Docket No. ~~2160~~

Commodity ~~Mica & Beryl~~

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration, under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

Withdrawal; unsigned contracts returned

Contract No. Idm-E ~~275~~

Date of Contract ~~or Amendment~~: July 30, 1952

Name and Address of Operator:

Mineral Hills, Inc.
Custer, South Dakota

Amount of Government participation ____ $ 7,300.00

Percent of Government participation 90 %

Region: V State: South Dakota

Please release $7,300.00

(Name) Chambers
Chief, Contract Administration and Audit Division

(Title)

Date Delivered to Bureau of Mines, Washington. 9/10/52 13908

Docket No. 2168

Commodity Beryl-Mica

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration, under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

Contract No. Idm-E 376

Date of Contract ~~of Amendment~~ July 30, 1952

Name and Address of Operator:
Mineral Mills, Inc.
Custer, South Dakota

Amount of Government participation $ 7,380.00

Percent of Government participation 90 %

Region: V State: South Dakota

J.L. (Name) Chambers
Chief, Contract Administration

(Title)

Date Delivered to Bureau of Mines, Washington. July 30, 1952

13908

OFFICE OF THE ADMINISTRAT

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

SEP 2 1952

August 29, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Docket DMEA-2168, Contract Idm-E376 - Old Mike Pegmatite Mineral Mills, Inc., Custer, S. Dak.

Returned are the six copies of Contract Idm-E376 unsigned by the operator, together with the original and three copies of a Field Team report explaining why the contract as written does not satisfy the original purpose of the proposed project.

The operator believes that drill holes will be of little value to him.

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

Attachments

ABNeedham:dg
cc Dutton
Mullen
Redden
Region V
files
df

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

DOCKET NO. DMEA 2168

COMMODITY Mica and Beryl
Idm-E376

Government's Copy

RECEIVED
AUG 1 1952
BUREAU OF MINES
DEFENSE DIVISION

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

EXPLORATION PROJECT CONTRACT [1]

IT IS AGREED this 30th day of July, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Mineral Mills, Inc., a South Dakota corporation
Custer, South Dakota

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 Custer, described as follows: [3] The Great Northern Lode Mining Claim located in Sections 2 and 3, T. 3 S. R 4 E., B.H.M. and further described in Book 14, Page 223, Mineral Locations, Custer County, South Dakota. Known as the Old Mike Mine, it lies 3½ miles northwest of Custer, South Dakota.

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:

None

(*b*) ~~That the Operator is lessee, in possession and entitled to possession, and the Owner's Consent to Lease 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] mica and beryl

in or upon the described land; and shall bring the project to completion within a period of five (5) 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.

[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.

Administration
SEP 2 1952

(*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 90 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $7,380.00, which is 90 percent of $8,200.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final 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

MINERAL MILLS, INC.
(Operator)

By

By
Acting Administrator, Defense
Minerals Exploration Administration

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

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

[CORPORATE SEAL]

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO. DMEA-2168

EXHIBIT "A"

Description of the Work

The work shall consist of drilling, by contract, 4 or 5 (BX) diamond drill holes to depths of about 200 feet to 250 feet each. The drilling contract is subject to Government approval prior to the commencement of work. The work shall be done in two stages.

The holes are to be so located and pointed as to explore and test the main pegmatite zone for a distance along the strike 200 feet northwesterly from Section E-E' as indicated on Topographic and Geologic map (Fig. 1) attached hereto.

Stage I

In Stage I there shall be drilled Diamond Drill Hole No. 2 and Diamond Drill Hole No. 3, the locations of which are both tentatively indicated on the attached map. However, the exact location, inclination and depth of each hole will be designated and approved by the Regional Office Field Team before the work is started. The total combined length of the holes drilled in Stage I shall not exceed 500 feet.

Stage II

Two or three additional holes shall be drilled after the completion of Stage I, if the undertaking of this work is approved by the Regional Office Field Team based upon the finding of a favorable pegmatite in the area drilled in Stage I.

The holes would further test the same pegmatite zone tested in Stage I. The exact location, inclination and depth of each hole will be determined by the Field Team before the work is started.

The total combined length of the holes drilled in Stage II shall not exceed 500 feet.

Estimated Costs of the Project

(Items followed by asterisk are allowable maximums)

Stage I

(1)	Independent Contracts		
	500 ft.* BX diamond drill hole at a unit price not to exceed $6.50/ft.*, including all costs of transportation and all other drilling costs		$3,250.00*
(2)	Labor, Supervision, Consultants		
	Supervision - 20 days* @ $15.00 per day*		300.00*
(3)	Operating Material and Supplies		
	None		
(4)	Operating Equipment		
	None		
(5)	Rehabilitation and Repairs		
	None		
(6)	New Buildings, Improvements, Installations		
	None		
(7)	Miscellaneous		
	Social Security tax, liability insurance, workmen's compensation, etc.	$100.00	
	Core boxes and core gathering, including labor	150.00	
	Sampling and core analyses 1/, including labor	300.00	550.00
	Total estimated cost of Stage I		$4,100.00*

1/ The Regional Office is to be consulted as to the disposition of cores for analyses and the proper method of making determination for beryl and other minerals.

Stage II

(1) Independent Contracts

500 ft.* BX diamond drill hole at a unit price not to exceed $6.50/ft.* including all costs of transportation and all other drilling costs		$3,250.00*

(2) Labor, Supervision, Consultants

Supervision - 20 days* @ $15.00 per day*		300.00*

(3) Operating Material and Supplies

None

(4) Operating Equipment

None

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Social Security tax, liability insurance, workmen's compensation, etc.	$100.00	
Core boxes and core gathering, including labor	150.00	
Sampling and ore analyses 2/, including labor	300.00	550.00
Total estimated cost of Stage II		$4,100.00*
Total estimated cost — Stage I		$4,100.00*
Total estimated cost — Stage II		4,100.00*
Total estimated cost — Stages I and II		$8,200.00*
Government participation @ 90%		$7,380.00*

2/ See footnote 1

DMEA-2168

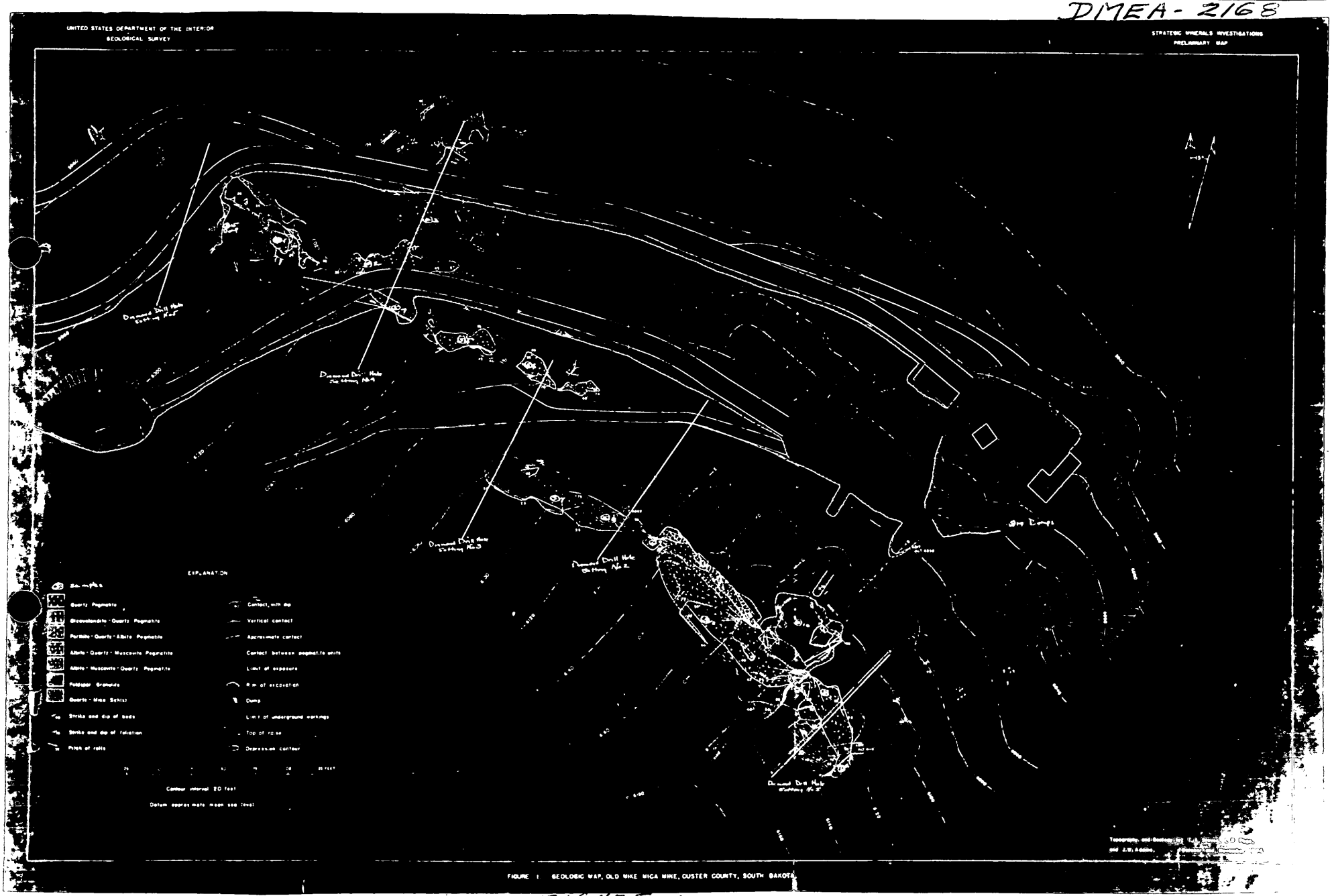

FIGURE 1 GEOLOGIC MAP, OLD MIKE MICA MINE, CUSTER COUNTY, SOUTH DAKOTA

FIGURE 1

DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 2168

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

EXPLORATION

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip
CODE 370

To:	Ind. Minerals	Date	10-18-51
To:	Waskey	Date	
To:	Mr Parsons	Date	
To:	Mr Lyon	Date	10-19-51
To:	Mr Mittendorf	Date	OCT 22 195
To:	General Counsel	Date	Oct 29 1951
To:	P.E.D.	Date	11/2/51
To:	General Counsel	Date	11/5/51
To:	Oper Comm	Date	9-9-52
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

aec

DO NOT DETACH

CONTROLLED DOCUMENT

FILE COPY
SURNAME:

Robertson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

NOV 6 1952

Mr. Robert Waskey
Defense Materials Procurement
Agency
General Services Administration
Building
Washington 25, D. C.

Subject: Docket No. DMEA-2168 - Beryl-Mica
Old Mike Pegmatite Mine
(Mineral Mills, Inc.)
Custer, South Dakota

Dear Mr. Waskey:

Transmitted herewith is copy of letter to Mineral Mills, Inc., advising them that exploration project application, Docket No. DMEA-2168, had been withdrawn and closed.

A contract for the "Old Mike Pegmatite", Idm-E376, was approved but was unacceptable to the company and the unexecuted copies of contract returned; the project was one for about 1,000 feet of diamond drilling.

As requested by you on the telephone, I am sending you a copy of the Field Team's report to read. Please return it to this office after you have finished reading it.

Sincerely yours,

Signed

S.H. 11-6-52

Lawrence G. Houk, Chief
Nonmetallic Minerals Division

Enclosures 2

JTRobertson:gad 11/6/52

Copy to: Adm. R. File
Docket File
Mr. Houk

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C. 600

Robertson
Frank
Linkel
Ellis

BJ

SEP 2 6 1952

Mr. A. J. Johnson, Secretary-Treasurer
Mineral Mills, Inc.
Custer, South Dakota

Subject: Docket No. DMEA-2168
Beryl-Mica
Old Mike Pegmatite
Custer County, South Dakota
Contract Idm-E376

Dear Mr. Johnson:

An original and five copies of an exploration contract, prepared for signature for the subject mine, has been returned to this office by Mr. A. B. Needham, Executive Officer, Region V, and he informs us that the contract is not acceptable to the company.

In our opinion an enlargement of the scope of the project submitted in the rejected contract is not warranted or justified.

You are advised that the application, Docket No. DMEA-2168, is now considered withdrawn and closed. In event of any future request for exploration assistance for the subject mine please file a new application.

Your interest in exploration under the Defense Minerals Program is very much appreciated.

Sincerely yours,

(signed) FRANK E. JOHNSON (fw)

ACTING Administrator

S.H.
9-29-52

JTRobertson:gad 9/25/52

Copy to: Admin. Reading File
Docket File
Operating Committee
Field Team, Region V
Mr. Kauffman, 1347
Mr. Norton, G-232 GSA Bldg.
Mr. Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

September 25, 1952

Memorandum

To: Chairman, Operating Committee

From: Nonmetallic Minerals Division

Subject: Docket No. DMEA-2168 (Beryl-Mica)
Old Mike Pegmatite
Custer County, South Dakota
Contract No. Idm-E376

Re: Returned unsigned contract rejected by operator. Recommendation to advise applicant that application is closed.

Six copies of contract No. Idm-E376 are returned unsigned. The Regional Executive Officer advises that the contract is unacceptable and an explanatory report by the Field Team is also attached to the letter of transmittal.

An exploration project for this mine was considered and reconsidered numerous times by examining engineers and specialist, and finally the contract as written was decided upon. A proposal to test by means of bulk sampling was rejected and the project was finally limited to 1,000 feet of diamond drilling.

The Nonmetallic Minerals Division is of the opinion that no revision should be made in the contract to enlarge the scope of the work and that the contract should be withdrawn and the application in this case closed.

It is recommended that the attached letter be sent to the company advising it of the steps taken on matter.

Jasper T. Robertson
Nonmetallic Minerals Division

FILE COPY
SURNAME:

Robertson
Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C. 600

September 25, 1952

Memorandum

To: Chairman, Operating Committee

From: Nonmetallic Minerals Division

Subject: Docket No. DMEA-2168 (Beryl-Mica)
Old Mike Pegmatite
Custer County, South Dakota
Contract No. Idm-E376

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It is recommended that the attached letter be sent to the company advising it of the steps taken on matter.

Jasper T. Robertson
Nonmetallic Minerals Division

JTRobertson:gad 9/25/52
Copy to: Docket File
Admin. Reading File
Mr. Houk

REPORT

on

Contract Idm E-376, Docket No. 2168

Old Mike Pegmatite, Custer County, South Dakota

Mineral Mills, Inc.

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

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

Reviewed by
DMEA OPERATING COMMITTEE
9/17/52
(date)

Report on Contract Idm E-376, Docket No. 2168, Mineral Mills, Inc.
Old Mike Pegmatite, Custer County, S. Dak.

SUMMARY

The original exploration proposal was based on the application by Mineral Mills, Inc. for an expansion loan for the construction of a beryl flotation mill on the Old Mike property.

In the loan application the estimate of grade of the beryl in the reserves, as determined from analyses of samples collected by the Metals Reserve and Bureau of Mines, was represented as being 2.0 percent. Later evidence indicated that these and other analyses made at the time were unreliable.

Visual estimates by the Geological Survey had placed the grade of beryl at approximately 0.5 percent. However, owing to the small grain size of the beryl, there was also some doubt as to the accuracy of this estimate.

In order to reconcile the differences in grade estimates, it was recommended that other large samples be taken and analysed, in the belief that larger samples and improved methods of analyses would give accurate results. This was considered especially necessary since, in the application for the expansion loan or mill construction the minimum grade of the heads or mill feed was set at 1.5 percent beryl in order for the operation to be economically feasible, and a lower grade head would preclude success. The field team also recommended that if the large scale sampling proved the applicant's estimate of 2.0 percent, or even a grade of 1.0 percent, to be correct, additional exploration should be undertaken.

In a report, Review of Exploration Application, Mineral Mills, Inc., Old Mike Pegmatite, dated March 10, 1952, made after re-examination of the property, the field team concluded that an accurate estimate of the grade of beryl could be obtained with fewer samples. The team then recommended sampling the fine rejects or tailings from the old mill and also cutting 4 or 5 trenches across the beryl zone of the pegmatite.

Actually, in their opinion, the tailing sample would be sufficient for an accurate check of grade of the beryl zone, but it was believed best to verify the results considering the amount that had been requested in the expansion loan application. The second phase of the exploration, core drilling, was recommended only on the slight possibility that the sampling would indicate a grade of 1.0 percent or better.

CONCLUSIONS AND RECOMMENDATIONS

The outline of the exploration in the contract prepared by the DMEA disregards the intent of the original application as well as the recommendations in the review report, and starts immediately with core drilling. The drilling would not adequately sample the pegmatite for beryl, and hence the primary purpose of the exploration, determination of the grade of beryl in the reserves, is lost.

It is possible that core drilling would disclose inner units of sheet mica, but actual information obtainable from drilling as to the quality, grade, and size of the sheet mica would be of little or no value.

Had the original application been based on exploration of the pegmatite primarily for sheet mica, the application would have been denied because the possibility of making a significant discovery is highly improbable and core drilling would not have been recommended as the means of exploration.

The field team still maintains that checking the grade of beryl should be the initial phase of the exploration, and the second phase or core drilling would be justified only if the sampling results proved to be favorable; that is, the beryl grade is two or three times the field team's estimate of 0.5 percent.

The field team recommends that the contract under consideration should not be completed and the application be denied on the basis that a significant discovery is highly improbable.

FILE COPY
SURNAME:

Robertson
Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. R. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

Subject: Docket No. DMEA-2168
Beryl-Mica
Old Mike Mine
Mineral Hills, Inc.
Custer County, South Dakota

Dear Mr. Needham:

Please find herewith the original and five copies of a contract covering the subject exploration project which have been signed by this office for the Government with registor number and effective date.

You will note that only the diamond drilling part of the program as recommended by the Field Team has been included in the contract. We feel that this part of the proposed program is all that warrants Government assistance under DMEA Order-1.

If the contract meets with your approval, present it to the Operator for his approval and signature. If any provisions are unsatisfactory to the Operator, return all copies to this office along with suggested changes for consideration.

After signing of the contract, one copy is to be given to the Operator, one copy retained for your files, and the remaining copies, including the original, are to be returned to this office as soon as possible.

A copy of the contract required by the Regional Finance Office will be forwarded directly by the Washington Finance Section.

Sincerely yours,

7/30

(signed) FRANK E. JOHNSON (JHB)

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Approved:

J. H. Hedges (JHB)

Member, Bureau of Mines

T. P. Thayer (JHB)

Member, Geological Survey

Enclosures 6

JTRobertson:gad 7/8/52
Copy to: Admin. Reading File
Docket File
Operating Committee (2)
Mr. Houk
Mr. Kauffman, 1347
Mr. Norton, G-232 GSA Bldg.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON

July 29, 1952

Memorandum

To: Executive Officer, Region V

From: DMEA Operating Committee

It will be necessary to insert in the contract in the space provided under Article 3 the number of days from the date of the contract in which work shall commence.

Upon execution of the attached contract, the Field Team will make distribution in accordance with instructions contained in Memorandum No. 10, dated July 24, 1952.

FILE COPY
SURNAME:

Robertson
Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Memorandum

JUL 8 1952

To: Chairman, Operating Committee, DMEA

From: Non-Metallic Minerals Division, DMEA

Subject: Docket No. DMEA-2168
Commodity: Beryl-Mica
Old Mike Mine, Mineral Mills, Inc.
Custer County, South Dakota

cc 7/30

Re: Recommendation of exploration assistance for subject mine.

This application has been considered and reconsidered several times by both Field Engineers and Washington Commodity Specialists, but for one reason or another no satisfactory solution was arrived at. In the beginning, the applicant tried to obtain assistance in the form of an expansion loan in the sum of $150,000 to expand milling facilities and production of the Old Mike Mine. Then it was passed on to us for an exploration loan. Twice a contract for exploration assistance was drawn up but both drafts of contract were rejected as being objectional or unworkable. The various comments and discussions on the case by J. J. Norton, D. H. Mullen, C. B. Needham, F. E. Johnson and others, all point up to the difficulty of reaching a satisfactory program for the project.

The fact is that the mine has been worked in the past for sheet and scrap mica. Its future potentiality as a producer of beryl in conjunction with scrap mica operation is largely conjecture and difficult to prove. However, the most adverse factor is the fact that the main mica-bearing pegmatite dike is largely worked out. Cross-section E-E' shows the pinching out of the dike to the northwest. There is a bare possibility that a northwesterly extension may be found if the dike pitches to the northwest. It is to check this, that the pegmatite zone northwest of cross-section E-E', along the strike for a distance of 200 feet, would be tested by core drill. The project would be strictly exploratory and consist of two stages. Stage I - 500 feet of core drilling. Stage II - an additional 500 feet of holes if the work of Stage I encounters favorable pegmatite formation.

This limited program is recommended.

JTRobertson:gad 7/7/52
Copy to: Admin. Reading File
Docket File
Mr. Houk
Attachments

Jasper T. Robertson
Non-Metallic Minerals Division

FILE COPY
SURNAME:

Rubin

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

July 3, 1952

Memorandum

To: Acting Administrator

Through: L. G. Houk

From: Chief Counsel

Subject: Mineral Mills, Inc., Docket No. DMEA 2168

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the attachment to the contract of the map identified as Fig. 1 prior to execution.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachment

HCRubin/mef
cc: Mails & Files
H. C. Rubin
J. L. Hofflund
L. G. Houk
Chron.

n.s. in R. & R.

~~OFFICE OF THE ADMINISTRATOR~~

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

July 7, 1952

Memorandum

To: Acting Administrator

Through: L. G. Houk

From: Chief Counsel

Subject: Mineral Mills, Inc., Docket No. DMEA 2168

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the attachment to the contract of the map identified as Fig. 1 prior to execution.

J. L. Hofflund
Chief Counsel

Attachment

FILE COPY
SURNAME:

Robertson
Norton
Neuffer

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

600

June 19, 1952

Memorandum

To: Chief Counsel, DMEA

From: Nonmetallic Minerals Division, DMEA

Subject: Docket No. DMEA-2168 - Beryl-Mica Mineral Mills, Inc., Old Mike Mine Custer County, South Dakota

JS
RKR

The file for this case is submitted to you together with our preliminary draft of contract and Exhibit "A". They are for your information in the preparation of the final draft of contract.

