yes
(b) Cash and owned equipment

Phase II

6. (a) None
(b) (48 hour week, overtime included)

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2 helpers, $1.37½/hr., 100 shifts each	2,464.00	
2 slushers, $1.37½/hr., 100 shifts each	2,464.00	
4 months supervision, $700 month	2,800.00	
Engineering and consultants	400.00	
(c) Air and water lines	600.00	
Ventilation tubing	300.00	
Timbering	3,000.00	
Gasoline and lubricants	600.00	
Explosives	1,400.00	
(d) Rented 2 air compressors, 4 mo. @ $165.60/mo.	1,324.80	
Purchased 2 jackhammers with JL4 leg. $545 ea.	1,090.00	
Purchased 2 sets air and water hose	130.00	
Purchased 2 sets drill steel and bits	47.35	
Purchased 2 double drum slushers, $450.00 ea.	900.00	
Purchased 2 scrapers, cable and access.	[illegible]	
Owned: Pickup truck, use allow. 4 mo., $100 mo.	400.00	
Owned: Station wagon, use allow. 4 mo., $100 mo.	400.00	
(e) None		
(f) None		
(g) Repairs and Maintenance	500.00	
Sampling and assaying	1,000.00	
Accounting	200.00	
Workmen's Comp. Em. Liab. Inc.	350.00	
Payroll taxes	154.80	$23,716.95
(h) Contingencies 10% of total	2,371.69	$26,088.64

Unit cost $26.09/ft.

7. (a) Yes
(b) Cash and owned equipment.

MF 200(A) EXHIBIT A

Operator

American Mining and Development Co.
Suite 206, American Building
1317 F Street, N.W.
Washington, D.C.

PHASE I

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1,000 feet of short 6 ft. x 7 ft. tunnels Cross cuts, raises to explore Showings Estimated Unit Cost $26.08864 per foot Total Cost Phase II (1,000 x $26.08864)	26,083.64
Grand Total	$ 56,478.95

Government's Participation	$ 50,831.06
Operator's participation	5,647.89
Total	$ 56,478.95

DMEA-2869

GENERAL SERVICES ADMINISTRATION
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(PMGC)

Mr. Lawrence Houck
D. M. E. A.
Room 4537
Department of the Interior
Interior Bldg.
18th & C NW
Washington, D. C.

MF 200 (A)