This application has been considered and reconsidered several times by both Field Engineers and Washington Commodity Specialists, but for one reason or another no satisfactory solution was arrived at. In the beginning, the applicant tried to obtain assistance in the form of an expansion loan in the sum of $150,000 to expand milling facilities and production of the Old Mike Mine. Then it was passed on to us for an exploration loan. Twice a contract for exploration assistance was drawn up but both drafts of contract were rejected as being objectional or unworkable. The various comments and discussions on the case by J. J. Norton, L. H. Mullen, A. B. Needham, F. E. Johnson and others, all point up to the difficulty of reaching a satisfactory program for the project.

The fact is, that the mine has been worked in the past as a scrap mica mine. Its future potentiality as a producer of beryl in conjunction with scrap mica operation is largely conjecture and difficult to prove. However, the most adverse factor is the fact that the main mica-bearing pegmatite dike is largely worked out. Cross-section B-B' shows the pinching out of the dike to the northwest. There is a bare possibility that a northwesterly extension may be found if the dike pitches to the northwest. It is to check this, that the pegmatite zone northwest of cross-section A-A', along the strike for a distance of 200 feet, would be tested by core drill. The project would be strictly exploratory and consist of two stages. Stage I - 500 feet of core drilling. Stage II - an additional 500 feet of holes if the work of Stage I encounters favorable pegmatite formation.

Jasper T. Robertson
Nonmetallic Minerals Division

Attachments

JTRobertson:mp 6/19/52
cc: Docket File
Adm. Reading File
Mr. Houk
Mr. Robertson

FILE COPY
SURNAME:

F. Johnson

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

May 15, 1952

Memorandum

To: Acting Administrator

From: Acting Deputy Administrator

Subject: DMEA-2168 (Beryl-Mica)
Minerals Mills, Inc.,
Old Mike Mine
Custer County, South Dakota
Proposed Exploration Contract

4.5.in R. & R.

The subject operator originally filed an application (DMA-1367) for a loan in the amount of $150,000.00 to expand the facilities and production of the Old Mike Mine. The Field Team examined the property and after consultation with A. I. Johnson, Manager of Mineral Mills, Inc., suggested that he apply for an exploration project. The Field Team reports that the reserve figures of the applicant and Field Team "were not based upon sufficient concrete evidence", and there was an apparent large discrepancy in these figures. The Field Team states that underground workings were inaccessible and the accuracy of former analytical work of the Bureau of Mines and Brush Beryllium Corporation for BeO content were questionable. Visual estimate of the grade of the pegmatite is given by the Field Team as 0.5% beryl and they state that the previous estimate by the USGS of 1.0% beryl appears to be reasonable. Sampling by USBM and Brush Beryllium Corporation indicated a grade of 2% beryl, based on analyses ranging from 0.20% to 0.25% BeO (BeO content of beryl 9-13%.)

The applicant claimed a reserve of 175,000 tons (5 years operations). The Field Team estimates 40,000 tons of proven reserves and 23,000 tons of probable reserves or a total of 63,000 tons. They further estimate that a total of 150,000 tons may possibly be present.

Under date of September 29, 1951, Operator filed an application for an Exploration Project as follows:

A - Sampling Dumps and Outcrops	
15 samples at $20.00 each	$300.00
4-way split of samples and analyses and study	300.00
Sub-total	600.00
B - 1,750' Diamond drilling @ $5.00 per ft.	$8750.00
Sampling and analyses of D.D. cores	400.00
Sub-total	$9150.00
Project total	$9750.00

Field Team Recommendation

A - 2 samplers @ $1.25 per hr., plus 6% for taxes & ins., $21.20 per day for 15 days	$ 318.00
Analyses of 60 pulps (4 cuts from 15 channel samples) at $15.00 each	900.00
Sub-total	$1218.00
B - 1,750' AX Diamond core drilling @ $5.00 per ft.	$8750.00
Analyses of 40 samples @ $15.00 each	600.00
Sub-total	$9350.00
Project total	$10,568.00

A contract was prepared but was unacceptable to Legal Division because of lack of clarity with respect to encumbrances on property.

Under date of November 7, 1951, Operator was requested to furnish information regarding any liens or encumbrances on property. Necessary data were received from Operator.

The USGS Commodity Specialist recommended modification of the plan and return to Field Team for reconsideration, suggesting bulk sampling of outcrops and mine workings as stage one, and 300 a foot tunnel as stage two, to be followed by drilling if previous work was successful. The suggested changes were discussed with Mr. Meadows, Executive Officer, Region V. Two new proposals were submitted by the Field Team and Region V Headquarters. These

als are tabulated below:

Original

Bulk, sampling, 6 samples at $308.36 ea.	$1,850.00
Drifting and Crosscutting, 500' @ $32.10 per ft.	16,050.00
Diamond Drilling, 1,000' @ $6.00 per ft.	7,800.00
Total	$25,700.00

Revised

A - Bulk, sampling, 20 samples @ $308.36 ea.	$ 6,167.20
B - Drifting and Crosscutting, 425' @ $32.10 per ft.	13,642.50
C - Diamond Drilling, 1,750' @ $6.00 per ft.	12,300.00
Total	$32,109.70

Mr. D. H. Mullen in his memorandum of March 5, 1952 to Mr. A. B. Needham makes pertinent remarks with respect to the proposed project.

Under date of March 31, 1952 Mr. J. J. Norton, Commodity Specialist of USGS, comments on the latest proposal from the Field Team. He recommends following the Field Team's recommendations with suggested modifications.

The current proposed contract has been reduced to the following:

A - 6 bulk samples, including analyses @ $283.33 ea. Total $1,700.00

Thus the Contract would be solely a bulk sampling job to determine the BeO content of the exposed outcrops of the pegmatite. Evidently, it was thought that this expense was all that would be warranted.

In reviewing the docket, it appears that the sole purpose of the proposed project is to prove the grade of the pegmatite in order to support the application for a production loan. This does not seem to me to constitute an exploration project under DMEA 1.

If we undertook such a project and the results were too low in grade, the project would be ended and the cost to the Government would be small. However, if the results indicated a mineable grade of material, a loan could not be supported because of insufficient tonnage. No new reserves would be added to the estimate of the Field Team. The results would not be representative as they would be taken only from the most accessible surface exposures. Underground exposures could not be sampled as they are now inaccessible. The question of obtaining proper weights is also involved.

Past experience of Metals Reserve Company with the management indicates that it is unreliable and incompetent to carry out the project. The sampling would have to be closely supervised by the Government from start to final preparation of samples.

The project would then become a case of the Bureau of Mines and Geological Survey doing consulting work and being supervisors for the Operator, a practice to which both agencies are strongly opposed. It would be more appropriate to finance the USBM and have them do the job for DMPA.

The proposed procedure of sending 4-100 pound samples of material averaging approximately 1/2 inch in size to separate parties for analyses would be inconclusive as we would probably receive 4 different results on such samples. To obtain results in agreement, it would be necessary to reduce the samples to a pulp in the usual manner and then make a 4-way split of the pulp.

The record does not show any place where the previous samples or sampling methods were questioned, but only the methods of analyses. Possibly the USBM and Brush Burlington Corp. might still have the original pulps that could be analyzed by modern techniques and obtain a reliable answer to the average BeO content of the pegmatite.

If we had a project consisting only of sampling and analyses, and the results were favorable, could we appropriately certify a discovery or development?

It would appear that a large number of channel samples would give more representative results than a fewer number of bulk samples. The latter should be required only if metallurgical tests were to be made, in which case the results would have some significance as to the value of the material to be mined.

An Exploration Project is for the purpose of finding new ore, either by delineating and sampling new ore bodies or extensions of known ore bodies. If it is assumed there is a possibility of finding additional reserves of beryl, then the project should be set up for this purpose. To do this, the most practical means would be to put down a few drill holes to find the extension of the pegmatite mass or other separate masses of pegmatite that may be in the vicinity of those exposed.

However, a study of the USGS maps of the old workings, clearly indicates that the main pegmatite pinches out at depth and becomes very narrow in the lowest workings (now inaccessible). It also appears to pinch out towards the only open end which is to the

northeast. The possibility of adding to the reserves, therefore, appears to be very limited. Under the circumstances, I am of the opinion that the application should be denied.

Although the amount of money to be expended is small, I have gone into this case in detail because of the policy matters involved and the establishment of a precedent for similar cases if a contract is made only for sampling and analyses, which is work that should be done as a part of an examination for a production loan and not as an Exploration Project.

Acting Deputy Administrator

FEJohnson:pa
5-15-52

cc: Admin. Reading File
R & R
Mr. Houk
F. E. Johnson (2)

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

May 15, 1952

Memorandum

To: Acting Administrator

From: Acting Deputy Administrator

Subject: DMEA-2168 (Beryl-Mica)
Minerals Mills, Inc.,
Old Mike Mine
Custer County, South Dakota
Proposed Exploration Contract

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Frank E. Johnson
Acting Deputy Administrator

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. B. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

Subject: Docket No. DMEA-2168 - Beryl & Mica
Old Mike Mine
Mineral Mills, Inc.
Custer County, South Dakota

Dear Mr. Needham:

Please find herewith the original and five copies of a contract covering the subject exploration project which have been signed by this office for the Government with register number and effective date as shown.

If the contract meets with your approval, present it to the Operator for his approval and signature. If any provisions are unsatisfactory to the Operator, return all copies to this office along with suggested changes for consideration.

After signing of the contract, one copy is to be given to the Operator, one copy retained for your files, and the remaining copies, including the original, are to be returned to this office as soon as possible.

A copy of the contract required by the Regional Finance Office will be forwarded directly by the Washington Finance Section.

Sincerely yours,

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures 6

Approved:

_____
Member, Bureau of Mines

_____
Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. B. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

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Old Mike Mine
Mineral Mills, Inc.
Custer County, South Dakota

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Sincerely yours,

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures 6

Approved:

_____
Member, Bureau of Mines

_____
Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. B. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

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Old Mike Mine
Mineral Mills, Inc.
Custer County, South Dakota

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A copy of the contract required by the Regional Finance Office will be forwarded directly by the Washington Finance Section.

Sincerely yours,

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures 6

Approved:

Member, Bureau of Mines

Member, Geological Survey

LGHouk:gad 5/7/52
Copy to: Admin. Reading File
Operating Committee
Docket File
Mr. Norton, G-232, GSA Bldg.
Mr. Needleman, 3510
Mr. Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. B. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

Subject: Docket No. DMEA-2168 - Beryl & Mica
Old Mike Mine
Mineral Mills, Inc.
Custer County, South Dakota

Dear Mr. Needham:

Please find herewith the original and five copies of a contract covering the subject exploration project which have been signed by this office for the Government with register number and effective date as shown.

If the contract meets with your approval, present it to the Operator for his approval and signature. If any provisions are unsatisfactory to the Operator, return all copies to this office along with suggested changes for consideration.

After signing of the contract, one copy is to be given to the Operator, one copy retained for your files, and the remaining copies, including the original, are to be returned to this office as soon as possible.

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Mr. Houk

Mr. A. S. Needham
Executive Officer, DMEA
Field Team, Region V
2308 Colfax Avenue, South
Minneapolis 4, Minnesota

Subject: Docket No. [illegible]-2168 - Beryl & Mica
Old Mike Mine
Mineral Hills, Inc.
Custer County, South Dakota

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Defense Minerals Exploration
Administration

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Mr. Houk

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Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

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Defense Minerals Exploration
Administration

Enclosures 6

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Member, Geological Survey

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Mr. Norton, G-232, GSA Bldg.
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Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

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Custer County, South Dakota

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Operating Committee
Docket File
Mr. Norton, G-232, GSA Bldg.
Mr. Needleman, 3510
Mr. Houk

FILE COPY
SURNAME:

Houk per gad

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. N. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

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Mineral Mills, Inc.
Custer County, South Dakota

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Defense Minerals Exploration
Administration

Enclosures 6

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LGHouk:gad 5/7/52
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Docket File
Mr. Norton, G-232, GSA Bldg.
Mr. Needleman, 3510
Mr. Houk

Mr. A. B. Needham
Executive Officer, DMA
Field Team, Region V
2008 Colfax Avenue, South
Minneapolis 5, Minnesota

Subject: Docket No. DMA-2168 - Beryl & Mica
Old Mike Mine
Mineral Hills, Inc.
Custer County, South Dakota

Dear Mr. Needham:

Please find herewith the original and five copies of a contract covering the subject exploration project which have been signed by this office for the Government with register number and effective date as shown.

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Defense Minerals Exploration
Administration

Enclosures 6

Approved:

Member, Bureau of Mines

Member, Geological Survey

LGHouk:gad 5/7/52
Copy to: Admin. Reading File
Operating Committee
Docket File
Mr. Norton, G-232, GSA Bldg.
Mr. Needleman, 3510
Mr. Houk

400 FILE COPY
SURNAME:

Keating

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

NOV 30 1951

Mr. Albert Gushurst, President
Mineral Mills, Inc.
Lead, South Dakota

Re: Docket DMA ~~13672~~ 2168
Mineral Mills, Inc.
Old Mike Mine
Custer, South Dakota

Dear Mr. Gushurst:

On November 6th this office wrote Mr. A. I. Johnson, Secretary of your company, requesting information relative to any liens or encumbrances which might be against your property. A copy of this letter is enclosed together with copies of Mineral Order 5 and M. F. 103.

The above information is required before your application can be given further consideration. A simple letter from your company signed by an authorized official stating that there are no liens or encumbrances, if that is the case, will be sufficient.

Will you be kind enough to advise this office so that consideration of your application may proceed.

Sincerely yours,

C. O. Mittendorf (fw) 11-30

Acting Administrator,
Defense Minerals Exploration
Administration.

Enclosures-3

11-29-51
AGKeating/hmj

cc to: Adm. Reading File
Reports and Records
Mr. Mittendorf
Mr. Keating
Docket

FILE COPY
SURNAME:

Keating
FEJohnson

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

NOV 7 1951

Mr. A. I. Johnson, Secretary Treasurer
Mineral Mills, Inc.
Custer, South Dakota

Re: Docket No. DMA-2168X
Old Mike Mine

Dear Mr. Johnson:

Referring to your application for aid for an exploration project pursuant to Mineral Order 5, on form M. F. 103, your application does not contain the data requested in that form under item 6, relative to liens or encumbrances on the property upon which the work is to be done.

Will you be kind enough to furnish this information promptly so that further consideration of your application will not be delayed. Enclosed are two copies of Form M. F. 103 for your reference.

Sincerely yours,

(signed) FRANK E. JOHNSON (for) J.J. 11-7

Acting Director,
Production Expansion Division

Enclosures-2
AGKeating/hmj
Typed 11-6-51

cc to: R and R
Adm Reading Files
PED
Mr. Keating
Courtesy

FILE COPY
SURNAME:

140
DMA-2168X
Guthrie

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

November 1, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Mineral Mills, Inc. exploration contract -- Docket No. DMA-2168X

The proposed exploration contract in this case, submitted to us on October 29, 1951, is returned unapproved because the meaning of the words "None Required" as filled in in Article 2(a) is not clear. If there are no encumbrances the words "None" or "No encumbrances" should be used. If there are encumbrances they should be listed, and if no subordination agreement is required, the circumstances should be explained.

Your file is returned herewith.

J. L. Hofflund

N.S
R+R

J. L. Hofflund
General Counsel

Attachment

RRGuthrie/ema

Copy to: Reports & Records
J. L. Hofflund
R. R. Guthrie
Chron.

FILE COPY
SURNAME:

Washey
Parsons

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION 370
WASHINGTON 25, D. C.

October 18, 1951

Memorandum

To: Chief, Industrial Minerals Branch, DMA

From: Chief, Programming and Planning, DMA

Subject: DMA-2168X, Mineral Hills, Inc.
Old Mike Mine, Custer County, S. D.
Commodity: Beryl, Mica, Tantalite
Amount: 90% of $10,568

The prospective available supply of strategic beryl, mica and tantalite is far short of meeting defense requirements. Consequently, it is highly desirable that exploration for new domestic deposits be stimulated by any reasonable Government assistance to private interests. Any exploration project that holds promise of finding significant new reserves, merits consideration by Defense Minerals Administration.

/s/ N.S
R+R

A. J. Parsons

WASHEY:mp
cc: Field Team, Region V (2)
Mr. Mittendorf
Mr. Norton
Mr. Parsons
Mr. Barr
DMA Docket File

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

May 6, 1952

Memorandum

To: Acting Administrator
Through: Mr. L. G. Houk LGH.

From: Chief Counsel

Subject: Minerals Mills, Inc., Docket No. DMEA-2168

The attached exploration contract is in satisfactory legal form for execution by you, subject to annexing to the description of the real property in Article 2 the recording data related to the mining claims, or something in lieu thereof, as provided in DMEA Circular 21, Article 3(c).

Your attention is called to the fact that this exploration contract is for bulk sampling, unrelated to any other sort of exploration work. I do not think that this is objectionable from a legal standpoint, but I have understood you to say that you preferred not to enter into a contract for bulk sampling unrelated to any other sort of exploration.

J. L. Hofflund
Chief Counsel

Attachments

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

May 6, 1952

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Through: Mr. L. G. Houk

From: Chief Counsel

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J. L. Hofflund

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Chief Counsel

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

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From: Chief Counsel

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J. L. Hofflund
Chief Counsel

Attachments

HCRubin/JLHofflund/em
Copy to: Mails and Files
L. G. Houk
H. C. Rubin
J. L. Hofflund

FILE COPY
SURNAME:

Portin

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

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From: Chief Counsel

Subject: Minerals Mills, Inc., Docket No. DMEA-2168

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J. L. Hofflund

J. L. Hofflund
Chief Counsel

N.S
R+R

Attachments

HCRubin/JLHofflund/em
Copy to: Mails and Files
L. G. Houk
H. C. Rubin
J. L. Hofflund

May 15, 1952

Memorandum

To: Acting Administrator

From: Acting Deputy Administrator

Not official

Subject: DMA-2168 (Beryl-Mica)
Minerals Mills, Inc.,
Old Mike Mine
Custer County, South Dakota
Proposed Exploration Contract

The subject operator originally filed an application (DMA-1367) for a loan in the amount of $150,000.00 to expand the facilities and production of the Old Mike Mine. The Field Team examined the property and after consultation with A. I. Johnson, Manager of Mineral Mills, Inc., suggested that he apply for an exploration project. The Field Team reports that the reserve figures of the applicant and Field Team "were not based upon sufficient concrete evidence", and there was an apparent large discrepancy in these figures. The Field Team states that underground workings were inaccessible and the accuracy of former analytical work of the Bureau of Mines and Brush Beryllium Corporation for BeO content were questionable. Visual estimate of the grade of the pegmatite is given by the Field Team as 0.5% beryl and they state that the previous estimate by the USGS of 1.0% beryl appears to be reasonable. Sampling by USBM and Brush Beryllium Corporation indicated a grade of 2% beryl, based on analyses ranging from 0.20% to 0.25% BeO (BeO content of beryl 9-13%.)

The applicant claimed a reserve of 175,000 tons (5 years operations). The Field Team estimates 40,000 tons of proven reserves and 23,000 tons of probable reserves or a total of 63,000 tons. They further estimate that a total of 150,000 tons may possibly be present.

Under date of September 29, 1951, Operator filed an application for an Exploration Project as follows:

A - Sampling Dumps and Outcrops 15 samples at $20.00 each	$300.00
4-way split of samples and analyses and study	300.00
Sub-total	600.00
B - 1,750' Diamond drilling @ $5.00 per ft.	$8750.00
Sampling and analyses of D.D. cores	400.00
Sub-total	$9150.00
Project total	$9750.00

Field Team Recommendation

A - 2 samplers @ $1.25 per hr., plus 6% for taxes & Ins., $21.20 per day for 15 days	$ 318.00
Analyses of 60 pulps (4 cuts from 15 channel samples) at $15.00 each	900.00
Sub-total	$1218.00
B - 1,750' AA Diamond core drilling @ $5.00 per ft.	$8750.00
Analyses of 40 samples @ $15.00 each	600.00
Sub-total	$9350.00
Project total	$10,568.00

A contract was prepared but was unacceptable to Legal Division because of lack of clarity with respect to encumbrances on property.

Under date of November 7, 1951, Operator was requested to furnish information regarding any liens or encumbrances on property. Necessary data were received from Operator.

The USGS Commodity Specialist recommended modification of the plan and return to Field Team for reconsideration, suggesting bulk sampling of outcrops and mine workings as stage one, and 300 a foot tunnel as stage two, to be followed by drilling if previous work was successful. The suggested changes were discussed with Mr. Needham, Executive Officer, Region V. Two new proposals were submitted by the Field Team and Region V Headquarters. These

proposals are tabulated below:

Original

A - Bulk, sampling, 6 samples at $308.36 ea.		$1,850.00
B - Drifting and Crosscutting, 500' @ $32.10 per ft.		16,050.00
C - Diamond Drilling, 1,000' @ $6.00 per ft.		7,800.00
	Total	$25,700.00

Revised

A - Bulk, sampling, 20 samples @ $308.36 ea.		$ 6,167.20
B - Drifting and Crosscutting, 425' @ $32.10 per ft.		13,642.50
C - Diamond Drilling, 1,750' @ $6.00 per ft.		12,300.00
	Total	$32,109.70

Mr. D. H. Mullen in his memorandum of March 5, 1952 to Mr. A. B. Needham makes pertinent remarks with respect to the proposed project.

Under date of March 31, 1952 Mr. J. J. Norton, Commodity Specialist of USGS, comments on the latest proposal from the Field Team. He recommends following the Field Team's recommendations with suggested modifications.

The current proposed contract has been reduced to the following:

A - 6 bulk samples, including analyses @ $283.33 ea. Total $1,700.00

Thus the Contract would be solely a bulk sampling job to determine the BeO content of the exposed outcrops of the pegmatite. Evidently, it was thought that this expense was all that would be warranted.

In reviewing the docket, it appears that the sole purpose of the proposed project is to prove the grade of the pegmatite in order to support the application for a production loan. This does not seem to me to constitute an exploration project under DMEA 1.

If we undertook such a project and the results were too low in grade, the project would be ended and the cost to the Government would be small. However, if the results indicated a mineable grade of material, a loan could not be supported because of insufficient tonnage. No new reserves would be added to the estimate of the Field Team. The results would not be representative as they would be taken only from the most accessible surface exposures. Underground exposures could not be sampled as they are now inaccessible. The question of obtaining proper weights is also involved.

Past experience of Metals Reserve Company with the management indicates that it is unreliable and incompetent to carry out the project. The sampling would have to be closely supervised by the Government from start to final preparation of samples.

The project would then become a case of the Bureau of Mines and Geological Survey doing consulting work and being supervisors for the Operator, a practice to which both agencies are strongly opposed. It would be more appropriate to finance the USBM and have them do the job for DMPA.