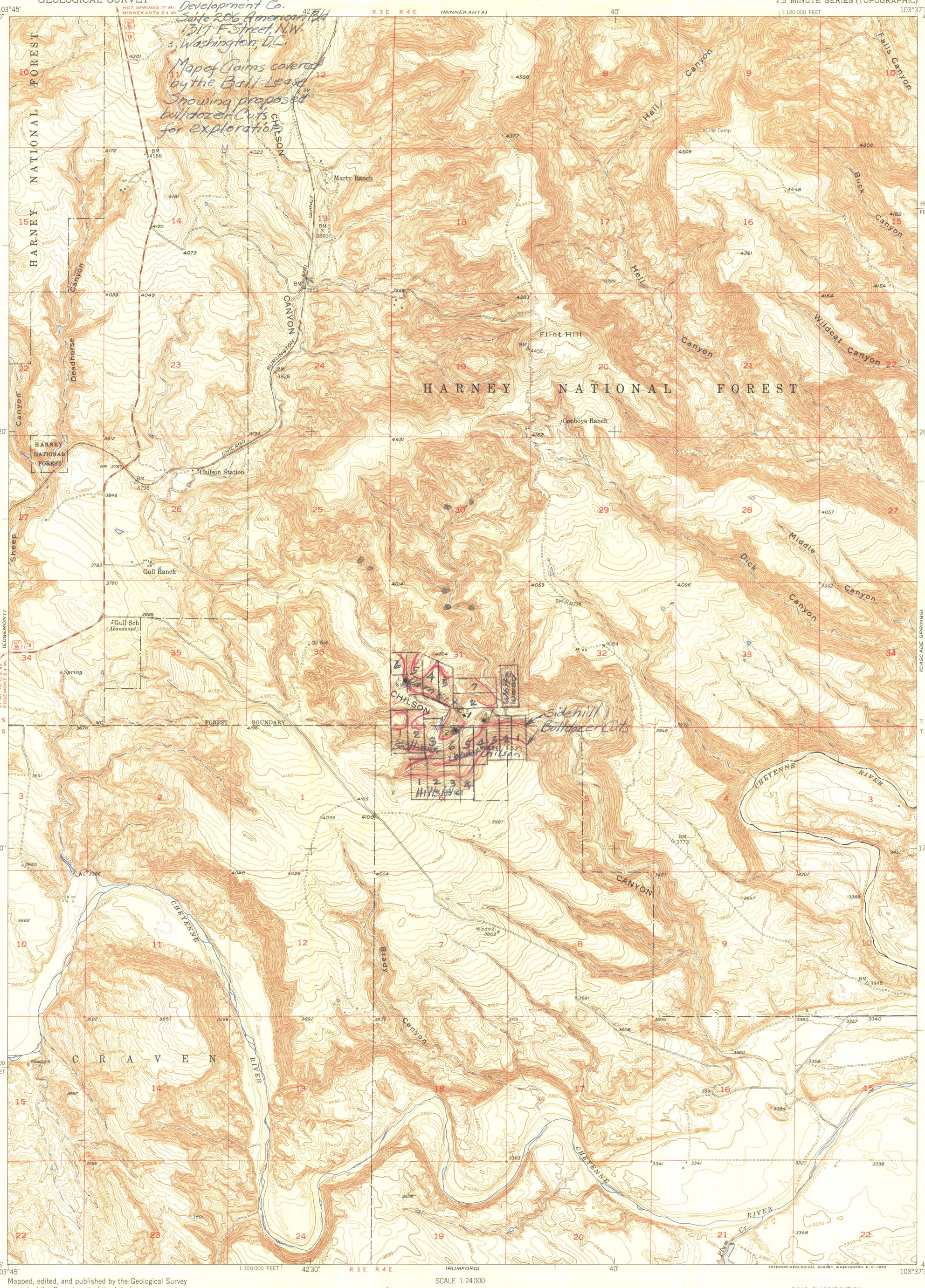
EXHIBIT A

American Mining and Development Co.
Suite 206 American Bld
1317 F Street, N.W.
Washington, D.C.

Map of Claims covered by the Bell Lease
Showing proposed bulldozer Cuts for exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

FLINT HILL QUADRANGLE
SOUTH DAKOTA-FALL RIVER CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey as part of the Department of the Interior program for the development of the Missouri River Basin

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1949. Field check 1950

Polyconic projection. 1927 North American datum
10,000-foot grid based on South Dakota coordinate system, south zone

TRUE NORTH
MAGNETIC NORTH
14°
APPROXIMATE MEAN DECLINATION, 1950

SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty — 4 LANE | 6 LANE
Medium-duty — 4 LANE | 6 LANE
Light-duty
Unimproved dirt
U. S. Route
State Route