The proposed procedure of sending 4-100 pound samples of material averaging approximately 1/2 inch in size to separate parties for analyses would be inconclusive as we would probably receive 4 different results on such samples. To obtain results in agreement, it would be necessary to reduce the samples to a pulp in the usual manner and then make a 4-way split of the pulp.

The record does not show any place where the previous samples or sampling methods were questioned, but only the methods of analyses. Possibly the USBM and Brush Burlington Corp. might still have the original pulps that could be analyzed by modern techniques and obtain a reliable answer to the average BeO content of the pegmatite.

If we had a project consisting only of sampling and analyses, and the results were favorable, could we appropriately certify a discovery or development?

It would appear that a large number of channel samples would give more representative results than a fewer number of bulk samples. The latter should be required only if metallurgical tests were to be made, in which case the results would have some significance as to the value of the material to be mined.

An Exploration Project is for the purpose of finding new ore, either by delineating and sampling new ore bodies or extensions of known ore bodies. If it is assumed there is a possibility of finding additional reserves of beryl, then the project should be set up for this purpose. To do this, the most practical means would be to put down a few drill holes to find the extension of the pegmatite mass or other separate masses of pegmatite that may be in the vicinity of those exposed.

However, a study of the USGS maps of the old workings, clearly indicates that the main pegmatite pinches out at depth and becomes very narrow in the lowest workings (now inaccessible). It also appears to pinch out towards the only open end which is to the

northeast. The possibility of adding to the reserves, therefore, appears to be very limited. Under the circumstances, I am of the opinion that the application should be denied.

Although the amount of money to be expended is small, I have gone into this case in detail because of the policy matters involved and the establishment of a precedent for similar cases if a contract is made only for sampling and analyses, which is work that should be done as a part of an examination for a production loan and not as an Exploration Project.

Acting Deputy Administrator

FEJohnson:pa
5-15-52

cc: Admin. Reading File
R & R
Mr. Houk
F. E. Johnson (2)

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

DOCKET NO: DMEA 2168

COMMODITY Beryl - Mica

GOVERNMENT'S COPY

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] Mineral Mills, Inc., A South Dakota Corporation
Custer, South Dakota

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 Custer, described as follows: [3] The Great Northern lode mining claim located in Sections 2 and 3, T. 3 S., R. 4 E., Black Hills Meridian. It is about 3½ miles northwest of Custer and is known as the Old Mike mine. Book 14 Page 223 Mineral Locations Custer County.

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:

None

(*b*) ~~That the Operator is not 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 thirty days from the date of this contract shall commence work on a project of exploration for [5] beryl and mica

in or upon the described land; and shall bring the project to completion within a period of ninety days 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 all[illegible]ble maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, o[illegible] purchased, installed, or constructed for the purposes of the exploration work, with the estimated c[illegible] which is included in the estimate of costs in Exhibit "A." All of these items are allowable m[illegible]

(7) *Miscellaneous.*—Repairs to and maintenance of operating equipment (not incl[illegible] of the Operator's equipment), analytical work, accounting, workmen's compensati[illegible] payroll taxes.

(8) *Contingencies.*—Such other necessary, reasonable direct costs [illegible] of the total aggregate estimate of costs, whether or not includ[illegible] approved by the Government in the course of the work, as in[illegible]

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

[1] If sufficient space is not provided in any blank, use an extra s[illegible]
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the pro[illegible] attach or the production from which is not to be subj[illegible]
[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 90 percent of the allowable costs incurred as they accrue, in an aggregate total amount not in excess of $~~1,530.00~~ 10,500, which is 90 percent of $~~1,700.00~~ 11,700.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided*, that until the Operator's final report and final accounting have been rendered to the Government, and any final 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

Mineral Mills, Inc.
(Operator)

By _____

By _____
Acting Administrator,
Defense Minerals Exploration
Administration

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

_____

[CORPORATE SEAL]

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

DOCKET NO. DMEA 2168

COMMODITY Beryl - Mica

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

OPERATOR'S COPY

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]

Mineral Mills, Inc., A South Dakota Corporation
Custer, South Dakota

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 Custer, described as follows: [3] The Great Northern lode mining claim located in Sections 2 and 3, T. 3 S., R. 4 E., Black Hills Meridian. It is about 3½ miles northwest of Custer and is known as the Old Mike mine.

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:

None

(*b*) [illegible] 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 thirty days from the date of this contract shall commence work on a project of exploration for [5] beryl and mica

in or upon the described land; and shall bring the project to completion within a period of ninety days 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.

[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 90 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $1,530.00, which is 90 percent of $1,700.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final 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

Mineral Mills, Inc.
(Operator)

By _____

Acting Administrator,
Defense Minerals Exploration
Administration

By _____

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

_____

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO DMEA-2168

Exhibit "A"

Description of the Work

This project will consist entirely of sampling. Six bulk samples, each weighing approximately 7 tons, shall be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated, in advance, by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus ¼ inch and from it four samples, each weighing 100 pounds, will be cut. One of each of these four samples is to go to the U. S. Geological Survey and to the U. S. Bureau of Mines, and two of each of the four samples are to be commercially analyzed. The commercial laboratories selected shall be well qualified for spectrographic analysis. In case of discrepancies or disagreements pulps from these samples, as agreed upon by Government representatives and the operator, shall be sent to well qualified laboratories, agreed to in advance by the Government, for chemical analysis. The samples sent to the U. S. Geological Survey and the U. S. Bureau of Mines shall be analyzed only if the analysis of the others are in disagreement.

Estimated Costs of the Project

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

1 - Miner @ $12.00/day, 12 days	$144.00	
1 - Helper @ $10.80/day, 12 days	129.60	
2 - Muckers @ $10.80/day each, 12 days	259.20	
1 - Supervisor @ $25.00/day, 12 days	300.00*	$ 832.80

(3) Operating Materials and Supplies

Miscellaneous	138.00

* Indicates allowable maximum

(4) Operating Equipment

To be rented:

1 - Portable compressor, 12 days @ $10.00 per day	$120.00	
Crushing and screening equipment, 6 days @ $10.00 per day	60.00	$ 180.00

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Compensation ins., Social Security, unemployment ins.	$ 75.20	
Power, 6 days @ $4.00 per day	24.00	
Trucking, 42 tons	120.00	
Spectrographic and chemical analysis of samples	330.00	549.20
Total cost of project		$1,700.00*
Government's participation @ 90%		$1,530.00*

Summary of Cost Per Bulk Sample

Labor and supervision of taking samples	$102.33	
Supplies, equipment rental, etc.	53.00	
Trucking sample, 7 tons	20.00	
Labor and supervision, crushing, screening, etc.	49.00	
Power	4.00	
Analysis	55.00	
Total per sample	$283.33	
Total for project, 6 samples		$1,700.00

* Indicates allowable maximum

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

DOCKET NO. DMEA 2168

COMMODITY Beryl - Mica

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

FIELD TEAM'S COPY

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] Mineral Mills, Inc., A South Dakota Corporation
Custer, South Dakota

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 Custer, described as follows: [3] The Great Northern lode mining claim located in Sections 2 and 3, T. 3 S., R. 4 E., Black Hills Meridian. It is about 3½ miles northwest of Custer and is known as the Old Mike mine.

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:

None

(*b*) [redacted]

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 thirty days from the date of this contract shall commence work on a project of exploration for [5] beryl and mica

in or upon the described land; and shall bring the project to completion within a period of ninety days 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.

[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 payment 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 90 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $ 1,530.00, which is 90 percent of $ 1,700.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final 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

Mineral Mills, Inc.
(Operator)

By _____

By _____
Acting Administrator,
Defense Minerals Exploration
Administration

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

_____

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO DMEA-2168

Exhibit "A"

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(2) Labor, Supervision, Consultants

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Miscellaneous	138.00

* Indicates allowable maximum

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(6) New Buildings, Improvements, Installations

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(7) Miscellaneous

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Analysis	55.00	
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Total for project, 6 samples		$1,700.00

* Indicates allowable maximum

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

DOCKET NO. DMEA 2168

COMMODITY Beryl - Mica

FINANCE OFFICE'S COPY ✓

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]

Mineral Hills, Inc., A South Dakota Corporation
Custer, South Dakota

hereinafter called the "Operator," as follows:

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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:

None

(*b*) [redacted]
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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.

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(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.

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(*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 90 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $ 1,530.00, which is 90 percent of $ 1,700.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final 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

Mineral Mills, Inc.
(Operator)

By _____

Acting Administrator,
Defense Minerals Exploration
Administration

By _____

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

_____

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO DMFA-2168

Exhibit "A"

Description of the Work

This project will consist entirely of sampling. Six bulk samples, each weighing approximately 7 tons, shall be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated, in advance, by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus ½ inch and from it four samples, each weighing 100 pounds, will be cut. One of each of these four samples is to go to the U. S. Geological Survey and to the U. S. Bureau of Mines, and two of each of the four samples are to be commercially analyzed. The commercial laboratories selected shall be well qualified for spectrographic analysis. In case of discrepancies or disagreements pulps from these samples, as agreed upon by Government representatives and the operator, shall be sent to well qualified laboratories, agreed to in advance by the Government, for chemical analysis. The samples sent to the U. S. Geological Survey and the U. S. Bureau of Mines shall be analyzed only if the analysis of the others are in disagreement.

Estimated Costs of the Project

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

1 - Miner @ $12.00/day, 12 days	$144.00	
1 - Helper @ $10.80/day, 12 days	129.60	
2 - Muckers @ $10.80/day each, 12 days	259.20	
1 - Supervisor @ $25.00/day, 12 days	300.00*	$ 832.80

(3) Operating Materials and Supplies

Miscellaneous	138.00

* Indicates allowable maximum

(4) Operating Equipment

To be rented:

1 - Portable compressor, 12 days @ $10.00 per day	$120.00	
Crushing and screening equipment, 6 days @ $10.00 per day	60.00	$ 180.00

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Compensation ins., Social Security, unemployment ins.	$ 75.20	
Power, 6 days @ $4.00 per day	24.00	
Trucking, 42 tons	120.00	
Spectrographic and chemical analysis of samples	330.00	549.20
Total cost of project		$1,700.00*
Government's participation @ 90%		$1,530.00*

Summary of Cost Per Bulk Sample

Labor and supervision of taking samples	$102.33
Supplies, equipment rental, etc.	53.00
Trucking sample, 7 tons	20.00
Labor and supervision, crushing, screening, etc.	49.80
Power	4.00
Analysis	55.00
Total per sample	$283.33
Total for project, 6 samples	$1,700.00

* Indicates allowable maximum

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

DOCKET NO. DM[redacted] 2163

COMMODITY Beryl - Mica

EXTRA COPY ✓

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]

Mineral Hills, Inc., A South Dakota Corporation
Custer, South Dakota

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 Custer, described as follows: [3] The Great Northern lode mining claim located in Sections 2 and 3, T. 3 S., R. 4 E., Black Hills Meridian. It is about 3½ miles northwest of Custer and is known as the Old Mica mine.

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:

None

(*b*) [redacted].

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 thirty days from the date of this contract shall commence work on a project of exploration for [5] beryl and mica

in or upon the described land; and shall bring the project to completion within a period of ninety days 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.

[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 [illegible] percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $[illegible], which is [illegible] percent of $[illegible], 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

Mineral Mills, Inc.
(Operator)

By [illegible]

By Acting Administrator, Defense Minerals Exploration Administration

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

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
MINERAL HILLS, INC.
OLD MIKE MINE
DOCKET NO DMEA-2168

Exhibit "A"

Description of the Work

This project will consist entirely of sampling. Six bulk samples, each weighing approximately 7 tons, shall be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated, in advance, by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus ¼ inch and from it four samples, each weighing 100 pounds, will be cut. One of each of these four samples is to go to the U. S. Geological Survey and to the U. S. Bureau of Mines, and two of each of the four samples are to be commercially analyzed. The commercial laboratories selected shall be well qualified for spectrographic analysis. In case of discrepancies or disagreements pulps from these samples, as agreed upon by Government representatives and the operator, shall be sent to well qualified laboratories, agreed to in advance by the Government, for chemical analysis. The samples sent to the U. S. Geological Survey and the U. S. Bureau of Mines shall be analyzed only if the analysis of the others are in disagreement.

Estimated Costs of the Project

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

1 - Miner @ $12.00/day, 12 days	$144.00	
1 - Helper @ $10.80/day, 12 days	129.60	
2 - Muckers @ $10.80/day each, 12 days	259.20	
1 - Supervisor @ $25.00/day, 12 days	300.00*	$ 832.80

(3) Operating Materials and Supplies

Miscellaneous	138.00

* Indicates allowable maximum

(4) Operating Equipment

To be rented:

1 - Portable compressor, 12 days @ $10.00 per day	$120.00	
Crushing and screening equipment, 6 days @ $10.00 per day	60.00	$ 180.00

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Compensation ins., Social Security, unemployment ins.	$ 75.20	
Power, 6 days @ $4.00 per day	24.00	
Trucking, 42 tons	120.00	
Spectrographic and chemical analysis of samples	330.00	549.20
Total cost of project		$1,700.00*
Government's participation @ 90%		$1,530.00*

Summary of Cost Per Bulk Sample

Labor and supervision of taking samples	$102.33
Supplies, equipment rental, etc.	53.00
Trucking sample, 7 tons	20.00
Labor and supervision, crushing, screening, etc.	49.00
Power	4.00
Analysis	55.00
Total per sample	$283.33
Total for project, 6 samples	$1,700.00

* Indicates allowable maximum

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

DOCKET NO. DM[redacted] 2168

COMMODITY Beryl - Mica

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

DOCKET COPY

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]

Mineral Hills, Inc., A South Dakota Corporation
Custer, South Dakota

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 Custer, described as follows: [3] The Great Northern lode mining claim located in Sections 2 and 3, T. 3 S., R. 4 E., Black Hills Meridian. It is about 3½ miles northwest of Custer and is known as the Old Mica mine.

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:

None

(*b*) [redacted].
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 thirty days from the date of this contract shall commence work on a project of exploration for [5] beryl and mica

in or upon the described land; and shall bring the project to completion within a period of ninety days 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.

[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 90 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $1,530.00, which is 90 percent of $1,700.00, the agreed, estimated total cost of the project in which the Government will participate; *Provided,* that until the Operator's final report and final accounting have been rendered to the Government, and any final 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

Mineral Mills, Inc.
(Operator)

By ______________________

Acting Administrator,
Defense Minerals Exploration
Administration

By ______________________

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

____

[CORPORATE SEAL]

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO DMEA-2168

Exhibit "A"

Description of the Work

This project will consist entirely of sampling. Six bulk samples, each weighing approximately 7 tons, shall be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated, in advance, by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus ¼ inch and from it four samples, each weighing 100 pounds, will be cut. One of each of these four samples is to go to the U. S. Geological Survey and to the U. S. Bureau of Mines, and two of each of the four samples are to be commercially analyzed. The commercial laboratories selected shall be well qualified for spectrographic analysis. In case of discrepancies or disagreements pulps from these samples, as agreed upon by Government representatives and the operator, shall be sent to well qualified laboratories, agreed to in advance by the Government, for chemical analysis. The samples sent to the U. S. Geological Survey and the U. S. Bureau of Mines shall be analyzed only if the analysis of the others are in disagreement.

Estimated Costs of the Project

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

1 – Miner @ $12.00/day, 12 days	$144.00	
1 – Helper @ $10.80/day, 12 days	129.60	
2 – Muckers @ $10.80/day each, 12 days	259.20	
1 – Supervisor @ $25.00/day, 12 days	300.00*	$ 832.80

(3) Operating Materials and Supplies

Miscellaneous	138.00

* Indicates allowable maximum

(4) Operating Equipment

To be rented:

1 - Portable compressor, 12 days @ $10.00 per day	$120.00	
Crushing and screening equipment, 6 days @ $10.00 per day	60.00	$ 180.00

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Compensation ins., Social Security, unemployment ins.	$ 75.20	
Power, 6 days @ $4.00 per day	24.00	
Trucking, 42 tons	120.00	
Spectrographic and chemical analysis of samples	330.00	549.20
Total cost of project		$1,700.00*
Government's participation @ 90%		$1,530.00*

Summary of Cost Per Bulk Sample

Labor and supervision of taking samples	$102.33
Supplies, equipment rental, etc.	53.00
Trucking sample, 7 tons	20.00
Labor and supervision, crushing, screening, etc.	49.00
Power	4.00
Analysis	55.00
Total per sample	$283.33
Total for project, 6 samples	$1,700.00

* Indicates allowable maximum

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

DOCKET NO. DMEA 2163

COMMODITY Beryl - Mica

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

DIVISION COPY ✓

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(*b*) [redacted].
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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

Mineral Mills, Inc.
(Operator)

By ----------

Acting Administrator,
Defense Minerals Exploration
Administration

By ----------

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

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO DMEA-2168

Exhibit "A"

Description of the Work

This project will consist entirely of sampling. Six bulk samples, each weighing approximately 7 tons, shall be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated, in advance, by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus ¼ inch and from it four samples, each weighing 100 pounds, will be cut. One of each of these four samples is to go to the U. S. Geological Survey and to the U. S. Bureau of Mines, and two of each of the four samples are to be commercially analyzed. The commercial laboratories selected shall be well qualified for spectrographic analysis. In case of discrepancies or disagreements pulps from these samples, as agreed upon by Government representatives and the operator, shall be sent to well qualified laboratories, agreed to in advance by the Government, for chemical analysis. The samples sent to the U. S. Geological Survey and the U. S. Bureau of Mines shall be analyzed only if the analysis of the others are in disagreement.

Estimated Costs of the Project

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

1 - Miner @ $12.00/day, 12 days	$144.00	
1 - Helper @ $10.80/day, 12 days	129.60	
2 - Muckers @ $10.80/day each, 12 days	259.20	
1 - Supervisor @ $25.00/day, 12 days	300.00*	$ 832.80

(3) Operating Materials and Supplies

Miscellaneous	138.00

* Indicates allowable maximum

(4) Operating Equipment

To be rented:

1 - Portable compressor, 12 days @ $10.00 per day	$120.00	
Crushing and screening equipment, 6 days @ $10.00 per day	60.00	$ 180.00

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Compensation ins., Social Security, unemployment ins.	$ 75.20	
Power, 6 days @ $4.00 per day	24.00	
Trucking, 42 tons	120.00	
Spectrographic and chemical analysis of samples	330.00	549.20
Total cost of project		$1,700.00*
Government's participation @ 90%		$1,530.00*

Summary of Cost Per Bulk Sample

Labor and supervision of taking samples	$102.33
Supplies, equipment rental, etc.	53.00
Trucking sample, 7 tons	20.00
Labor and supervision, crushing, screening, etc.	49.00
Power	4.00
Analysis	55.00
Total per sample	$283.33
Total for project, 6 samples	$1,700.00

* Indicates allowable maximum

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 2168

COMMODITY BERYL-MICA

RECEIVED

APR 7 1952

GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

EXPLORATION PROJECT CONTRACT[1]

~~(Short Form)~~

Not the long form

IT IS AGREED this _____ day of _____, 195~~2~~, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] MINERAL MILLS, INC., a South Dakota Corporation (A. T. JOHNSON, SECRETARY & TREASURER) CUSTER, SOUTH DAKOTA

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 CUSTER, described as follows:[3] THE GREAT NORTHERN LODE MINING CLAIM LOCATED IN SECTIONS 2 AND 3, T. 3S., R. 4E., BLACK HILLS MERIDIAN. IT IS ABOUT 3½ MILES NORTHWEST OF CUSTER AND IS KNOWN AS THE OLD MIKE MINE

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: NONE

(*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 30 days from the date of this contract shall commence work on a project of exploration for[5] BERYL AND MICA

in or upon the described land; and shall bring the project to completion within a period of 90 days from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 90 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $1,530.00, which is 90 percent of $1,700.00, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

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

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

ARTICLE 9. *Changes and added provisions* _____

_____

_____

_____

_____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

_____
(Operator)

By _____

By _____

_____

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

_____ [CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

MINERAL MILLS, INC.

OLD MIKE MINE

EXPLORATION PROJECT CONTRACT

Docket No. OMEA 2168

BERYL-MICA

EXHIBIT "A"

Description OF WORK.

THIS PROJECT WILL CONSIST ENTIRELY OF SAMPLING. SIX BULK SAMPLES, EACH WEIGHING APPROXIMATELY 7 TONS, SHALL BE CUT AT VARIOUS POINTS ON THE OLD MIKE PEGMATITE DIKE AND DUMP. THESE POINTS WILL BE INDICATED in advance BY GOVERNMENT REPRESENTATIVES

EACH SAMPLE WILL BE CRUSHED AND PROPERLY SPLIT. THE END FRACTION WILL BE MINUS 1/2 INCH AND FROM IT FOUR SAMPLES, EACH WEIGHING 100 POUNDS, WILL BE CUT. ONE OF each of these four SAMPLES IS TO GO TO THE U.S. GEOLOGICAL SURVEY and TO THE U.S. BUREAU OF MINES, AND TWO of the four samples ARE to be COMMERCIAL ANALYSED. The commercial laboratories selected shall be WELL QUALIFIED ~~LABORATORIES~~ FOR SPECTOGRAPHIC ANALYSIS. IN CASE OF DISCREPANCIES OR DISAGREEMENTS PULPS FROM THESE SAMPLES, AS AGREED UPON BY GOVERNMENT REPRESENTATIVES AND THE OPERATOR, SHALL BE SENT TO WELL QUALIFIED LABORATORIES, agreed to in advance by the Government, FOR CHEMICAL ANALYSIS. THE SAMPLES SENT TO THE U.S. GEOLOGICAL SURVEY AND THE U.S. BUREAU OF MINES SHALL BE ANALYSED ONLY IF the analysis of the OTHERS ARE IN DISAGREEMENT.

Note Practice at end of total.

~~THIS WORK IS TO BE COMPLETED IN 90 DAYS.~~

ESTIMATED COSTS OF THE PROJECT
(* indicates allowable maximum)

SUMMARY OF COST PER bulk SAMPLE

LABOR & SUPERVISION OF TAKING SAMPLES	$102.33
SUPPLIES, EQUIPMENT, REPAIR, ETC.	53.00
TRUCKING SAMPLE, 7 TONS.	20.00
LABOR & SUPERVISION, CRUSHING, SCREENING, ETC.	49.00
POWER.	4.00
ANALYSIS.	55.00
TOTAL PER SAMPLE	283.33

TOTAL FOR PROJECT, 6 SAMPLES. $1700.00

(1) Independent Contracts none

(2) LABOR, & SUPERVISION, Consultants

1 MINER, @ 12.00 PER DAY, 12 DAYS.	144.00
1 HELPER. 10.80 " " , 12 "	129.60
2 MUCKERS. 10.80 each " " , 12 "	259.20
1 SUPERVISOR @ 25.00 PER DAY 12 DAYS.	300.00*
~~COMPENSATION INS. SOC. SEC. UNEMPLOYMENT INS.~~	~~75.20~~ 832.80
~~TOTAL~~	~~908.00~~

(3) Operating Materials and Supplies

(4) Operating Equipment miscellaneous $138.00

To Be RENTED 1 PORTABLE COMPRESSOR,
12 DAYS AT $10.00 PER DAY 120.00

~~RENTED~~ CRUSHING & SCREENING
EQUIPMENT, 6 DAYS. AT $10.00 PER DAY 60.00

180.00

~~TOTAL~~ ~~318.00~~

(5) Rehabilitation and Repairs
none
(6) New buildings, improvements, installations
(7) MISCELLANEOUS none

Compensation ins., Soc. Sec., Unemployment ins.	$ 75.20
POWER, 6 DAYS AT $4.00 PER DAY	24.00
TRUCKING 42 TONS.	120.00
SPECTROGRAPHIC & CHEMICAL ANALYSIS OF SAMPLES.	330.00
~~TOTAL~~	549.20

Total Cost of Project	1700.00*
Government's participation @ 90%	1530.00*

EXPLORATION PROJECT CONTRACT
MINERAL MILLS, INC.
OLD MIKE MINE
DOCKET NO DMEA-2168

Exhibit "A"

Description of the Work

This project will consist entirely of sampling. Six bulk samples, each weighing approximately 7 tons, shall be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated, in advance, by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus ½ inch and from it four samples, each weighing 100 pounds, will be cut. One of each of these four samples is to go to the U. S. Geological Survey and to the U. S. Bureau of Mines, and two of each of the four samples are to be commercially analyzed. The commercial laboratories selected shall be well qualified for spectrographic analysis. In case of discrepancies or disagreements pulps from these samples, as agreed upon by Government representatives and the operator, shall be sent to well qualified laboratories, agreed to in advance by the Government, for chemical analysis. The samples sent to the U. S. Geological Survey and the U. S. Bureau of Mines shall be analyzed only if the analysis of the others are in disagreement.

Estimated Costs of the Project

(1) Independent Contracts

None

(2) Labor, Supervision, Consultants

1 - Miner @ $12.00/day, 12 days	$144.00	
1 - Helper @ $10.80/day, 12 days	129.60	
2 - Muckers @ $10.80/day each, 12 days	259.20	
1 - Supervisor @ $25.00/day, 12 days	300.00*	$ 832.80

(3) Operating Materials and Supplies

Miscellaneous	138.00

* Indicates allowable maximum

(4) Operating Equipment

To be rented:

1 - Portable compressor, 12 days @ $10.00 per day	$120.00	
Crushing and screening equipment, 6 days @ $10.00 per day	60.00	$ 180.00

(5) Rehabilitation and Repairs

None

(6) New Buildings, Improvements, Installations

None

(7) Miscellaneous

Compensation ins., Social Security, unemployment ins.	$ 75.20	
Power, 6 days @ $4.00 per day	24.00	
Trucking, 42 tons	120.00	
Spectrographic and chemical analysis of samples	330.00	549.20
Total cost of project		$1,700.00*
Government's participation @ 90%		$1,530.00*

Summary of Cost Per Bulk Sample

Labor and supervision of taking samples	$102.33
Supplies, equipment rental, etc.	53.00
Trucking sample, 7 tons	20.00
Labor and supervision, crushing, screening, etc.	49.00
Power	4.00
Analysis	55.00
Total per sample	$283.33
Total for project, 6 samples	$1,700.00

* Indicates allowable maximum

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

1201

SYMBOLS

DL=Day Letter

NL=Night Letter

LT=Int'l Letter Telegram

VLT=Int'l Victory Ltr.

(43)

1952 MAY 7 PM 12 59

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

DMCA-2168

DA099 MA109 M.RTA041 PD GOVT=RAPID CITY SDAK 7 1038A=

LAWRENCE G HOUK= 4637 Interior Bldg

NONMETALIC MINERALS DIVN DEFENSE MINERALS EXPLORATION

Minerals Exploration

ADMN INTERIOR BLDG WASHDC=

RC 1820 Serv

DJS V to Main

V971

RETEL CON OLD MIKE GROUP OF 5 CLAIMS HELD BY LOCATION QUAKING ASP PAGE 611 DICTATOR AND MEDIATOR PAGE 441 MICA MILLING AND MANUFACTURING PAGE 511 ALL BOOK FIFTEEN GREAT NORTHERN BOOK FOURTEEN PAGE 223 MINERALS LOCATION CUSTER COUNTY=

D H MULLEN SUPERVISING ENGINEER RAPID CITY FIELD OFFICE.

5 611 441 511 223.

APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DEPARTMENT OF [illegible]
Defense Minerals
RECEIVED
MAY 8 1952

IN REPLY REFER TO:
G-MD-JJN

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

March 31, 1952

Memorandum

REVIEW OF NEW EXHIBIT A FROM FIELD TEAM FOR APPLICATION DMEA-2168 (Beryl and mica).

To: Non-Metallic Minerals Division, DMEA
From: J. J. Norton, U. S. Geological Survey
Commodities: Beryl and mica.
Applicant: Mineral Mills, Inc.
Name of property: Old Mike
Location of property: Custer County, South Dakota.
Field team's recommendation:

Three stage exploration.

A. Collect 6 samples, 7 tons each, costing a total of $1,850.
B. Drift and crosscut, maximum of 500 feet, costing $16,050.
C. Diamond drilling, 1,000 feet, costing $7,800.

Comments:

1. Two different versions of a new Exhibit A have been submitted. I presume the one marked "void 1st draft" should be disregarded, and I have proceeded on this assumption.

2. Mullen's memorandum of March 5 addressed to Needham contains some very pertinent remarks. Mullen mentions "the apparent incompetence of the operator." I think that RFC's past experience with Mineral Mills, Inc. should be taken into consideration in determining whether or not the Government should cooperate with this operator any further.

3. There might be further discussion of the question of whether or not to do the tunnel work that I suggested in place of the diamond drilling that the field team originally recommended for Stage B. You will remember that the field team wanted Stage B to consist of drilling that would cost $9,350. I was opposed to this recommendation on the ground that in the only place that is worthy of exploration the work could be more adequately done by about 300 feet of tunnel, which at $30 per foot would cost no more than the drilling proposed by the field team. The field team, however, estimates the cost of the necessary tunnel work at $13,643 in one version of Exhibit A and at $16,050 in the other version. Furthermore, the comments by Redden and Binyon show that the area to be explored by the tunnel could be checked first

by 300 to 500 feet of diamond drilling, which presumably would cost between $2,000 and $4,000. Under these circumstances you may wish to do this drilling.

4. The likelihood that Stage C will be necessary is so remote that I suggest not including it in the contract.

5. 500 feet of tunnel work in Stage B seems exeessive, but the map that you have asked Region V to submit will show just what the footage should be.

6. The field team's cost estimate for BeO analyses for Stages A and B is excessive. BeO in this range should be done spectrographically. The cost for such an analysis by a well qualified laboratory, such as the National laboratory in Cleveland or the Saratoga laboratory at Saratoga, New York, is about $5.

7. Rental of a compressor at $10 per day, costing a total of $1,250 for Stages A and B, seems excessive. because this mine presumably still has its compressor and the costs should be at an amortization rate rather than a rental rate.

ACTION SUGGESTED:

Follow field team's recommendation, with any modification necessary in accordance with comments made above.

J. J. Norton

J. J. Norton

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

~~WASHINGTON 25, D.C.~~

Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

March 19, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Docket DMEA-2168, Mineral Mills, Inc., Custer, S. Dak. (Old Mike Mine)

Reference is made to your memorandum of January 29, 1952, requesting this office to prepare a revised exhibit A for preparation of a contract for the subject docket.

This office prepared a revised exhibit, submitted it to our Rapid City representatives, who suggested several changes. The revised exhibit, which is the final version as recommended by Region V, was then prepared.

So that you will know the history of the case, a copy of the first draft and Rapid City's answer and suggestions are attached, together with six copies of the final suggested exhibit A.

This office has retained the copy of the application you sent us, because, pursuant to memorandum No. 2, the field team should retain one copy of all applications.

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

Attachments

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 21 1952

Reviewed by
DMEA OPERATING COMMITTEE
3-26-52
(date)

Copied for DMEA (Wash)
Needham:dt-3/18/52

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

March 5, 1952

Memorandum

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

From: Supervising Engineer, Rapid City Field Office

Subject: Revision DMA Docket 2168X, Old Mike, Mineral Mills Inc., Custer, S. Dak.

The subject proposal has been thoroughly discussed and considered by Binyon of this office and Redden of the Survey. A summary report of that investigation is attached.

I agree generally with their conclusions except that I would not, however, recommend anything beyond the first or sampling phase. The primary purpose of this project was to determine the grade of the material available for mill feed and was to furnish information on which to arrive at a decision on an application for a production-expansion loan of $150,000. At that time the operator wished to keep exploration expenses at a minimum, although he has expressed his approval of this proposal.

It seems somewhat foolish to approve an exploration loan that has only a faint chance of being repaid only to be able to approve a much larger expansion loan. If there is little chance of repaying a loan of $32,000, there is far less chance of repaying a loan five times as large, all of which would, of necessity, come from production over a relatively short period. This viewpoint, together with the apparent incompetence of the operator, makes anything more than the original proposal a very poor risk. I would, therefore, not be inclined to recommend anything more than originally proposed; viz determination of grade of existing material at the lowest possible cost and possibly a limited amount of diamond drilling.

It is also conceivable that the grade could be determined from a single sample of the material on the dump at the scrap mica mill. This material represents a relatively large amount of the beryl-bearing zone less the mica that was recovered.

/s/ D. H. Mullen

Review of Exploration Application, Mineral Mills, Inc., Old Mike Pegmatite (DMEA-2168X, Beryl, Mica, Tantalite), Custer, South Dakota

The original field team recommendation was based on an application for an expansion loan by Mineral Mills, Inc. for $150,000 with which to construct a beryl flotation plant at the Old Mike pegmatite, Custer, S. Dak. The expansion application was based on the supposition that the pegmatite contained 2 percent beryl--a figure based on early sampling results of Metals Reserve and the Bureau of Mines. There was strong reason to suspect that the method of analysis of these early samples was in error. The visual estimates made by the Geological Survey of the beryl percentage for the bulk of the pegmatite was only 0.5 percent. A few spectrographic analyses of samples taken by the Geological Survey indicated approximately 1 percent beryl. This raises the question that the pegmatite might contain considerably more fine-grained beryl than was indicated by the visual estimates. It was decided that the pegmatite should be sampled to check the grade of the beryl before considering the plant expansion application for construction of a beryl mill. The original recommendation was based on the above facts and on the desire of the Applicant to keep exploration expenditures at a minimum so that the total loan could be amortized within the required time.

The new proposal prepared by Region V Headquarters on recommendations from Norton and Page presents several good and bad features.

Stage A. The larger bulk samples will undoubtedly give more accurate results than the smaller samples. The provision for another commercial analyst is an added check to the three originally proposed.

It is noted that provision is made in the sampling costs for four analyses. It is questioned whether or not the Applicant can reimburse the Geological Survey and the Bureau of Mines for the costs of the analyses made by those two agencies.

The cost of the sampling seems unduly high, and it is believed that many of the samples could be eliminated by using the fines from the scrap mica mill (shown in ink on the photostatic copy of the Old Mike map). Part of these fines have been removed, but possibly 2,000 to 3,000 tons of fines remain, representing probably 5,000 tons of wall zone pegmatite. These fines could be corrected for the amount of scrap mica that has been removed, and the results would be a representative sample already crushed to minus 1/2-inch and ready for quartering and transmittal to the analyst. One sample taken from different portions of the fines dump would probably eliminate 15 of the proposed 20 samples. The corrected analysis of this sample would be representative if the entire southeastern

portion of the pegmatite which may be separate pegmatite from the exposures on the northwest corner of the map. It is believed that the five remaining samples would be necessary to check the beryl grade in the portions of the pegmatite which have not been mined and may be a separate pegmatite or pegmatites. The exact location of these samples should be fluid and subject to change upon agreement of the Field Team and the Applicant.

Stage B. Stage B is good in that it will explore and develop the pegmatite, and possibly encourage the mining of scrap mica--if nothing else, if discovered. The drift as outlined in the proposal is erroneously located as starting approximately 90 feet northwest of section EE' and proceeding N. 15° W. The drift would have to be located either at the NE corner of the scrap mica mill, or about 120 feet east of the north end of the mica mill, and would trend in a southeasterly direction along the pegmatite.

There is also no provision for the sampling of the pegmatite in any portion of the drift or laterals. Provision should be made for the handling, crushing, and analysis of approximately 5 samples from the underground workings in Stage B.

Stage C. This stage would be final completion of the work necessary to complete reserve calculations. There would have to be an unusual discovery to warrant completion of the three stages--especially one that would have promise to repay a $32,000 loan. It would be necessary to discover a million dollar pegmatite--an unusually rare species of pegmatite.

The question of continuing with Stage B will be difficult to decide. If the decision is based strictly on the grade of the beryl with reference to the cut-off value (approximately 1.5 percent beryl) for the milling operation as proposed by the Applicant, there will be little difficulty and Stage B will probably not be started. The reason for this is because pegmatites in the Black Hills containing 2 percent beryl are extremely rare, if present at all.

If, on the other hand, the possibility is considered of using lower-grade beryl ore in a government-subsidized operation or of the discovery of a deposit of strategic mica by Stage B, continuation might be recommended. The recommendation for continuation will depend entirely on whether or not a beryl-flotation mill and mica-buying station are established in the vicinity of Custer. At the present prices of mica and the lack of any beryl mill, it would be very unwise to even consider Stage B and C with hope of repayment of the loan.

Even if Stage A proves that the bulk of the pegmatite averages 2 percent beryl, it is doubtful if any beryl production will result. It was recently learned in a discussion with S. M. Runke of the Bureau of Mines that he did not believe the Applicant was competent enough to establish a successful beryl flotation mill under present technological knowledge.

If a beryl flotation mill is established in the Custer vicinity by DMPA through some other company, the sampling and development of reserves has a definite value to the Government and a place in DMEA work. The unusual richness in scrap mica of the wall zone of the pegmatite is favorable for use in a beryl mill. That is, recovered scrap mica would substantially reduce the cost of the beryl produced.

The application has been discussed in detail by the Bureau of Mines and the Geological Survey and it is believed that the sampling of Stage A should be limited to 6 samples, one from the fines dump, and 5 from the outcrops of pegmatite wall zone located in the northwest portion of the map. These would be located with approval of the Field Team, and each sample would contain approximately 7 tons. It is believed that reliable sampling results could be obtained and that approximately $5,000 would be saved.

It is also believed that a minimum of 300 feet and a maximum of 500 feet of diamond drilling (BX core) should be done along the northwestern outcrops of the pegmatite before driving the drift of Stage B. The drilling is believed necessary because very little is known about the structure of the scattered outcrops of pegmatite in the northwest corner of the pegmatite.

Possibly 1,000 feet of diamond drilling could be proposed for Stage C on the rare possibility that it might be needed.

Due to the many related problems involved the final decision should come from authorities able to answer the associated questions, such as "how urgently do we want beryl?" The proposal from Region V Headquarters is more thorough than the one suggested here. It is believed that essentially equivalent results could be obtained by the cheaper proposal.

Jack A. Redden
U. S. Geological Survey

E. O. Binyon
U. S. Bureau of Mines

Revised EXHIBIT "A" For Comment

Void 1st Draft

Exploration Project - Docket DMEA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by the DMEA Field Team.

Stage A

(1) Fifteen ore more bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points are indicated on the attached U. S. Geological Survey map.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days.

(3) Estimated cost of stage A.

Summary of costs per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Assays and analyses	80.00	
Total per sample	$308.36	
15 samples and analysis at $308.36		$4,625.40
5 miscellaneous samples and analysis at $308.36		1,541.80
	Total	$6,167.20

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the DMEA Field Team that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet

This revised exhibit sent to Reped City representatives for comment 2/5/52

of drifting, cross-cutting, and necessary auxiliary work in the northwestern section of the dike, starting approximately 90 feet northwest of section EE (attached USGS map) and bearing approximately N. 15° W. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in 5 months.

(3) Estimated cost of stage B.

Summary of cost per foot		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Analysis	4.00	
Total	$32.10	
325 feet (drifting) at $32.10		$10,432.50
100 feet (lateral) at $32.10		3,210.00
Total		$13,642.50

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with the DMEA Field Team that further work is warranted, this stage of the project will be carried out. It will consist of core drilling along the strike of the dike, the holes to be located approximately as indicated on the attached U. S. Geological Survey map. Definite location and number of holes will depend on the interpretation of results of stage B by the DMEA Field Team. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 8 months.

(3) Estimated cost of stage C.

1,750 feet of BX diamond core drilling not to exceed $6.00 per foot	$10,500.00
Miscellaneous	800.00
Supervision	1,000.00
Total	$12,300.00

Total Cost of Project

Stage A:	$ 6,167.20
Stage B:	13,642.60
Stage C:	12,300.00
Total	$32,109.70

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

1 portable compressor at $10.00 per day	$ 400.00
Rental of crushing and screening equipment at $10.00 per day	200.00
Supplies	450.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

1 portable compressor at $10.00 per day	$ 850.00
Supplies	4,509.25
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,750 feet of BX diamond drilling at $6.00 per foot	$10,500.00
(Cementing and boxing of core extra)	
All necessary equipment for diamond drilling will be included in the contract	

Labor and Supervision

Stage A:

1 miner	at $1.50 per hour	
1 helper	at $1.35 per hour	
2 muckers	at $1.35 per hour	
1 supervisor	at $25 per day	
(To be paid for actual time worked)		
Total allowable labor cost, including taxes, insurance, and overtime		$ 3,035.20

Stage B:

2 miners	at $1.50 per hour	
2 helpers	at $1.35 per hour	
1 supervisor	at $25 per day	
(To be paid for actual time worked)		
Total allowable labor cost, including taxes, insurance, and overtime		$ 6,583.25

Stage C:

1 supervisor at $25 per day	$ 1,000.00
(To be paid for actual time worked)	
All other costs included in the drilling contract	

Miscellaneous Costs

Stage A:

Power	$ 80.00
Trucking	402.00
Assaying 80 pulps at $20.00	1,600.00

Stage B:

Assaying 85 pulps at $20.00	$ 1,700.00

Stage C:

Cementing and core boxes	$ 800.00

Rehabilitation and Repairs

Not applicable.

EXHIBIT "A"

Exploration Project - Docket DMEA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by Government representatives.

Stage A

(1) Six bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days or less.

(3) Estimated cost of stage A.

Summary of cost per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Analysis	80.00	
Total per sample	$308.36	
6 samples and analysis at $308.36		$1,850.00
Total		$1,850.00

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet of drifting, cross-cutting, and necessary auxiliary work

in the northwestern section of the dike, starting in the vicinity of the scrap mica mill. The exact location and direction and quantity of this work would be determined by Government representatives. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in approximately 6 months.

(3) Estimated cost of stage B.

Summary of cost per foot:		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Sampling and analysis	4.00	
Total	$32.10	
300 feet (drifting or cross-cutting) at $32.10		$9,630.00
200 feet (additional drifting and cross-cutting, if necessary) at $32.10		6,420.00
Total		$16,050.00

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 1,000 feet of core drilling along the strike of the dike. The location, direction, and number will be determined by the Government representatives. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 6 months.

(3) Estimated cost of stage C.

1,000 feet of BX diamond core drilling not to exceed $6.00 per foot	$6,000.00	
Miscellaneous	800.00	
Supervision	1,000.00	
Total		$7,800.00

Total Cost of Project

Stage A:	$ 1,850.00
Stage B:	16,050.00
Stage C:	7,800.00
Total	$25,700.00

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

Rental of 1 portable compressor at $10.00 per day	$ 120.00
Rental of crushing and screening equipment at $10.00 per day	60.00
Supplies	135.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

Rental of 1 portable compressor at $10.00 per day	$ 1,000.00
Supplies	5,305.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,000 feet of BX diamond drilling at $6.00 per foot	$ 6,000.00

(Cementing and boxing of core extra)

All necessary equipment for diamond drilling will be included in the contract

Labor and Supervision

Stage A:

1 miner	at $1.50 per hour	
1 helper	at $1.35 per hour	
2 muckers	at $1.35 per hour	
1 supervisor	at $25.00 per day	
(To be paid for actual time worked)		
Total allowable labor cost, including taxes, insurance, and overtime		$ 910.40

Stage B:

2 miners	at $1.50 per hour	
2 helpers	at $1.35 per hour	
1 supervisor	at $25.00 per day	
(To be paid for actual time worked; estimated at 500 man shifts)		
Total allowable labor cost, including taxes, insurance, and overtime		$7,745.00

Stage C:

1 supervisor at $25.00 per day	$1,000.00
(To be paid for actual time worked)	
All other costs included in the drilling contract	

Miscellaneous Costs

Stage A:

Power	$ 24.00
Trucking	120.60
Assaying ~~80~~ 24 pulps at $20.00	480.00

Stage B:

Assaying 85 pulps at $20.00	$2,000.00

Stage C:

Cementing and core boxes	$ 800.00

Rehabilitation and Repairs

Not applicable.

EXHIBIT "A"

Exploration Project - Docket DMEA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by Government representatives.

Stage A

(1) Six bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days or less.

(3) Estimated cost of stage A.

Summary of cost per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Analysis	80.00	
Total per sample	$308.36	
6 samples and analysis at $308.36		$1,850.00
Total		$1,850.00

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet of drifting, cross-cutting, and necessary auxiliary work

in the northwestern section of the dike, starting in the vicinity of the scrap mica mill. The exact location and direction and quantity of this work would be determined by Government representatives. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in approximately 6 months.

(3) Estimated cost of stage B.

Summary of cost per foot:		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Sampling and analysis	4.00	
Total	$32.10	
300 feet (drifting or cross-cutting) at $32.10		$9,630.00
200 feet (additional drifting and cross-cutting, if necessary) at $32.10		6,420.00
Total		$16,050.00

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 1,000 feet of core drilling along the strike of the dike. The location, direction, and number will be determined by the Government representatives. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 6 months.