FLINT HILL, S. DAK.
N4315—W10337.5/7.5

1950

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1952

MF200

EXHIBIT A

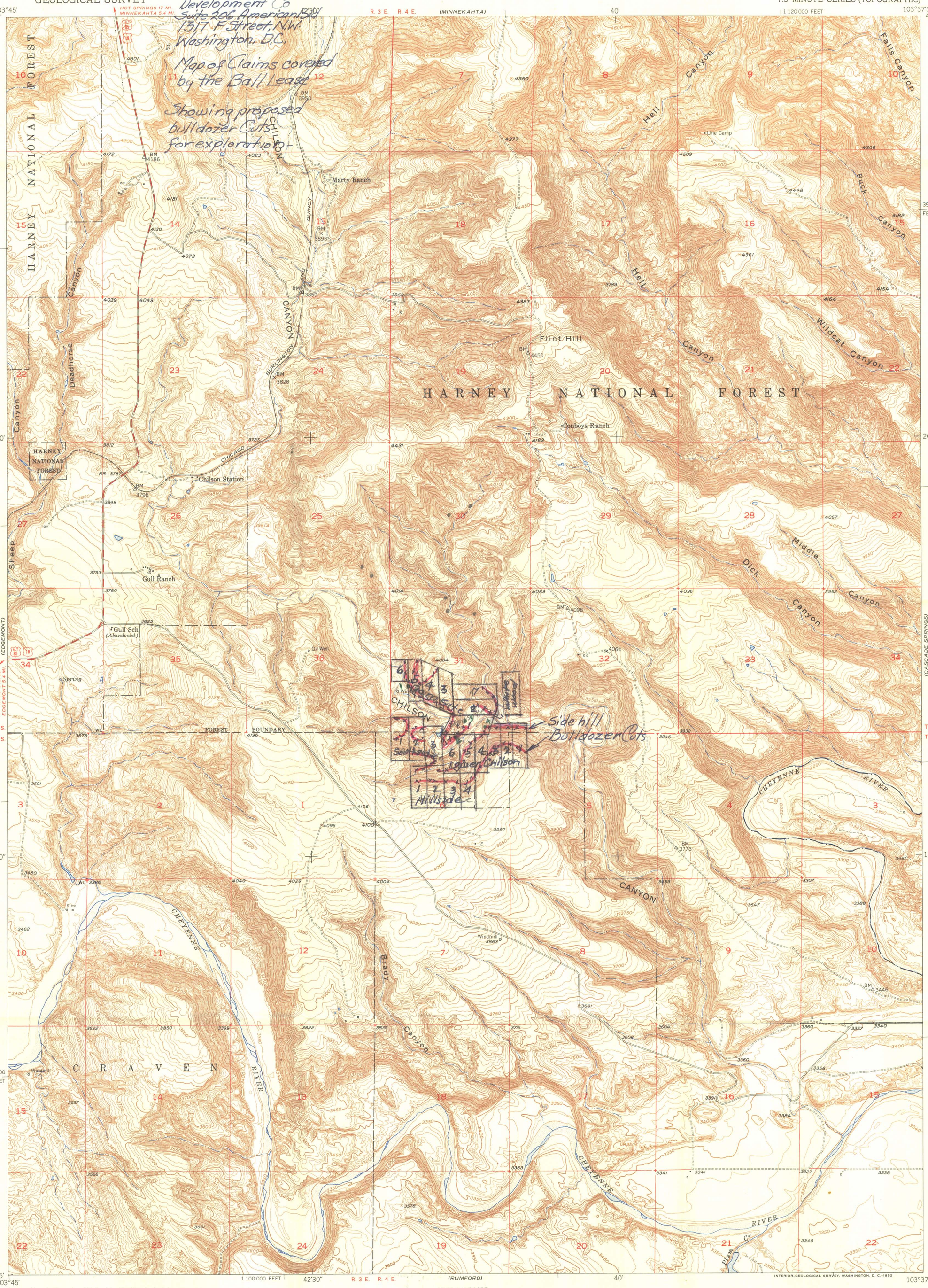
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

American Mining and Development Co
Suite 206 American Bank
1317 F Street, N.W.
Washington, D.C.

Map of Claims covered by the Ball Lease

Showing proposed bulldozer cuts for exploration

FLINT HILL QUADRANGLE
SOUTH DAKOTA-FALL RIVER CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



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MAGNETIC NORTH
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1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

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CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty — 4 LANE | 6 LANE
Medium-duty — 4 LANE | 6 LANE
Light-duty
Unimproved dirt
U. S. Route
State Route

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MF 200(A)