(3) Estimated cost of stage C.

1,000 feet of BX diamond core drilling not to exceed $6.00 per foot	$6,000.00	
Miscellaneous	800.00	
Supervision	1,000.00	
Total		$7,800.00

Total Cost of Project

Stage A:	$ 1,850.00
Stage B:	16,050.00
Stage C:	7,800.00
Total	$25,700.00

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

Rental of 1 portable compressor at $10.00 per day	$ 120.00
Rental of crushing and screening equipment at $10.00 per day	60.00
Supplies	135.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

Rental of 1 portable compressor at $10.00 per day	$ 1,000.00
Supplies	5,305.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,000 feet of BX diamond drilling at $6.00 per foot	$ 6,000.00

(Cementing and boxing of core extra)

All necessary equipment for diamond drilling will be included in the contract

Labor and Supervision

Stage A:

1 miner	at $1.50 per hour	
1 helper	at $1.35 per hour	
2 muckers	at $1.35 per hour	
1 supervisor	at $25.00 per day	
(To be paid for actual time worked)		
Total allowable labor cost, including taxes, insurance, and overtime		$ 910.40

Stage B:

2 miners	at $1.50 per hour	
2 helpers	at $1.35 per hour	
1 supervisor	at $25.00 per day	
(To be paid for actual time worked; estimated at 500 man shifts)		
Total allowable labor cost, including taxes, insurance, and overtime		$7,745.00

Stage C:

1 supervisor at $25.00 per day	$1,000.00
(To be paid for actual time worked)	
All other costs included in the drilling contract	

Miscellaneous Costs

Stage A:

Power	$ 24.00
Trucking	120.60
Assaying 80 pulps at $20.00	480.00

Stage B:

Assaying 85 pulps at $20.00	$2,000.00

Stage C:

Cementing and core boxes	$ 800.00

Rehabilitation and Repairs

Not applicable.

EXHIBIT "A"

Exploration Project - Docket DMEA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by Government representatives.

Stage A

(1) Six bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days or less.

(3) Estimated cost of stage A.

Summary of cost per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Analysis	80.00	
Total per sample	$308.36	
6 samples and analysis at $308.36		$1,850.00
Total		$1,850.00

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet of drifting, cross-cutting, and necessary auxiliary work

in the northwestern section of the dike, starting in the vicinity of the scrap mica mill. The exact location and direction and quantity of this work would be determined by Government representatives. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in approximately 6 months.

(3) Estimated cost of stage B.

Summary of cost per foot:		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Sampling and analysis	4.00	
Total	$32.10	
300 feet (drifting or cross-cutting) at $32.10		$9,630.00
200 feet (additional drifting and cross-cutting, if necessary) at $32.10		6,420.00
Total		$16,050.00

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 1,000 feet of core drilling along the strike of the dike. The location, direction, and number will be determined by the Government representatives. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 6 months.

(3) Estimated cost of stage C.

1,000 feet of BX diamond core drilling not to exceed $6.00 per foot	$6,000.00	
Miscellaneous	800.00	
Supervision	1,000.00	
Total		$7,800.00

Total Cost of Project

Stage A:	$ 1,850.00
Stage B:	16,050.00
Stage C:	7,800.00
Total	$25,700.00

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

Rental of 1 portable compressor at $10.00 per day	$ 120.00
Rental of crushing and screening equipment at $10.00 per day	60.00
Supplies	135.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

Rental of 1 portable compressor at $10.00 per day	$ 1,000.00
Supplies	5,305.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,000 feet of BX diamond drilling at $6.00 per foot	$ 6,000.00

(Cementing and boxing of core extra)

All necessary equipment for diamond drilling will be included in the contract

Labor and Supervision

Stage A:

1 miner at $1.50 per hour
1 helper at $1.35 per hour
2 muckers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked)

Total allowable labor cost, including taxes, insurance, and overtime $ 910.40

Stage B:

2 miners at $1.50 per hour
2 helpers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked; estimated at 500 man shifts)

Total allowable labor cost, including taxes, insurance, and overtime $7,745.00

Stage C:

1 supervisor at $25.00 per day $1,000.00

(To be paid for actual time worked)

All other costs included in the drilling contract

Miscellaneous Costs

Stage A:

Power	$ 24.00
Trucking	120.60
Assaying 80 pulps at $20.00	480.00

Stage B:

Assaying 85 pulps at $20.00	$2,000.00

Stage C:

Cementing and core boxes	$ 800.00

Rehabilitation and Repairs

Not applicable.

EXHIBIT "A"

Exploration Project - Docket DMEA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by Government representatives.

Stage A

(1) Six bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days or less.

(3) Estimated cost of stage A.

Summary of cost per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Analysis	80.00	
Total per sample	$308.36	
6 samples and analysis at $308.36		$1,850.00
Total		$1,850.00

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet of drifting, cross-cutting, and necessary auxiliary work

in the northwestern section of the dike, starting in the vicinity of the scrap mica mill. The exact location and direction and quantity of this work would be determined by Government representatives. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in approximately 6 months.

(3) Estimated cost of stage B.

Summary of cost per foot:		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Sampling and analysis	4.00	
Total	$32.10	
300 feet (drifting or cross-cutting) at $32.10		$9,630.00
200 feet (additional drifting and cross-cutting, if necessary) at $32.10		6,420.00
Total		$16,050.00

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 1,000 feet of core drilling along the strike of the dike. The location, direction, and number will be determined by the Government representatives. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 6 months.

(3) Estimated cost of stage C.

1,000 feet of BX diamond core drilling not to exceed $6.00 per foot	$6,000.00	
Miscellaneous	800.00	
Supervision	1,000.00	
Total		$7,800.00

Total Cost of Project

Stage A:	$ 1,850.00
Stage B:	16,050.00
Stage C:	7,800.00
Total	$25,700.00

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

Rental of 1 portable compressor at $10.00 per day	$ 120.00
Rental of crushing and screening equipment at $10.00 per day	60.00
Supplies	135.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

Rental of 1 portable compressor at $10.00 per day	$ 1,000.00
Supplies	5,305.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,000 feet of BX diamond drilling at $6.00 per foot	$ 6,000.00

(Cementing and boxing of core extra)

All necessary equipment for diamond drilling will be included in the contract

Labor and Supervision

Stage A:

1 miner at $1.50 per hour
1 helper at $1.35 per hour
2 muckers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked)

Total allowable labor cost, including taxes, insurance, and overtime $ 910.40

Stage B:

2 miners at $1.50 per hour
2 helpers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked; estimated at 500 man shifts)

Total allowable labor cost, including taxes, insurance, and overtime $7,745.00

Stage C:

1 supervisor at $25.00 per day $1,000.00

(To be paid for actual time worked)

All other costs included in the drilling contract

Miscellaneous Costs

Stage A:

Power	$ 24.00
Trucking	120.60
Assaying 80 pulps at $20.00	480.00

Stage B:

Assaying 85 pulps at $20.00	$2,000.00

Stage C:

Cementing and core boxes	$ 800.00

Rehabilitation and Repairs

Not applicable.

EXHIBIT "A"

Exploration Project - Docket DMEA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by Government representatives.

Stage A

(1) Six bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days or less.

(3) Estimated cost of stage A.

Summary of cost per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Analysis	80.00	
Total per sample	$308.36	
6 samples and analysis at $308.36		$1,850.00
Total		$1,850.00

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet of drifting, cross-cutting, and necessary auxiliary work

in the northwestern section of the dike, starting in the vicinity of the scrap mica mill. The exact location and direction and quantity of this work would be determined by Government representatives. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in approximately 6 months.

(3) Estimated cost of stage B.

Summary of cost per foot:		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Sampling and analysis	4.00	
Total	$32.10	
300 feet (drifting or cross-cutting) at $32.10		$9,630.00
200 feet (additional drifting and cross-cutting, if necessary) at $32.10		6,420.00
Total		$16,050.00

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 1,000 feet of core drilling along the strike of the dike. The location, direction, and number will be determined by the Government representatives. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 6 months.

(3) Estimated cost of stage C.

1,000 feet of HX diamond core drilling not to exceed $6.00 per foot	$6,000.00	
Miscellaneous	800.00	
Supervision	1,000.00	
Total		$7,800.00

Total Cost of Project

Stage A:	$ 1,850.00
Stage B:	16,050.00
Stage C:	7,800.00
Total	$25,700.00

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

Rental of 1 portable compressor at $10.00 per day	$ 120.00
Rental of crushing and screening equipment at $10.00 per day	60.00
Supplies	135.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

Rental of 1 portable compressor at $10.00 per day	$ 1,000.00
Supplies	5,305.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,000 feet of BX diamond drilling at $6.00 per foot	$ 6,000.00

(Cementing and boxing of core extra)

All necessary equipment for diamond drilling will be included in the contract

Labor and Supervision

Stage A:

1 miner at $1.50 per hour
1 helper at $1.35 per hour
2 muckers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked)

Total allowable labor cost, including taxes, insurance, and overtime $ 910.40

Stage B:

2 miners at $1.50 per hour
2 helpers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked; estimated at 500 man shifts)

Total allowable labor cost, including taxes, insurance, and overtime $7,745.00

Stage C:

1 supervisor at $25.00 per day $1,000.00

(To be paid for actual time worked)

All other costs included in the drilling contract

Miscellaneous Costs

Stage A:

Power	$ 24.00
Trucking	120.60
Assaying 80 pulps at $20.00	480.00

Stage B:

Assaying 85 pulps at $20.00	$2,000.00

Stage C:

Cementing and core boxes	$ 800.00

Rehabilitation and Repairs

Not applicable.

EXHIBIT "A"

Exploration Project - Docket DMSA-2168x
Old Mike Mine
Mineral Mills, Inc.
Custer, South Dakota

The work under this contract is to be accomplished in three stages - A, B, and C - each successive stage to be dependent on the interpretation of the results of the previous stage, by Government representatives.

Stage A

(1) Six bulk samples, each weighing approximately 7 tons, will be cut at various points on the Old Mike pegmatite dike and dump. These points will be indicated by Government representatives.

Each sample will be crushed and properly split. The end fraction will be minus-1/2 inch and from it four samples, each weighing 100 pounds, will be taken. One of these samples is to go to the U. S. Geological Survey, one to the U. S. Bureau of Mines, and two are for commercial analysis.

(2) This work is to be completed in 90 days or less.

(3) Estimated cost of stage A.

Summary of cost per sample:		
Labor of sampling	$101.96	
Supplies, equipment rental, etc.	42.50	
Trucking samples	20.10	
Crushing, screening, preparation	38.80	
Supervision	25.00	
Analysis	80.00	
Total per sample	$308.36	
6 samples and analysis at $308.36		$1,850.00
Total		$1,850.00

Stage B

(1) Subject to a satisfactory completion of stage A and agreement by the Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 325 feet of drifting, cross-cutting, and necessary auxiliary work

in the northwestern section of the dike, starting in the vicinity of the scrap mica mill. The exact location and direction and quantity of this work would be determined by Government representatives. The purpose of this and any auxiliary work would be to determine the downward plunge of the Old Mike dike.

(2) This work is to be completed in approximately 6 months.

(3) Estimated cost of stage B.

Summary of cost per foot:		
Labor	$10.49	
Rental, supplies, and maintenance	12.61	
Supervision	5.00	
Sampling and analysis	4.00	
Total	$32.10	
300 feet (drifting or cross-cutting) at $32.10		$9,630.00
200 feet (additional drifting and cross-cutting, if necessary) at $32.10		6,420.00
Total		$16,050.00

Stage C

(1) Subject to a satisfactory completion of stage B and agreement with Government representatives that further work is warranted, this stage of the project will be carried out. It will consist of approximately 1,000 feet of core drilling along the strike of the dike. The location, direction, and number will be determined by the Government representatives. The principal objective of this stage would be to determine the extension of the dike.

(2) This work is to be completed within 6 months.

(3) Estimated cost of stage C.

1,000 feet of BX diamond core drilling not to exceed $6.00 per foot	$6,000.00	
Miscellaneous	800.00	
Supervision	1,000.00	
Total		$7,800.00

Total Cost of Project

Stage A:	$ 1,850.00
Stage B:	16,050.00
Stage C:	7,800.00
Total	$25,700.00

Fixtures and Improvements

Not applicable.

Operating Equipment and Supplies

Stage A:

Rental of 1 portable compressor at $10.00 per day	$ 120.00
Rental of crushing and screening equipment at $10.00 per day	60.00
Supplies	135.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage B:

Rental of 1 portable compressor at $10.00 per day	$ 1,000.00
Supplies	5,305.00
All other tools and equipment to be furnished by applicant at no cost to the project	

Stage C:

1,000 feet of BX diamond drilling at $6.00 per foot	$ 6,000.00

(Cementing and boxing of core extra)

All necessary equipment for diamond drilling will be included in the contract

Labor and Supervision

Stage A:

1 miner at $1.50 per hour
1 helper at $1.35 per hour
2 muckers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked)

Total allowable labor cost, including taxes, insurance, and overtime $ 910.40

Stage B:

2 miners at $1.50 per hour
2 helpers at $1.35 per hour
1 supervisor at $25.00 per day

(To be paid for actual time worked; estimated at 500 man shifts)

Total allowable labor cost, including taxes, insurance, and overtime $7,745.00

Stage C:

1 supervisor at $25.00 per day $1,000.00

(To be paid for actual time worked)

All other costs included in the drilling contract

Miscellaneous Costs

Stage A:

Power	$ 24.00
Trucking	120.60
Assaying 80 pulps at $20.00	480.00

Stage B:

Assaying 85 pulps at $20.00 $2,000.00

Stage C:

Cementing and core boxes $ 800.00

Rehabilitation and Repairs

Not applicable.

FILE COPY
SURNAME:

Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. A. B. Needham
Executive Officer
DMEA Field Team, Region V
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

Subject: Docket No. DMEA-2168
Beryl - Mica
Old Mike Mine
Mineral Mills, Inc.

JAN 29 1952

Dear Mr. Needham:

Confirming our telephone conversation of the 21st in regard to the subject application, we have found it impossible to amend the Mineral Mills application in which we were going to substitute underground sampling and exploration for the diamond drilling program suggested by the Field Team.

We, therefore, feel that it would be better for your office to prepare a revised Exhibit "A", inasmuch as this office does not have the necessary information. In the first stage will be the cutting of the 14 channel samples and analyses of these samples, and any other underground sampling that is feasible.

Stage 2 would be underground exploration by means of cross cuts and drifts from near the Field Team's drill holes 4 and 5 to the main pegmatite northeast of Section EE. The following papers on subject application are enclosed:

Form MF-103
Memorandum from J. J. Norton, USGS, to DMEA
Copy of Contract to be revised

(signed) FRANK E. JOHNSON
HB
Chairman, Operating Committee

Enclosures 3

Approved:

J. H. Hodges
HB
For Bureau of Mines

2 P Thayer
For Geological Survey
HB

LGHouk:gad
1/25/52
Copy to: Admin. Reading File
Docket
1-29 J.O.
Mr. W. F. Dietrich, 3526
Mr. J. J. Norton, G-228, GSA Bldg.
Mr. Houk

IN REPLY REFER TO:

G-MD-JJN

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

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMA-2168X (formerly DMA-1367)

To: Non-Metallic Minerals Division, DMEA
From: J. J. Norton, U. S. Geological Survey
Commodities: Beryl, mica, tantalite
Applicant: Mineral Mills, Inc.
Name of property: Old Mike
Location of property: Custer, South Dakota
Field team's recommendation:

Two stage exploration program:

Stage 1:--14 channel samples and 1 dump sample for Be analyses.
Stage 2:-- 5 diamond drill holes as follows:

DDH-1:--Beneath outcrop of southeast end of the main mass of the Old Mike pegmatite.
DDH-2 and 3:--Beneath narrow northwest extension from the main mass of the pegmatite.
DDH-4 and 5:--Northwest of the other holes. Beneath outcrops of numerous stringers of pegmatite that are exposed near where the mill is now located.

Comments: (based largely on telephone conversation with L. R. Page):

Stage 1:--Past sampling seems to indicate that the pegmatite contains considerably more beryllium than can be accounted for by the beryl that has been seen in the deposit. Consequently I can reluctantly agree that additional sampling is necessary, but only if the following changes are made:

a. The samples should be bulk samples. Probably about 100 tons of pegmatite should be mined to provide representative data on the grade of the beryl-bearing units.

b. Sample cuts should be distributed so that data is obtained on all beryl-bearing units in all exposed parts of the pegmatite, both on the surface outcrop and in the mine workings. The sample locations shown on the field team's map are all in albite-muscovite-quartz pegmatite on the top of the outcrop.

c. Perhaps a sampling procedure could be devised that would make use of the Old Mike mill, which is now inactive. The bulk samples could be put through the crusher, and an automatic device could be constructed to split the crushed material.

d. The field team's report states that 14 channel samples and 1 dump sample will be collected, but the sample localities marked on the map show 13 channel samples and 2 dump samples. One of the "dump" samples is evidently a sample of the tailings from the mill, which is not shown on the map because it was constructed after the map was made.

Stage 2:--The logical method of exploring this pegmatite is to search northwest of section EE' for a down-plunge extension of the main mass of the pegmatite. This is the only place where available evidence gives us reason to expect to find reserves that have previously been unknown. Furthermore, it is possible that the beryl content is high in this part of the pegmatite. The only feasible way to undertake this exploration is by means of a drift and crosscut that extends from near the mill, which is about where the field team's drill holes 4 and 5 are located, to the main pegmatite northwest of section EE'. This drift would be on the mill level, and could be used for subsequent mining. I do not know exactly how long this tunnel would be because the map made in 1945 does not show the workings exactly as they are today. My guess is that the tunnel would be about 300 feet long. If this work were successful, then drilling to trace the pegmatite in depth would be warranted.

ACTION SUGGESTED:

Modify exploration plan or return to field team for reconsideration in the light of comments made above.

J. J. Norton

J. J. Norton

Mr. Keating

MINERAL MILLS, INC.
CUSTER, SOUTH DAKOTA

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

November 30, 1951

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 4 8 20 PM '51

DEC 4 1951
Defense Minerals Administration,
Production Expansion Division.

DMEA-2168
NONMETALLICS

Mr. Frank E. Johnson,
Acting Director- Production Expansion Division,
Defense Minerals Administration,
Washington, D. C.

Dear Mr. Johnson:

Your letter of November 7th. was just received yesterday, and we are very sorry for this delay.

In regard to item 6 relative to liens or encumbrances on the property- there are no liens or encumbrances on the mining property under consideration. We do have a mortgage on certain equipment belonging to the company but the directors of the company have kept the actual mine and mining claims clear of any liens. As the mining equipment etc. is not under consideration in this application only drilling of the mining property and sampling same there are no encumbrances or liens that would be of interest. We added some equipment to our crushing and screening plant and issued a mortgage on the equipment and building to cover the items. That is the only lien held against the company.

Very truly yours,

Mineral Mills Inc.

G. E. Johnson

Secretary- Treasurer

Referred to General Counsel - for sufficiency
Approved 11/6/51
Keating

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

NOV 7 1951

Mr. A. I. Johnson, Secretary Treasurer
Mineral Mills, Inc.
Custer, South Dakota

Re: Docket No. DMA-2168X
Old Mike Mine

Dear Mr. Johnson:

Referring to your application for aid for an exploration project pursuant to Mineral Order 5, on form M. F. 103, your application does not contain the data requested in that form under item 6, relative to liens or encumbrances on the property upon which the work is to be done.

Will you be kind enough to furnish this information promptly so that further consideration of your application will not be delayed. Enclosed are two copies of form M. F. 103 for your reference.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director,
Production Expansion Division

Enclosures-2

C O P Y

Mr. A. I. Johnson, Secretary Treasurer
Mineral Mills, Inc.
Custer, South Dakota

Re: Docket No. DMA-2168X
Old Mike Mine

Dear Mr. Johnson:

Referring to your application for aid for an exploration project pursuant to Mineral Order 5, on form M. F. 103, your application does not contain the data requested in that form under item 6, relative to liens or encumbrances on the property upon which the work is to be done.

Will you be kind enough to furnish this information promptly so that further consideration of your application will not be delayed. Enclosed are two copies of form M. F. 103 for your reference.

Sincerely yours,

Acting Director,
Production Expansion Division

Enclosures-2

11/29/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION 370
WASHINGTON 25, D. C.

October 18, 1951

Memorandum

To: Chief, Industrial Minerals Branch, DMA

From: Chief, Programming and Planning, DMA

Subject: DMA-2168X, Mineral Mills, Inc.
Old Mike Mine, Custer County, S. D.
Commodity: Beryl, Mica, Tantalite
Amount: 90% of $10,568

The prospective available supply of strategic beryl, mica and tantalite is far short of meeting defense requirements. Consequently, it is highly desirable that exploration for new domestic deposits be stimulated by any reasonable Government assistance to private interests. Any exploration project that holds promise of finding significant new reserves, merits consideration by Defense Minerals Administration.

A. B. Parsons

October 18, 1951

Mr. A. I. Johnson
Mineral Mills, Inc.
Custer
South Dakota

Subject: DMA-2168
Re: Exploration

My dear Mr. Johnson:

This will acknowledge receipt of your application dated September 29, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA-2168 and referred to the Industrial Minerals Branch.

Kindly refer to DMA-2168 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

2463

Exhibit "A" - Exploration Project

Docket [illegible]A-2168X
Old Mike Mine

The work under this contract to be carried out in two stages:

Stage A

(1) The cutting of 14 channel samples from various points on the pegmatite outcrops together with a sample taken from the old dump, all samples to be cut at locations as shown on USGS map attached hereto.

(2) All exploration work will be confined to the Great Northern Claim of the Old Mike Mine. The work to be performed by the operator.

(3) The resulting samples are to be analyzed for Beryl by the most modern techniques through Government and Commercial laboratories.

(4) Methods of taking, handling and assaying samples to be mutually agreed upon by the operator and the Regional Field Team.

(5) This work is to be completed in 60 days.

(6) Estimated costs of Stage A of the project:

I	4 Samples @ $1.25 per hour plus taxes and insurance $21.20 for 15 days	$ 318.00
II	Analyses of 60 pulps - 4 cuts from 15 samples @ $15.00 each	900.00
	Total	$ 1,218.00

Stage B

(1) This work is to be undertaken only in the event that the Field Team considers the results of the Stage A work indicate an adequate tonnage of commercial grade material may be delineated by the following:

(2) To drill diamond core drill holes along the strike of the pegmatite outcrops from five set ups as designated on the attached map referred to above. At least one AX hole and possibly two to be drilled from each set-up.

(3) The total footage of all holes to be drilled in this project shall not exceed a maximum of 1750 feet.

Stage B (continued)

(4) Drilling to be done by contract at an estimated cost of $5.00 per foot. The drilling contract subject to Government approval prior to commencing work.

(5) Method of selection and handling of drill cores for assay to be approved by the Field Team.

(6) Work to be completed within eight months.

(7) Estimated Cost of Stage B. of the project:

I	1750 feet BX diamond core drilling @ $5. per foot	$ 8,750.00
II	Analysis of 40 pulp samples @ $15.00 each	600.00
	Total	$ 9,350.00
	Total Cost of Projects A and B	10,508.00

Operator will furnish all equipment, supplies, water, and power necessary for the project.

No additional buildings or fixtures are required.

The operator expresses willingness and financial ability to carry out its part of the cost of the project.

2908 Colfax Avenue South
Minneapolis 8, Minnesota
Region V

October 15, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration, Interior Building, Washington 25, D. C.

From: Executive Officer - DMA Field Team, Region V

Subject: DMA Docket ~~1367~~ 2168 - Mineral Mills, Inc.
Custer, South Dakota

Reference is made to the subject docket, application for which was a $150,000 loan to expand or get into production the "Old Mike" property near Custer, South Dakota.

The field team began the investigation in accordance with the referral, but soon learned there was a sizable discrepancy in reserves and advised the applicant that an exploratory project would be more realistic. The applicant agreed, and thereupon make out and filed here an exploratory project application. Field team agrees with the proposal.

It is therefore recommended that the expansion loan proposal for $150,000 (original DMA Docket 1367) be deferred, at least until further exploration is completed, and that the application for exploration be considered for contract.

Four copies of the field team's report on the subject Docket, together with four copies each of Form MF-103, Exploration Application, and Form MF-100, General Technical Data, and two maps are enclosed for your consideration.

Returned also is the original referral on the $150,000 loan application.

Enclosures:

A. P. Needham

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION V

DMA-1867 2168

Old Mike Mine, Custer District

Custer County, South Dakota

Glen Walker, Mining Engineer
U. S. Bureau of Mines

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

October 5, 1951

DEFENSE MINERALS ADMINISTRATION
Report of Field Examination

by

Glen Walker, Mining Engineer
U. S. Bureau of Mines

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

Docket No.: DMA-1367
Property: Old Mike
Applicant: Mineral Mills, Inc.
Commodity: beryl, mica, tantalite

Conclusions and Recommendations

The exploration, as outlined by the applicant, appears to be reasonable and adequate to determine the reserves of mica, beryl and tantalite in the Old Mike pegmatite.

The applicant has applied for a $180,000 loan to expand the facilities and production of this property. This application, Docket No. DMA-1367, has been examined and partially considered by the field team. After consultation with A. I. Johnson, manager of Mineral Mills, Inc., regarding reserves, such a large discrepancy became apparent that the field team suggested an exploration loan application be submitted. The reason for this suggestion was that the reserve figures of both the applicant and the field team were not based upon sufficiently concrete evidence, the underground workings are inaccessible, and the accuracy of former grade analyses is questionable. The field team collaborated with the applicant on the location and footage of core holes and channel samples as outlined in the exploration application. The applicant requests that DMA-1367 be held in abeyance until the proposed exploration is completed.

It is recommended that this exploration project be accepted.

Exhibit A

As set forth in the application, the exploration is to be divided into two phases, A and B. Phase A is the cutting of 14 channel samples from various points on pegmatite outcrops (see map) and one sample from the old dump on the Great Northern claim. These 15 samples will be analyzed by different methods and personnel for beryl. If the analysis indicates a sufficient grade, then Phase B will be pursued. It should be pointed out that, because past experience in analyzing material of this general tenor for BeO has cast some doubt on the results, it is felt that the method outlined of analyzing a comparatively large number of pulps by various methods and concerns will result in an acceptable figure. The field work of this phase will require about 2 weeks to complete.

Phase 3 includes five diamond core drill set-ups along the strike of the pegmatites on the Great Northern claim (see map). At least one NX hole, and possibly two, will be drilled from each set-up, with a total maximum footage of 1,750 for the project. This phase should be completed within 6 months.

All the minerals on which this application is based fall in the 90 percent government participation category.

Geologic Report

The Old Mike mine is located on two zoned pegmatites in sec. 2, T. 3 S., R. 4 E., about 5 miles north-northwest of Custer, South Dakota. The mine and pegmatites have been mapped in detail by the U. S. Geological Survey, and complete reports and maps are available. The main purpose of this investigation is to check the reserve figures of the applicant.

A crosscut adit and a glory hole leading to the adit have exposed the main pegmatite in some detail, and smaller open cuts have explored the upper part of the smaller pegmatite.

Very little additional work has been done at the mine since the Geological Survey completed the open file maps and sections on the Old Mike pegmatite. The applicant states that a 30-foot winze was completed below the level of the adit since the open file maps were prepared; this winze is inaccessible at present. In addition, about 1,000 tons of pegmatite have been blasted from the central portion of the main pegmatite.

The richest ore in the main pegmatite occurs in the wall zone and an intermediate zone of albite-quartz pegmatite. The wall zone has been sub-divided during mapping into an outer unit of albite-muscovite-quartz pegmatite and an inner unit of albite-quartz-muscovite pegmatite. Beryl and scrap mica occur in both the wall and intermediate zones, and columbite-tantalite occurs in the intermediate zone. Perthite is another economic mineral occurring as a "hood" in the upper part of the pegmatite.

Reserves and Recommendations

A visual estimate of the grade of the beryl in the wall zone is 0.5 percent beryl. This is in agreement with previous estimates of the Geological Survey. The outcrops of the wall zone are coated with limonite and phosphate (?) stains, so that mineral area counts are not reliable. The intermediate zone is poorly exposed, but the previous estimate of 1.0 percent beryl made by the Geological Survey appears to be reasonable.

The applicant states that the grade of the beryl in the pegmatite is 2 percent. This figure is based on sampling by the U. S. Bureau of Mines, Brush Beryllium Corporation, and Metals Reserve Co. It is true that the results of this sampling indicated an average of 0.20 percent BeO, both on fresh ore and in dump samples.

It is believed that these analyses are erroneous. The analyses by the Bureau of Mines were made during World War II at Rolla, Missouri, using a precipitation method of chemical analysis which was later proved to be unreliable. The method gave BeO values which were considerably too high. The assays of Brush Beryllium Corporation were apparently made by the Saratoga Laboratories in the early part of 1948. It was subsequently proved by the Geological Survey that BeO determinations made by Saratoga Laboratories before October, 1948 (when a change was made in spectrographic techniques) were of questionable accuracy.

The applicant listed the ore tonnage at 175,000 tons. This tonnage is necessary for a 5-year operation of the mill. This estimate is supposed to include the entire tonnage of the two pegmatites and does not take into account the "barren" ore or quartz core in the main pegmatite.

New computations were made of the ore reserves (wall zone and intermediate zone of the pegmatite) which gave 88,000 tons of ore, of which 40,000 tons could be regarded as proved and 48,000 tons as probable ore. It is very likely that there is at least 75,000 tons of minable ore, the previous estimate of the Geological Survey. There is a possibility that there would be 150,000 tons of ore, or equal to the tonnage claim of the applicant.

The recoverable value, based on the Geological Survey's estimate of beryl percentage, of about 46,000 tons of the ore in the main pegmatite is approximately $5.00 per ton. Similarly, the recoverable value of 17,500 tons of the ore in the smaller pegmatite is about $4.50 per ton.

More exploration is needed to warrant the proposed plant expansion. This was discussed with the applicant and it was recommended that the applicant undertake a two-phase exploration program to prove: 1) the content of the beryl in the ore, and 2) the total ore tonnage.

The first phase of the exploration would consist of the taking of properly located samples from the two zones of the main pegmatite and the wall zone of the smaller pegmatite. These would be analyzed for BeO by the most modern techniques. The Bureau and Survey would probably also take portions of the samples in order to check assay results.

If the results of the sampling indicate that the grade of the ore is sufficiently high (the cut-off grade of beryl is between 1 and 2 percent for this operation), then phase 2 of the exploration would take place. It would consist of approximately 1,750 feet of diamond drilling and the assaying of the pegmatite drill core. This drilling footage will be adequate to "prove" the required 5 years of ore reserves, providing of course that there are sufficient reserves of ore present.

Since the major part of the proposed work will be contracted for, no manpower problem is anticipated.

The applicant will furnish all equipment and supplies necessary for the project.

The exploration will be confined to the Great Northern claim, of the Old Mike group, which is easily accessible by about 2 miles of a company maintained, crushed rock, one-way road.

Water for this project is ample and available from a nearby spring. The power to be used is gasoline and will be delivered in barrels.

The project will be supervised by A. I. Johnson, who is a graduate of the South Dakota School of Mines and who has had several years experience managing pegmatite operations. He is assumed to be capable of the responsibilities involved in this project.

Phase A:

2 samplers @ $1.25 per hour, plus 8% for taxes and insurance @ $21.60 per day for 15 days	$ 318.00
Analysis of 60 pulps (4 cuts from 15 samples) @ $15.00 each	900.00
Total for Phase A	$1,218.00

Phase B:

1,750 feet AX diamond core drilling @ $5.00 per ft.	$ 8,750.00
Analysis of 40 pulps @ $15.00 each	600.00
Total for Phase B	$ 9,350.00
Total cost of project	$10,568.00

Phase A can start immediately after the contract is signed and will require 3 weeks to complete. No reasonable estimate is possible of the time required for the analytical work, but as aforestated, Phase B will not be started until favorable results are obtained in this phase.

Phase B:

1st month - 330 feet of core hole
2nd month - 330 feet of core hole
3rd month - 330 feet of core hole
4th month - 330 feet of core hole
5th month - 330 feet of core hole
7 shifts of 6th month - 100 feet of core hole

Form MF-103
(May 1951)

U. S. 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. DMA-2168

Date received 10-17-51

Mineral Mills Inc
Custer, S. Dak

Name and address of applicant

Date Sept. 29, 1951

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?
   (*b*) What are the byproducts, if any?
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.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

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

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   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	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

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.

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.

(*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.

(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:

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)					
Indicated (probable)					

(*c*) If placer:

(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:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

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.

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.

Mineral Mills Inc
(Name of company)

By J. D. Johnson
(Signature of authorized official)

Sept. 29, 1951
(Date)

Sec. Treas.
(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

General Technical Data- For use under the
Defense Production Act of 1950.

General Technical Data.

1. Materials Produced.
   a. The chief mine products are beryl, mica, tantalite and feldsapr. Feldspar is a by-product.

2. a. Inclinded shaft on south endof dike at end of adit 50'.
   b. Approximately 350' of drifts and crosscuts have been driven on the property.
   c. An adit of 150 feet.
   d .An open cut 50' long is located on the mill end of the dike.

3. a. 4 miles northwest of Custer- nearest railroad siding one mile west of the property
   b. No organized mining district.
   c. Property located in sections 2 and 3 T. 3 S. R 4 E. BHM
   d. Located in Custer County- South Dakota.

4. The property is not now in operation.
   The applicant is the owner of the property.

5. The property has been in operation from 1942 to 1950 inclusive. Negotiations are now under way for operating the property for mica. I t is expected that this project may develop within a few weeks.

6. The applicant has been producing beryl, mica, tantalite and feldspar since 1942.
   b. The manager- A.I. Johnson has been operating properties of this nature since 1933.

7. History-

Mineral Mills Inc, was organized in June of 1941 to operate the Old Mike Mine situated about 4 miles northwest of Custer. The property had been a producer of sheet mica during the first world war and had produced mica and tantalite during the intervening period and its operation by Mineral Mills Inc. This production had been confined to the adit area on the south end of the pegmatite.

The company, after arranging a lease with the Maywood Chemical Co for the oper ation of the mine, brought in trained rifters and mica sheeters from North Carolina to develop local personnel for producing strategic as well as scrap mica. A screening plant was also set up to recover a portion of the scrap not recovered by hand sorting methods. Considerable test work was done on the problem of recovering a maximum amount of the mica contained in the dike material. When the war came on Mineral Mills Inc went all out for the production of strategic mica beryl and tantalite, scrap mica production being relegated to a secondary position.

General Technical Data

An arrangement to purchase the mine was made with the Maywood Chemical Co. and additional property was acquired adjoining these daims. The company now owns some 450 acres of mining property in the area. During the war also operated two additonal mica properties the Glenwood and Red Deer. It now owns the Glenwood mine as well as the Old Mike property. The Red Deer mine was operated under a lease by the Consolidated Feldspar Corp. Production from the several properties is given on a following sheet. The sheet mica andpumch mica wer sold to Colonial Mica Corp, the feldspar to the Consolidated Feldspar Corp., the tantalite to the Fansteel Metallurgical Corp., the beryl to Colonial Mica Corp and later to Mrs Gladys Wells at Custer, S. D. The company sold its scrap mica to three companies- U. S. Mica Co., Forest Park, Ill., Ashville Mica Co., Richmond, Va. , Concord Mica Co., Concord N. H. Some mica was sold later to Western Non- Metallics at Pueblo, Colorado.

To produce sheet and punch mica Mineral Mills Inc operated rifting plants at both Custer and Hill City and at one time employed some 45 rifters and sheeters beside those at the mines.

A great deal of experimental work was carried on with a pilot mill operation on theproperty to work out details of recovery for the scrap mica for future operations. This plant was operated with a D. C. power plant consisting of a Ford V- 8 engine , belt connected to a generator. A vibrating screen was used in the work. This work, in conjunction with experience gainde from the operation of the Bureau of Mines plant at Custer, S. Dak., was the basis for the plant later set up to produce scrap mica on a larger scale. The company during 1945 arranged with Smaller Plants Corp. for a llean of $25,000.00 for the construction of a mica beneficiation plant. This was completed in February 1946. During its first year of operation it produced over 1,000 tons of scrap mica. The plant was shut down in 1947 due to a reduction of the scrap mica price from $25.00 per ton to $20.00 per ton and this later was reduced still further to $18.00. The cause of the price reduction was curtailment of mica grinders in purchases to minimum necessities to cut down inventories in fear of general price reductions. Following this period surplus supplies were made available from government stock piles at reduced prices and the mica situation as far as the producer was concerned became critifal. Prices started to rise again in the later part of 1949 and have continued but the company has been working on a project to more economically recover all of the economic minerals which would include fine beryl, tantalite etc.

Production- Mineral Mills Inc.
Old Mike Mine

1942-	35,893# punch mica	$ 6601.62
	1,624½# sheet mica	3426.33
	250 tons scrap mica	10009.68
	6½ tons beryl	540.00
	200# tantalite	300.00
	Total	$20877.74
1943-	3,075.2# sheet mica	15,376.09
	231 tons scrap mica	5,451.35

Sheet 3-
General Technical Data

1943- cont. Fwd			$ 20, 827.35
	13.766 tons beryl		$ 1,376.60
	150# tantalite		311.72
	22 tons feldspar		66.00
		Total	$ 22,581.76
1944-	21,347# washer punch		661.23
	4,670.06# sheet mica		27,424.22
	48.639 tons scrap mica		971.86
	2.33 tons beryl		321.80
	82.4# tantalite		147.68
		Total	$ 29,526.89
1945-	2,264# sheet mica)		
	3756.05# punch mica)		9,702.67
	44.176 tons scrap mica		970.07
		Total	$ 10,672.74
1946	1,006.13 tons scrap mica		$ 24,981.91
	86.32 tons feldspar		345.28
		Total	$25,327.19
1947-	197.05 tons scrap mica		$ 4,926.25
	4 tons block Mica		600.00
	71.03 tons feldspar		284.12
		Total	$ 5,810.37
1948-	61 tons scrap mica		$ 1,372.50
	20 tons feldspar		80.00
	800# beryl		80.00
		Total	$ 1,532.50
1949-	33 tons scrap mica		825.00
	2 tons beryl		400.00
	15 tons feldspar s	p	60.00
		Total	$ 1,285.00
1950-	3.25 tons beryl		650.00
	10 tons scrap mica		225.00
		Total	$ 875.00
	Total Old Mike Mine Production		$118,489.19

Production Glenwood Mine

1945-	483.44# punch)		
	989.56# sheet mica)		$9,462.41
	5.021 tons scrap mica		99.98
	27.616 tons block mica		3,825.62
		Total	$13,388.01

Production Red Deer Mine

1945	6.306 tons block Mica	Total	$984.75
	Total Mineral Mills Inc		$132,861.95

General Technical Data

Sheet 4

7- History

(b) No immeidate adjoining properties.

(c) Sampling of the beryl content of the pegmatite.

Brush Beryllium - sampling of dumps	.21 BeO
Mineral Mills Test samples- Dump	.185
" " " outcrops	.23
U. S. Bureau of Mines Test sample	.25
" " Dump "	.20
" " " "	.23

Sampling of pegmatite for mica by Bureau of Mines indicated over 15% mica.
Operations of Mineral Mills Inc to produce scrap mica from the mica rich zone gave 14.2% mica recovery with losses varying from 3 to 5 per cent mica.

8- Names of Officers and directors-

Name and address	title	1950 salary	shares held
Albert Gushurst D Lead, S. D.	Pres.	None	200
A. I. Johnson D	Sec-Treas.	"	200
Ben Bell- Vice President Jackson, Calif.		"	50
John Knecht D Rapid City, S. Dak.		"	40
Chas Bennett D Rapid City, S. Dak.		"	30
Wray Sharp Evanston, Illinois		"	20
		Total	540

9- Common stock authorized 1,000 shares - $100 par
" " Issued 540 "

10- Production shown on previous sheet.

11- It is estimated that when contemplated plant is built that production will total 14 tons of scrap mica daily and 1½ tons beryl with minor amounts of by-products of tantalite and feldspar.

12- Ore reserves have been estimated by Mineral Mills Inc at 175,000 tons of beryl-mica rich pegmatite having a recoverable value of 1.5% beryl and 14% mica with values of tantalite and feldspar undetermined. Purpose of present proposal in application is to establish actual reserves.

13- Access roads - Highway 16 is one mile West of mine- Gravelled road connects property to CB&Q RR and Highway 16.

14- Water would be available from wells drilled in area as previously mentioned.

15- Power line from Custer connects mine to source of power and average cost would be betwee 1¼ and 1½ cents per KWH.

16- For present project- Sampling would take two men with portable compressor- about week.
Diamond Drilling would be contracted at prevailing rates.

17- No necessity for use of present buildings for this projedt.

MF-103
(Rev. April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.
OCT 17 10 33 AM '51

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

DMA Docket No. DMA-2168

Date received 10-17-51

Participation

Mineral Hills Inc
Custer, S. Dak.

Name and address of applicant

Date Sept 29, 1951

FILL IN THIS BLOCK

Date of application Sept. 29, 1951

Estimated cost $10,000.00

Mineral or metal Beryl, Mica, tungsten

Percentage of Government participation 90%

Location of mine Custer, S. Dak.

Date of filing MF-100

DMA Docket Number, if available 2168

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*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.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

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.

Mineral Mills Inc
(Name of company)

By [signature]
(Signature of authorized official)

Sept. 29, 1951
(Date)

Sec. Treas
(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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Application for Aid for an Exploration Project
Pursuant to Mineral Order 5 under
Defense Production Act of 1950

1. The Applicant is a Corporation organizedunder the Laws of South Dakota.

2. The Officers and Directors are as follows:

President- Albert Gushurst, Lead, S. Dak.
Secretary- Treasurer- A. I. Johnson, Keystone, S. Dak.
Vice President- Ben Bell- Jackson, California
Directors: John Kneckt- Rapid City, S. Dak.
Chas. Bennett- " "
Other Stockholders: Wray Sharp- Evanston, Illinois.

4. a. The Applicant has operated the Old Mike Mine and other properties since 1942 and has been producing beryl, mica tantalite and feldspar during that time.
b. The property will be managed by A. I. Johnson who has been operating properties of this nature since 1933.

5. The company owns the properties under consideration.

8. A currentfinancial statement is being prepared. There has been no operation except for assessment work during the past year hence no profit and loss statement that is current is available.

9. The applicant is prepared to invest its 10% of the required expenditures.

The Property.

10.aThe Project calls for a sampling and diamond Drilling of the pegmatite dike outcropping on theGreat Northern Lode Mining Claim, located in Sections 2 and 3 T. 3 S. R. 4 E. BHM. The details are more fully shown on the Preliminary Map of the U. S. G. S. prepared under Strategic Mineral Investigations by Stevens, Paige and Adams during October and November of 1944. This is known as the Old Mike Mine.
b. Given above.

11. The present name of the property is the Old Mike Mine.

12. The property is located about 3½ miles Northwest of Custer, S. Dak. It is located about one mile East of Berne Siding on the Burlington Railroad. A siding is available here for shipment of ores. A graveled road connects the property with the siding.

13. Water is available from springs located on the Dictator Lode located north of the Great Northern and belonging to the Corporation.

Property Cont.

14/ The property has on it a milling plant and mining facilities but none of this would be needed for the sampling and diamond drilling operations contemplated in this application.

15. The ore could be shipped from Berne Siding and application for for additional milling facilities is contemplated as this work now under consideration is to block out sufficient ore and determine grade for a milling operation to produce beryl and mica from millingoperations. At present facilities are available for milling mica bearing pegmatite to produce scrap mica.

16- 17- 18 Details In Form MF - 100

The Exploration.

20. The exploration will be conducted to establish reserves sufficient to operate a 100 ton plant for a period sufficient to return the loan contemplated for a beryl recovery plant. The exploration will be conducted to determine grade and tonnage of reserves that could be made available. The mineral contemplated is beryl with by-product mica, tantalite.

21.a It is proposed to take 15 surface samples and analyze them for BeO content. These 15 samples will be from present dumps and indicatedoutcrops on the U.S.G.S. open file map accompanying this application. Samples will be available for Spectroscopic analysis, for chemical analysis, U. S. Bureau of Mines studies, and U. S. G. S. studies. The purpose of these samples will be to determine grade in BeO of present dumps and outcrops.

b. The second phase of the exploration contemplates drilling with diamond drill a total of 1750 feet of hole approximately indicated on the U.S.G.S open file map. Cores will be sampled and analyzed for BeO content as previously done with dump and face samples. It would require from 3 to 4 months to complete the work.