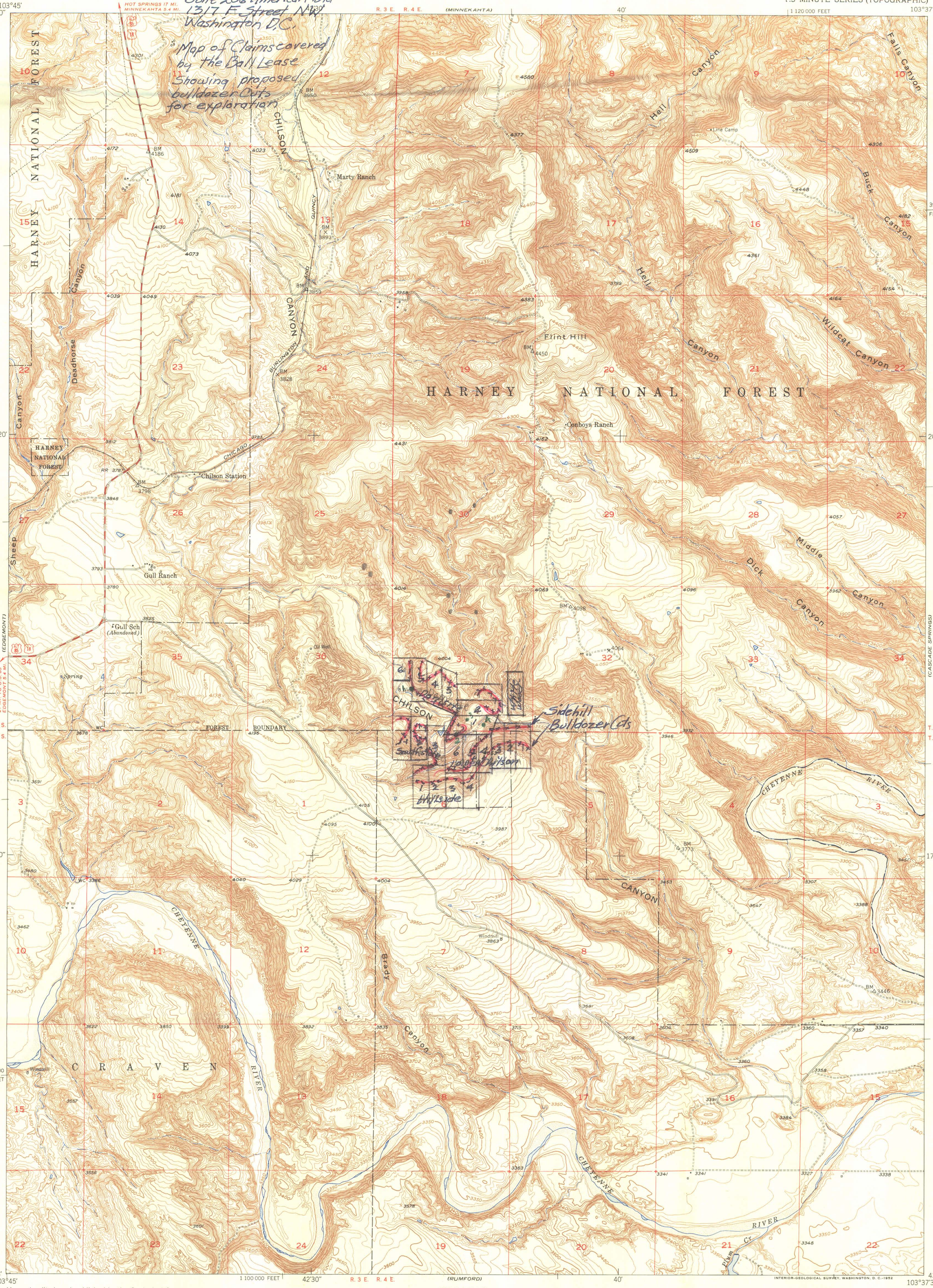
EXHIBIT A

American Mining and Development Co
Suite 206 American Bld
1317 F Street NW
Washington D.C.

Map of Claims covered by the Ball Lease Showing proposed bulldozer Cuts for exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

FLINT HILL QUADRANGLE
SOUTH DAKOTA-FALL RIVER CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



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1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

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CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty — 4 LANE | 6 LANE — Light-duty
Medium-duty — 4 LANE | 6 LANE — Unimproved dirt
U. S. Route — State Route

FLINT HILL, S. DAK.
N4315—W10337.5/7.5
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