22. Present indications are that fairly uniform concentrations of beryl occur in the deposit known as the Old Mike Mine. Present information is that the average grade of this is 2% beryl. An application was made to obtain a loan to build a beneficiation plant for beryl on theproperty. After discussions with the DMA field team it was thought adviseable to get more detailed information on thegrade and tonnage of the deposit. The present application is the outcome of studies and discussions with the DMA field team.

The Requirements and Costs.

23. (a) Sampling of present dumps and indicated outcrops.

1- Taking 15 samples at $20.00 per sample.....	$300.00
2- A four way analysis and study of samples... as previously indicated.	$300.00
Total	$600.00
(b) Sampling and analysis of diamond drill cores. Estimate cost of analyses and preparation	$400.00
Total costs	$1000.00
(c) 1750' of diamond drilling @ $5.00 per ft.	8750.00
Total	$9750.00

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON D.C.
OCT 17 10 32 AM '51

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
2908 Colfax Avenue South
Minneapolis 8, Minnesota
Region V

October 15, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration, Interior Building, Washington 25, D. C.

From: Executive Officer - DMA Field Team, Region V

Subject: DMA Docket ~~1367~~ 2168 - Mineral Mills, Inc.
Custer, South Dakota

Reference is made to the subject docket, application for which was a $150,000 loan to expand or get into production the "Old Mike" property near Custer, South Dakota.

The field team began the investigation in accordance with the referral, but soon learned there was a sizable discrepancy in reserves and advised the applicant that an exploratory project would be more realistic. The applicant agreed, and thereupon make out and filed here an exploratory project application. Field team agrees with the proposal.

It is therefore recommended that the expansion loan proposal for $150,000 (original DMA Docket 1367) be deferred, at least until further exploration is completed, and that the application for exploration be considered for contract.

Four copies of the field team's report on the subject Docket, together with four copies each of Form MF-103, Exploration Application, and Form MF-100, General Technical Data, and two maps are enclosed for your consideration.

Returned also is the original referral on the $150,000 loan application.

A. B. Needham

Enclosures:

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D.C.
Oct 17 10 32 AM '51

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Rapid City Field Office
School of Mines Campus
Rapid City, South Dakota

C O P Y

October 5, 1951

Memorandum

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

From: Supervising Engineer, Rapid City Field Office

Subject: Exploration proposal, Old Mike mine, Mineral Mills, Inc.

Enclosed are four copies of an application for an exploration loan on the subject property, together with four copies of MF-100, General Technical Data, and five copies of an examination report by the Bureau of Mines and Geological Survey.

This application is in lieu of the application for a production-expansion loan on the same property, Docket No. DMA-1367. The reasons for substitution are stated in the report. It is the desire of the applicant to defer consideration of his previous proposal pending results of exploration, if it is approved. The application for a production-expansion loan can not be approved at the present time. Please advise whether you wish the application for the production loan returned to you.

Some investigations concerning the feasibility of mining and milling methods proposed in the production loan are continuing and will be pertinent at the close of any exploration when expansion is again considered.

Copies of this report have been sent to the Survey at Custer and Madison.

/s/ D. H. Mullen
D. H. Mullen

cc: Reg. Director, Reg. V
files.

C O P Y

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.
OCT 17 10 32 AM '51

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION V

DMA-~~1367~~ 2168

Old Mike Mine, Custer District

Custer County, South Dakota

Glen Walker, Mining Engineer
U. S. Bureau of Mines

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

October 5, 1951

DEFENSE MINERALS ADMINISTRATION
Report of Field Examination

by

Glen Walker, Mining Engineer
U. S. Bureau of Mines

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

Docket No.: DMA-1367
Property: Old Mike
Applicant: Mineral Mills, Inc.
Commodity: beryl, mica, tantalite

Conclusions and Recommendations

The exploration, as outlined by the applicant, appears to be reasonable and adequate to determine the reserves of mica, beryl and tantalite in the Old Mike pegmatite.

The applicant has applied for a $150,000 loan to expand the facilities and production of this property. This application, Docket No. DMA-1367, has been examined and partially considered by the field team. After consultation with A. I. Johnson, manager of Mineral Mills, Inc., regarding reserves, such a large discrepancy became apparent that the field team suggested an exploration loan application be submitted. The reason for this suggestion was that the reserve figures of both the applicant and the field team were not based upon sufficiently concrete evidence, the underground workings are inaccessible, and the accuracy of former grade analyses is questionable. The field team collaborated with the applicant on the location and footage of core holes and channel samples as outlined in the exploration application. The applicant requests that DMA-1367 be held in abeyance until the proposed exploration is completed.

It is recommended that this exploration project be accepted.

Exhibit A

As set forth in the application, the exploration is to be divided into two phases, A and B. Phase A is the cutting of 14 channel samples from various points on pegmatite outcrops (see map) and one sample from the old dump on the Great Northern claim. These 15 samples will be analyzed by different methods and personnel for beryl. If the analysis indicates a sufficient grade, then Phase B will be pursued. It should be pointed out that, because past experience in analyzing material of this general tenor for BeO has cast some doubt on the results, it is felt that the method outlined of analyzing a comparatively large number of pulps by various methods and concerns will result in an acceptable figure. The field work of this phase will require about 3 weeks to complete.

Phase B includes five diamond core drill set-ups along the strike of the pegmatites on the Great Northern claim (see map). At least one BX hole, and possibly two, will be drilled from each set-up, with a total maximum footage of 1,750 for the project. This phase should be completed within 6 months.

All the minerals on which this application is based fall in the 90 percent government participation category.

Geologic Report

The Old Mike mine is located on two zoned pegmatites in sec. 2, T. 3 S., R. 4 E., about 3 miles north-northwest of Custer, South Dakota. The mine and pegmatites have been mapped in detail by the U. S. Geological Survey, and complete reports and maps are available. The main purpose of this investigation is to check the reserve figures of the applicant.

A crosscut adit and a glory hole leading to the adit have exposed the main pegmatite in some detail, and smaller open cuts have explored the upper part of the smaller pegmatite.

Very little additional work has been done at the mine since the Geological Survey completed the open file maps and sections on the Old Mike pegmatite. The applicant states that a 30-foot winze was completed below the level of the adit since the open file maps were prepared; this winze is inaccessible at present. In addition, about 1,000 tons of pegmatite have been blasted from the central portion of the main pegmatite.

The richest ore in the main pegmatite occurs in the wall zone and an intermediate zone of cleavelandite-quartz pegmatite. The wall zone has been sub-divided during mapping into an outer unit of albite-muscovite-quartz pegmatite and an inner unit of albite-quartz-muscovite pegmatite. Beryl and scrap mica occur in both the wall and intermediate zones, and columbite-tantalite occurs in the intermediate zone. Perthite is another economic mineral occurring as a "hood" in the upper part of the pegmatite.

Reserves and Recommendations

A visual estimate of the grade of the beryl in the wall zone is 0.5 percent beryl. This is in agreement with previous estimates of the Geological Survey. The outcrops of the wall zone are coated with limonite and phosphate (?) stains, so that mineral area counts are not reliable. The intermediate zone is poorly exposed, but the previous estimate of 1.0 percent beryl made by the Geological Survey appears to be reasonable.

The applicant states that the grade of the beryl in the pegmatite is 2 percent. This figure is based on sampling by the U. S. Bureau of Mines, Brush Beryllium Corporation, and Metals Reserve Co. It is true that the results of this sampling indicated an average of 0.20 percent BeO, both on fresh ore and in dump samples.

It is believed that these analyses are erroneous. The analyses by the Bureau of Mines were made during World War II at Rolla, Missouri, using a precipitation method of chemical analysis which was later proved to be unreliable. The method gave BeO values which were considerably too high. The assays of Brush Beryllium Corporation were apparently made by the Sarotoga Laboratories in the early part of 1948. It was subsequently proved by the Geological Survey that BeO determinations made by Sarotoga Laboratories before October, 1948 (when a change was made in spectrographic technique) were of questionable accuracy.

The applicant listed the ore tonnage at 175,000 tons. This tonnage is necessary for a 5-year operation of the mill. This estimate is supposed to include the entire tonnage of the two pegmatites and does not take into account the "barren" ore or quartz core in the main pegmatite.

New computations were made of the ore reserves (wall zone and intermediate zone of the pegmatite) which gave 63,000 tons of ore, of which 40,000 tons could be regarded as proved and 23,000 tons as probable ore. It is very likely that there is at least 75,000 tons of minable ore, the previous estimate of the Geological Survey. There is a possibility that there would be 150,000 tons of ore, or equal to the tonnage claim of the applicant.

The recoverable value, based on the Geological Survey's estimate of beryl percentage, of about 45,000 tons of the ore in the main pegmatite is approximately $5.00 per ton. Similarly, the recoverable value of 17,500 tons of the ore in the smaller pegmatite is about $4.30 per ton.

More exploration is needed to warrant the proposed plant expansion. This was discussed with the applicant and it was recommended that the applicant undertake a two-phase exploration program to prove: 1) the content of the beryl in the ore, and 2) the total ore tonnage.

The first phase of the exploration would consist of the taking of properly located samples from the two zones of the main pegmatite and the wall zone of the smaller pegmatite. These would be analyzed for BeO by the most modern techniques. The Bureau and Survey would probably also take portions of the samples in order to check assay results.

If the results of the sampling indicate that the grade of the ore is sufficiently high (the cut-off grade of beryl is between 1 and 2 percent for this operation), then phase 2 of the exploration would take place. It would consist of approximately 1,750 feet of diamond drilling and the assaying of the pegmatite drill core. This drilling footage will be adequate to "prove" the required 5 years of ore reserves, providing of course that there are sufficient reserves of ore present.

Since the major part of the proposed work will be contracted for, no manpower problem is anticipated.

The applicant will furnish all equipment and supplies necessary for the project.

The exploration will be confined to the Great Northern claim, of the Old Mike group, which is easily accessible by about 2 miles of a company maintained, crushed rock, one-way road.

Water for this project is ample and available from a nearby spring. The power to be used is gasoline and will be delivered in barrels.

The project will be supervised by A. I. Johnson, who is a graduate of the South Dakota School of Mines and who has had several years experience managing pegmatite operations. He is assumed to be capable of the responsibilities involved in this project.

Phase A:

2 samplers @ $1.25 per hour, plus 6% for taxes and insurance = $21.20 per day for 15 days	$ 318.00
Analysis of 60 pulps (4 cuts from 15 samples) @ $15.00 each	900.00
Total for Phase A	$1,218.00

Phase B:

1,750 feet AX diamond core drilling @ $5.00 per ft.	$ 8,750.00
Analysis of 40 pulps @ $15.00 each	600.00
Total for Phase B	$ 9,350.00
Total cost of project	$10,568.00

Phase A can start immediately after the contract is signed and will require 3 weeks to complete. No reasonable estimate is possible of the time required for the analytical work, but as aforestated, Phase B will not be started until favorable results are obtained in this phase.

Phase B:

1st month - 330 feet of core hole
2nd month - 330 feet of core hole
3rd month - 330 feet of core hole
4th month - 330 feet of core hole
5th month - 330 feet of core hole
7 shifts of 6th month - 100 feet of core hole

(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.

(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:

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)					
Indicated (probable)					

(c) If placer:

(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:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

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.

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.

Mineral Mills Inc
(Name of company)

By A. D. Johnson
(Signature of authorized official)

Sept. 29, 1971
(Date)

Sec. Treas.
(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

Form MF-100
(May 1951)

U. S. 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. DMA-2168

Date received 10-17-51

Mineral Mills INC
Custer, S. Dak

Name and address of applicant

Date Sept. 29, 1951

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?
   (*b*) What are the byproducts, if any?
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.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

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

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   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	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

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.

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.

General Technical Data- For use under the Defense Production Act of 1950.

General Technical Data.

1. Materials Produced.
   a. The chief mine products are beryl, mica, tantalite and feldsapr. Feldspar is a by-product.

2. a. Inclinded shaft on south endof dike at end of adit 50'.
   b. Approximately 350' of drifts and crosscuts have been driven on the property.
   c. An adit of 150 feet.
   d. An open cut 50' long is located on the mill end of the dike.

3. a. 4 miles northwest of Custer- nearest railroad siding one mile west of the property
   b. No organized mining district.
   c. Property located in sections 2 and 3 T. 3 S. R 4 E. BHM
   d. Located in Custer County- South Dakota.

4. The property is not now in operation.
   The applicant is the owner of the property.

5. The property has been in operation from 1942 to 1950 inclusive. Negotiations are now under way for operating the property for mica. It is expected that this project may develop within a few weeks.

6. The applicant has been producing beryl, mica, tantalite and feldspar since 1942.
   b. The manager- A.I. Johnson has been operating properties of this nature since 1933.

7. History-

Mineral Mills Inc, was organized in June of 1941 to operate the Old Mike Mine situated about 4 miles northwest of Custer. The property had been a producer of sheet mica during the first world war and had produced mica and tantalite during the intervening period and its operation by Mineral Mills Inc. This production had been confined to the adit area on the south end of the pegmatite.

The company, after arranging a lease with the Maywood Chemical Co for the operation of the mine, brought in trained rifters and mica sheeters from North Carolina to develop local personnel for producing strategic as well as scrap mica. A screening plant was also set up to recover a portion of the scrap not recovered by hand sorting methods. Considerable test work was done on the problem of recovering a maximum amount of the mica contained in the dike material. When the war came on Mineral Mills Inc went all out for the production of strategic mica beryl and tantalite, scrap mica production being relegated to a secondary position.

General Technical Data

An arrangement to purchase the mine was made with the Maywood Chemical Co. and additional property was acquired adjoining these daims. The company now owns some 450 acres of mining property in the area. During the war also operated two additonal mica properties the Glenwood and Red Deer. It now owns the Glenwood mine as well as the Old Mike property. The Red Deer mine was operated under a lease by the Consolidated Feldspar Corp. Production from the several properties is given on a following sheet. The sheet mica andpunch mica wer sol to Colonial Mica Corp, the feldspar to the Consolidated Feldspar Corp., the tantalite to the Fansteel Metallurgical Corp., the beryl to Colonial Mica Corp and later to Mrs Gladys Wells at Custer, S. D. The company sold its scrap mica to three companies- U. S. Mica Co., Forest Park, Ill., Ashville Mica Co., Richmond, Va. , Concord Mica Co., Concord N. H. Some mica was sold later to Western Non- Metallics at Pueblo, Colorado.

To produce sheet and punch mica Mineral Mills Inc operated rifting plants at both Custer and Hill City and at one time employed some 45 rifters and sheeters beside those at the mines.

A great deal of experimental work was carried on with a pilot mill operation on theproperty to work out details of recovery for the scrap mica for future operations. This plant was operated with a D. C. power plant consisting of a Ford V- 8 engine , belt connected to a generator. A vibrating screen was used in the work. This work, in conjunction with experience gainde from the operation of the Bureau of Mines plant at Custer, S. Dak., was the basis for the plant later set up to produce scrap mica on a larger scale. The company during 1945 arranged with Smaller Plants Corp. for a llean of $25,000.00 for the construction of a mica beneficiation plant. This was completed in February 1946. During its first year of operation it produced over 1,000 tons of scrap mica. The plant was shut down in 1947 due to a reduction of the scrap mica price from $25.00 per ton to $20.00 per ton and this later was reduced still further to $18.00. The cause of the price reduction was curtailment of mica grinders in purchase to minimum necessities to cut down inventories in fear of general price reductions. Following this period surplus supplies were made available from government stock piles at reduced prices and the mica situation as far as the producer was concerned became critifal. Prices started to rise again in the later part of 1949 and have continued but the company has been working on a project to more economically recover all of the economic minerals which would include fine beryl, tantalite etc.

Production- Mineral Mills Inc.
Old Mike Mine

1942-	35,893# punch mica	$ 6601.62
	1,624½# sheet mica	3426.33
	250 tons scrap mica	10009.68
	6½ tons beryl	540.00
	200# tantalite	300.00
	Total	$20877.74
1943-	3,075.2# sheet mica	15,376.09
	231 tons scrap mica	5,451.35

Sheet 3-
General Technical Data

1943- cont. Fwd			$ 20, 827.35
	13.766 tons beryl		$ 1,376.60
	150# tantalite		311.72
	22 tons feldspar		66.00
		Total	$ 22,581.76
1944-	21,347# washer punch		661.23
	4,670.06# sheet mica		27,424.22
	48.639 tons scrap mica		971.86
	2.33 tons beryl		321.80
	82.4# tantalite		147.68
		Total	$ 29,526.89
1945-	2,264# sheet mica)		
	3756.05# punch mica)		9,702.67
	44.176 tons scrap mica		970.07
		Total	$ 10,672.74
1946	1,006.13 tons scrap mica		$ 24,981.91
	86.32 tons feldspar		345.28
		Total	$25,327.19
1947-	197.05 tons scrap mica		$ 4,926.25
	4 tons block Mica		600.00
	71.03 tons feldspar		284.12
		Total	$ 5,810.37
1948-	61 tons scrap mica		$ 1,372.50
	20 tons feldspar		80.00
	800# beryl		80.00
		Total	$ 1,532.50
1949-	33 tons scrap mica		825.00
	2 tons beryl		400.00
	15 tons feldspar s	p	60.00
		Total	$ 1,285.00
1950-	3.25 tons beryl		650.00
	10 tons scrap mica		225.00
		Total	$ 875.00
	Total Old Mike Mine Production		$118,489.19

Production Glenwood Mine

1945-	483.44# punch)		
	989.56# sheet mica)		$9,462.41
	5.021 tons scrap mica		99.98
	27.616 tons block mica		3,825.62
		Total	$13,388.01

Production Red Deer Mine

1945	6.306 tons block Mica	Total	$984.75
	Total Mineral Mills Inc		$132,861.95

General Technical Data

Sheet 4

7- History

(b) No immeidate adjoining properties.

(c) Sampling of the beryl content of the pegmatite.

Brush Beryllium - sampling of dumps	.21 BeO
Mineral Mills Test samples- Dump	.185
" " " outcrops	.23
U. S. Bureau of Mines Test sample	.25
" " Dump "	.20
" " " "	.23

Sampling of pegmatite for mica by Bureau of Mines indicated over 15% mica.
Operations of Mineral Mills Inc to produce scrap mics from the mica rich zone gave 14.2% mica recovery with losses varying from 3 to 5 per cent mica.

8- Names of Officers and directors-

Name and address	title	1950 salary	shares held
Albert Gushurst D Lead, S. D.	Pres.	None	200
A. I. Johnson D	Sec-Treas.	"	200
Ben Bell- Vice President Jackson, Calif.		"	50
John Knecht D Rapid City, S. Dak.		"	40
Chas Bennett D Rapid City, S. Dak.		"	30
Gray Sharp Evanston, Illinois		"	20
		Total	540

9- Common stock authorized 1,000 shares - $100 par
" " Issued 540 "

10- Production shown on previous sheet.

11- It is estimated that when contemplated plant is built that production will total 14 tons of scrap mica daily and 1½ tons beryl with minor amounts of by-products of tantalite and feldspar.

12- Ore reserves have been estimated by Mineral Mills Inc at 175,000 tons of beryl-mica rich pegmatite having a recoverable value of 1.5% beryl and 14% mica with values of tantalite and feldspar undetermined. Purpose of present proposal in application is to establish actual reserves.

13- Access roads - Highway 16 is one mile West of mine- Gravelled road connects property to CB&Q RR and Highway 16.

14- Water would be available from wells drilled in area as previously mentioned.

15- Power line from Custer connects mine to source of power and average cost would be betwee 1¼ and 1½ cents per KWH.

16- For present project- Sampling would take two men with portable compressor- about week.
Diamond Drilling would be contracted at prevailing rates.

17- No necessity for use of present buildings for this projedt.

MF-103
(Rev. 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

OCT 17 10 32 AM '51

DO NOT FILL IN THIS BLOCK

Docket No. DMA A-2168

Date received 10-17-51

Participation

Mineral Mills Inc
Custer, S. Dak.

Name and address of applicant

Date Sept 29, 1951

FILL IN THIS BLOCK

Date of application Sept. 29, 1951

Estimated cost $10,000.00

Mineral or metal Beryl, Mica, tantalite

Percentage of Government participation 90%

Location of mine Custer, S. Dak.

Date of filing MF-100

DMA Docket Number, if available 2168

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.

*5. Are you the owner or the lessee of the property?

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*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.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

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.

Mineral Mills Inc
(Name of company)

By [signature]
(Signature of authorized official)

Sept. 29, 1951
(Date)

Sec. Treas
(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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Application for Aid for an Exploration Project
Pursuant to Mineral Order 5 under
Defense Production Act of 1950

1. The Applicant is a Corporation organizedunder the Laws of South Dakota.

2. The Officers and Directors are as follows:

President- Albert Gushurst, Lead, S. Dak.
Secretary- Treasurer- A. I. Johnson, Keystone, S. Dak.
Vice President- Ben Bell- Jackson, California
Directors: John Kneckt- Rapid City, S. Dak.
Chas. Bennett- " "
Other Stockholders: Wray Sharp- Evanston, Illinois.

4. a. The Applicant has operated the Old Mike Mine and other properties since 1942 and has been producing beryl, mica tantalite and feldspar during that time.
b. The property will be managed by A. I. Johnson who has been operating properties of this nature since 1933.

5. The company owns the properties under consideration.

8. A currentfinancial statement is being prepared. There has been no operation except for assessment work during the past year hence no profit and loss statement that is current is available.

9. The applicant is prepared to invest its 10% of the required expenditures.

The Property.

10.aThe Project calls for a sampling and diamond Drilling of the pegmatite dike outcropping on theGreat Northern Lode Mining Claim, located in Sections 2 and 3 T. 3 S. R. 4 E. BHM. The details are more fully shown on the Preliminary Map of the U. S. G. S. prepared under Strategic Mineral Investigations by Stevens, Paige and Adams during October and November of 1944. This is known as the Old Mike Mine.
b. Given above.

11. The present name of the property is the Old Mike Mine.

12. The property is located about 3½ miles Northwest of Custer, S. Dak. It is located about one mile East of Berne Siding on the Burlington Railroad. A siding is available here for shipment of ores. A graveled road connects the property with the siding.

13. Water is available from springs located on the Dictator Lode located north of the Great Northern and belonging to the Corporation.

Property Cont.

14/ The property has on it a milling plant and mining facilities but none of this would be needed for the sampling and diamond drilling operations contemplated in this application.

15. The ore could be shipped from Berne Siding and application for for additional milling facilities is contemplated as this work now under consideration is to block out sufficient ore and determine grade for a milling operation to produce beryl and mica from millingoperations. At present facilities are available for milling mica bearing pegmatite to produce scrap mica.

16- 17- 18 Details In Form MF - 100

The Exploration.

20. The exploration will be coneucted to establish reserves sufficient to operate a 100 ton plant for a period sufficient to return the loan contemplated for a beryl recovery plant. The exploration will be conducted to determine grade and tonnage of reserves that could be made available. The mineral contemplated is beryl with by-product mica, tantalite.

21.aIt is proposed to take 15 surface samples and analyze them for BeO content. These 15 samples will be from present dumps and indicatedoutcrops on the U.S.G.S. open file map accompanying this application. Samples will be available for Spectroscopic analysis, for chemical analysis, U. S. Bureau of Mines studies, and U. S. G. S. studies. The purpose of these samples will be to determine grade in BeO of present dumps andoutcrops.

b.The second phase of the exploration contemplates drilling with diamond drill a total of 1750 feet of hole approximately indicated on the U.S.G.S open file map. Cores will be sampled and analyzed for BeO content as previously done with dump and face samples. It would require from 3 to 4 months to complete the work.

22. Present indications are that fairly uniform concentrations of beryl occur in the deposit known as the Old Mike Mine. Present information is that the average grade of this is 2% beryl. An application was made to obtain a loan to build a beneficiation plant for beryl on theproperty. After discussions with the DMA field team it was thought adviseable to get more detailed information on thegrade and tonnage of the deposit. The present application is the outcome of studies and discussions with the DMA field team.

The Requirements and Costs.

23. (a) Sampling of present dumps and indicated outcrops.

1- Taking 15 samples at $20.00 per sample.....	$300.00
2- A four way analysis and study of samples... as previously indicated.	$300.00
Total	$600.00
(b) Sampling and analysis of diamond drill cores.	
Estimate cost of analyses and preparation	$400.00
Total costs	$1000.00
(c) 1750' of diamond drilling @ $5.00 per ft.	8750.00
Total	$9750.00

Form MF-100
(May 1951)

U. S. 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. DMA-2168

Date received 10-17-51

Mineral Mills Inc
Custer, S. Dak

Name and address of applicant

Date Sept. 29, 1951

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?
   (*b*) What are the byproducts, if any?
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.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

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

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   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	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

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.

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.

(*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.

(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:

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)					
Indicated (probable)					

(*c*) If placer:

(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:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

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.

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.

Mineral Mills Inc
(Name of company)

By A. D. Johnson.
(Signature of authorized official)

Sept. 29 1951
(Date)

Sec. Treas.
(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

General Technical Data- For use under the
Defense Production Act of 1950.

General Technical Data.

1. Materials Produced.
   a. The chief mine products are beryl, mica, tantalite and feldsapr. Feldspar is a by-product.

2. a. Inclinded shaft on south endof dike at end of adit 50'.
   b. Approximately 350' of drifts and crosscuts have been driven on the property.
   c. An adit of 150 feet.
   d. An open cut 50' long is located on the mill end of the dike.

3. a. 4 miles northwest of Custer- nearest railroad siding one mile west of the property
   b. No organized mining district.
   c. Property located in sections 2 and 3 T. 3 S. R 4 E. BHM
   d. Located in Custer County- South Dakota.

4. The property is not now in operation.
   The applicant is the owner of the property.

5. The property has been in operation from 1942 to 1950 inclusive. Negotiations are now under way for operating the property for mica. I t is expected that this project may develop within a few weeks.

6. The applicant has been producing beryl, mica, tantalite and feldspar since 1942.
   b. The manager- A.I. Johnson has been operating properties of this nature since 1933.

7. History-

Mineral Mills Inc, was organized in June of 1941 to operate the Old Mike Mine situated about 4 miles northwest of Custer. The property had been a producer of sheet mica during the first world war and had produced mica and tantalite during the intervening period and its operation by Mineral Mills Inc. This production had been confined to the adit area on the south end of the pegmatite.

The company, after arranging a lease with the Maywood Chemical Co for the oper ation of the mine, brought in trained rifters and mica sheeters from North Carolina to develop local personnel for producing strategic as well as scrap mica. A screening plant was also set up to recover a portion of the scrap not recovered by hand sorting methods. Considerable test work was done on the problem of recovering a maximum amount of the mica contained in the dike material. When the war came on Mineral Mills Inc went all out for the production of strategic mica beryl and tantalite, scrap mica production being relegated to a secondary position.

General Technical Data

An arrangement to purchase the mine was made with the Maywood Chemical Co. and additional property was acquired adjoining these daims. The company now owns some 450 acres of mining property in the area. During the war also operated two additonal mica properties the Glenwood and Red Deer. It now owns the Glenwood mine as well as the Old Mike property. The Red Deer mine was operated under a lease by the Consolidated Feldspar Corp. Production from the several properties is given on a following sheet. The sheet mica andpumch mica wer sol to Colonial Mica Corp, the feldspar to the Consolidated Feldspar Corp., the tantalite to the Fansteel Metallurgical Corp., the beryl to Colonial Mica Corp and later to Mrs Gladys Wells at Custer, S. D. The company sold its scrap mica to three companies- U. S. Mica Co., Forest Park, Ill., Ashville Mica Co., Richmond, Va. , Concord Mica Co., Concord N. H. Some mica was sold later to Western Non- Metallics at Pueblo, Colorado.

To produce sheet and punch mica Mineral Mills Inc operated rifting plants at both Custer and Hill City and at one time employed some 45 rifters and sheeters beside those at the mines.

A great deal of experimental work was carried on with a pilot mill operation on theproperty to work out details of recovery for the scrap mica for future operations. This plant was operated with a D. C. power plant consisting of a Ford V- 8 engine , belt connected to a generator. A vibrating screen was used in the work. This work, in conjunction with experience gainde from the operation of the Bureau of Mines plant at Custer, S. Dak., was the basis for the plant later set up to produce scrap mica on a larger scale. The company during 1945 arranged with Smallery Plants Corp. for a lloan of $25,000.00 for the construction of a mica beneficiation plant. This was completed in February 1946. During its first year of operation it produced over 1,000 tons of scrap mica. The plant was shut down in 1947 due to a reduction of the scrap mica price from $25.00 per ton to $20.00 per ton and this later was reduced still further to $18.00. The cause of the price reduction was curtailment of mica grinders in purchases to minimum necessities to cut down inventories in fear of general price reductions. Following this period surplus supplies were made available from government stock piles at reduced prices and the mica situation as far as the producer was concerned became critifal. Prices started to rise again in the later part of 1949 and have continued but the company has been working on a project to more economically recover all of the economic minerals which would include fine beryl, tantalite etc.

Production- Mineral Mills Inc.
Old Mike Mine

1942-	35,893# punch mica	$ 6601.62
	1,624½# sheet mica	326.33
	250 tons scrap mica	10009.68
	6½ tons beryl	540.00
	200# tantalite	300.00
	Total	$20877.74
1943-	3,075.2# sheet mica	15,376.09
	231 tons scrap mica	5,451.35

Sheet 3-
General Technical Data

1943- cont. Fwd			$ 20, 827.35
	13.766 tons beryl		$ 1,376.60
	150# tantalite		311.72
	22 tons feldspar		66.00
		Total	$ 22,581.76
1944-	21,347# washer punch		661.23
	4,670.06# sheet mica		27,424.22
	48.639 tons scrap mica		971.86
	2.33 tons beryl		321.80
	82.4# tantalite		147.68
		Total	$ 29,526.89
1945-	2,264# sheet mica)		
	3756.05# punch mica)		9,702.67
	44.176 tons scrap mica		970.07
		Total	$ 10,672.74
1946	1,006.13 tons scrap mica		$ 24,981.91
	86.32 tons feldspar		345.28
		Total	$25,327.19
1947-	197.05 tons scrap mica		$ 4,926.25
	4 tons block Mica		600.00
	71.03 tons feldspar		284.12
		Total	$ 5,810.37
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	20 tons feldspar		80.00
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	2 tons beryl		400.00
	15 tons feldspar s	p	60.00
		Total	$ 1,285.00
1950-	3.25 tons beryl		650.00
	10 tons scrap mica		225.00
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	Total Mineral Mills Inc		$132,861.95

General Technical Data

Sheet 4

7- History

(b) No immeidate adjoining properties.

(c) Sampling of the beryl content of the pegmatite.

Brush Beryllium - sampling of dumps	.21 BeO
Mineral Mills Test samples- Dump	.185
" " " outcrops	.23
U. S. Bureau of Mines Test sample	.25
" " Dump "	.20
" " " "	.23

Sampling of pegmatite for mica by Bureau of Mines indicated over 15% mica.
Operations of Mineral Mills Inc to produce scrap mics from the mica rich zone gave 14.2% mica recovery with losses varying from 3 to 5 per cent mica.

8- Names of Officers and directors-

Name and address	title	1950 salary	shares held
Albert Gushurst D Lead, S. D.	Pres.	None	200
A. I. Johnson D	Sec-Treas.	"	200
Ben Bell- Vice President Jackson, Calif.		"	50
John Knecht D Rapid City, S. Dak.		"	40
Chas Bennett D Raoid City, S. Dak.		"	30
Wray Sharp Evanston, Illinois		"	20
		Total	540

9- Common stock authorized 1,000 shares - $100 par
" " Issued 540 "

10- Production shown on previous sheet.

11- It is estimated that when contemplated plant is built that production will total 14 tons of scrap mica daily and 1½ tons beryl with minor amounts of by-products of tantalite and feldspar.

12- Ore reserves have been estimated by Mineral Mills Inc at 175,000 tons of beryl-mica rich pegmatite having a recoverable value of 1.5% beryl and 14% mica with values of tantalite and feldspar undetermined. Purpose of present proposal in application is to establish actual reserves.

General Technical Data

Sheet 5

13- Access roads - Highway 16 is one mile West of mine- Gravelled road connects property to CB&Q RR and Highway 16.

14- Water would be available from wells drilled in area as previously mentioned.

15- Power line from Custer connects mine to source of power and average cost would be betwee 1¼ and 1½ cents per KWH.

16- For present project- Sampling would take two men with portable compressor- about week.
Diamond Drilling would be contracted at prevailing rates.

17- No necessity for use of present buildings for this projedt.

OCT 22 1951

MEMORANDUM:

TO: Director, Production Expansion Division
Defense Minerals Administration

FROM: Director, Supply Division
Defense Minerals Administration

SUBJECT: Recommendation for Contract Approval

Name of Applicant: Minerals Mills, Inc.
Custer, South Dakota

DMA No. 2168X

Commodity: Beryl, Mica, Tantalite

Amount Requested: $ 10,000

Amount Approved: $ 10,568

Government Participation: 90% $ 9,511.20

Tom Lyon
Tom Lyon

Approved:

Director, Supply Division

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

OCT 17 10 33 AM '51

DO NOT FILL IN THIS BLOCK

Docket No. DMA - 2168

Date received 10-17-51

Participation

Mineral Mills Inc
Custer, S. Dak.

Name and address of applicant

Date Sept 29, 1951

FILL IN THIS BLOCK

Date of application Sept. 29, 1951

Estimated cost $10,000.00

Mineral or metal Beryl, Mica, tantalite

Percentage of Government participation 90%

Location of mine Custer, S. Dak.

Date of filing MF-100

DMA Docket Number, if available 2168

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.

*5. Are you the owner or the lessee of the property?

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

    (*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.

*17. Production:

    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

    (*a*) Describe the ore or mineral deposits briefly.

    (*b*) Submit available maps and assay data.

    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

    (*b*) Supervisors, by numbers and positions, with salaries of each.

    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

    (*f*) Cost of rental for equipment which the operator proposes to rent.

    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

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.

Mineral Mills Inc
(Name of company)

By A. J. Johnson
(Signature of authorized official)

Sept. 29 1951
(Date)

Sec. Treas
(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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Application for Aid for an Exploration Project
Pursuant to Mineral Order 5 under
Defense Production Act of 1950

1. The Applicant is a Corporation organizedunder the Laws of South Dakota.

2. The Officers and Directors are as follows:

President- Albert Gushurst, Lead, S. Dak.
Secretary- Treasurer- A. I. Johnson, Keystone, S. Dak.
Vice President- Ben Bell- Jackson, California
Directors: John Kneckt- Rapid City, S. Dak.
Chas. Bennett- " "
Other Stockholders: Wray Sharp- Evanston, Illinois.

4. a. The Applicant has operated the Old Mike Mine and other properties since 1942 and has been producing beryl, mica tantalite and feldspar during that time.
b. The property will be managed by A. I. Johnson who has been operating properties of this nature since 1933.

5. The company owns the properties under consideration.

8. A currentfinancial statement is being prepared. There has been no operation except for assessment work during the past year hence no profit and loss statement that is current is available.

9. The applicant is prepared to invest its 10% of the required expenditures.

The Property.

10.aThe Project calls for a sampling and diamond Drilling of the pegmatite dike outcropping on theGreat Northern Lode Mining Claim, located in Sections 2 and 3 T. 3 S. R. 4 E. BHM. The details are more fully shown on the Preliminary Map of the U. S. G. S. prepared under Strategic Mineral Investigations by Stevens, Paige and Adams during October and November of 1944. This is known as the Old Mike Mine.
b. Given above.

11. The present name of the property is the Old Mike Mine.

12. The property is located about 3½ miles Northwest of Custer, S. Dak. It is located about one mile East of Berne Siding on the Burlington Railroad. A siding is available here for shipment of ores. A graveled road connects the property with the siding.

13. Water is available from springs located on the Dictator Lode located north of the Great Northern and belonging to the Corporation.

Property Cont.

14/ The property has on it a milling plant and mining facilities but none of this would be needed for the sampling and diamond drilling operations contemplated in this application.

15. The ore could be shipped from Berne Siding and application for for additional milling facilities is contemplated as this work now under consideration is to block out sufficient ore and determine grade for a milling operation to produce beryl and mica from millingoperations. At present facilities are available for milling mica bearing pegmatite to produce scrap mica.

16- 17- 18 Details In Form MF - 100

The Exploration.

20. The exploration will be coneucted to establish reserves sufficient to operate a 100 ton plant for a period sufficient to return the loan contemplated for a beryl recovery plant. The exploration will be conducted to determine grade and tonnage of reserves that could be made available. The mineral contemplated is beryl with by-product mica, tantalite.

21.a It is proposed to take 15 surface samples and analyze them for BeO content. These 15 samples will be from present dumps and indicatedoutcrops on the U.S.G.S. open file map accompanying this application. Samples will be available for Spectroscopic analysis, for chemical analysis, U. S. Bureau of Mines studies, and U. S. G. S. studies. The purpose of these samples will be to determine grade in BeO of present dumps and outcrops.

b. The second phase of the exploration contemplates drilling with diamond drill a total of 1750 feet of hole approximately indicated on the U.S.G.S open file map. Cores will be sampled and analyzed for BeO content as previously done with dump and face samples. It would require from 3 to 4 months to complete the work.

22. Present indications are that fairly uniform concentrations of beryl occur in the deposit known as the Old Mike Mine. Present information is that the average grade of this is 2% beryl. An application was made to obtain a loan to build a beneficiation plant for beryl on theproperty. After discussions with the DMA field team it was thought adviseable to get more detailed information on thegrade and tonnage of the deposit. The present application is the outcome of studies and discussions with the DMA field team.

The Requirements and Costs.

23. (a) Sampling of present dumps and indicated outcrops.

1- Taking 15 samples at $20.00 per sample.....	$300.00
2- A four way analysis and study of samples... as previously indicated.	$300.00
Total	$600.00
(b) Sampling and analysis of diamond drill cores. Estimate cost of analyses and preparation	$400.00
Total costs	$1000.00
(c) 1750' of diamond drilling @ $5.00 per ft.	8750.00
Total	$9750.00

Form MF-100
(May 1951)

U. S. 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. DMA-2168

Date received 10-17-51

Mineral Mills Inc
Custer, S. Dak.

Name and address of applicant

Date Sept. 29, 1951

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?
   (*b*) What are the byproducts, if any?
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.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

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

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

   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	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

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.

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.

(*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.

(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:

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)					
Indicated (probable)					

(*c*) If placer:

(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:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

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.

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.

Mineral Mills Inc
(Name of company)

By A. J. Johnson
(Signature of authorized official)

Sept. 29 1951
(Date)

Sec. Treas
(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

General Technical Data- For use under the
Defense Production Act of 1950.

General Technical Data.

1. Materials Produced.
   a. The chief mine products are beryl, mica, tantalite and feldsapr. Feldspar is a by-product.

2. a. Inclinded shaft on south endof dike at end of adit 50'.
   b. Approximately 350' of drifts and crosscuts have been driven on the property.
   c. An adit of 150 feet.
   d. An open cut 50' long is located on the mill end of the dike.
3. a. 4 miles northwest of Custer- nearest railroad siding one mile west of the property
   b. No organized mining district.
   c. Property located in sections 2 and 3 T. 3 S. R 4 E. BHM
   d. Located in Custer County- South Dakota.

4. The property is not now in operation.
   The applicant is the owner of the property.

5. The property has been in operation from 1942 to 1950 inclusive. Negotiations are now under way for operating the property for mica. I t is expected that this project may develop within a few weeks.

6. The applicant has been producing beryl, mica, tantalite and feldspar since 1942.
   b. The manager- A.I. Johnson has been operating properties of this nature since 1933.

7. History-

   Mineral Mills Inc, was organized in June of 1941 to operate the Old Mike Mine situated about 4 miles northwest of Custer. The property had been a producer of sheet mica during the first world war and had produced mica and tantalite during the intervening period and its operation by Mineral Mills Inc. This production had been confined to the adit area on the south end of the pegmatite.

   The company, after arranging a lease with the Maywood Chemical Co for the oper ation of the mine, brought in trained rifters and mica sheeters from North Carolina to develop local personnel for producing strategic as well as scrap mica. A screening plant was also set up to recover a portion of the scrap not recovered by hand sorting methods. Considerable test work was done on thenproblem of recovering a maximum amount of the mica contained in the dike material. When the war came on Mineral Mills Inc went all out for the production of strategic mica beryl and tantalite, scrap mica production being relegated to a secondary position.

General Technical Data

An arrangement to purchase the mine was made with the Maywood Chemical Co. and additional property was acquired adjoining these daims. The company now owns some 450 acres of mining property in the area. During the war also operated two additonal mica properties the Glenwood and Red Deer. It now owns the Glenwood mine as well as the Old Mike property. The Red Deer mine was operated under a lease by the Consolidated Feldspar Corp. Production from the several properties is given on a following sheet. The sheet mica andpumch mica wer sold to Colonial Mica Corp, the feldspar to the Consolidated Feldspar Corp., the tantalite to the Fansteel Metallurgical Corp., the beryl to Colonial Mica Corp and later to Mrs Gladys Wells at C uster, S. D. The company sold its scrap mica to three companies- U. S. Mica Co., Forest Park, Ill., Ashville Mica Co., Richmond, Va. , Concord Mica Co., Concord N. H. Some mica was sold later to Western Non- Metallics at Pueblo, Colorado.

To produce sheet and punch mica Mineral Mills Inc operated rifting plants at both Custer and Hill City and at one time employed some 45 rifters and sheeters beside those at the mines.

A great deal of experimental work was carried on with a pilot mill operation on theproperty to work out details of recovery for the scrap mica for future operations. This plant was operated with a D. C. power plant consisting of a Ford V- 8 engine , belt connected to a generator. A vibrating screen was used in the work. This work, in conjunction with experience gainde from the operation of the Bureau of Mines plant at Custer, S. Dak., was the basis for the plant later set up to produce scrap mica on a larger scale. The company during 1945 arranged with Smaller Plants Corp. for a llean of $25,000.00 for the construction of a mica beneficiation plant. This was completed in February 1946. During its first year of operation it produced over 1,000 tons of scrap mica. The plant was shut down in 1947 due to a reduction of the scrap mica price from $25.00 per ton to $20.00 per ton and this later was reduced still further to $18.00. The c ause of the price reduction was curtailment of mica grinders in purchases to minimum necessities to cut down inventories in fear of general price reductions. Following this period surplus supplies were made available from government stock piles at reduced prices and the mica situation as far as the producer was concerned became critifal. Prices started to rise again in the later part of 1949 and have continued but the company has been working on a project to more economically recover all of the economic minerals which would ind ude fine beryl, tantalite etc.

Production- Mineral Mills Inc.
Old Mike Mine

1942-	35,893# punch mica	$ 6601.62
	1,624½# sheet mica	3426.33
	250 tons scrap mica	10009.68
	6½ tons beryl	540.00
	200# tantalite	300.00
	Total	$20877.74
1943-	3,075.2# sheet mica	15,376.09
	231 tons scrap mica	5,451.35

Sheet 3-
General Technical Data

1943- cont. Fwd			$ 20, 827.35
	13.766 tons beryl		$ 1,376.60
	150# tantalite		311.72
	22 tons feldspar		66.00
		Total	$ 22,581.76
1944-	21,347# washer punch		661.23
	4,670.06# sheet mica		27,424.22
	48.639 tons scrap mica		971.86
	2.33 tons beryl		321.80
	82.4# tantalite		147.68
		Total	$ 29,526.89
1945-	2,264# sheet mica)		
	3756.05# punch mica)		9,702.67
	44.176 tons scrap mica		970.07
		Total	$ 10,672.74
1946	1,006.13 tons scrap mica		$ 24,981.91
	86.32 tons feldspar		345.28
		Total	$25,327.19
1947-	197.05 tons scrap mica		$ 4,926.25
	4 tons block Mica		600.00
	71.03 tons feldspar		284.12
		Total	$ 5,810.37
1948-	61 tons scrap mica		$ 1,372.50
	20 tons feldspar		80.00
	800# beryl		80.00
		Total	$ 1,532.50
1949-	33 tons scrap mica		825.00
	2 tons beryl		400.00
	15 tons feldspar s	p	60.00
		Total	$ 1,285.00
1950-	3.25 tons beryl		650.00
	10 tons scrap mica		225.00
		Total	$ 875.00
	Total Old Mike Mine Production		$118,489.19

Production Glenwood Mine

1945-	483.44# punch)		
	989.56# sheet mica)		$9,462.41
	5.021 tons scrap mica		99.98
	27.616 tons block mica		3,825.62
		Total	$13,388.01

Production Red Deer Mine

1945	6.306 tons block Mica	Total	$984.75
	Total Mineral Mills Inc		$132,861.95

General Technical Data

Sheet 4

7- History

(b) No immeidate adjoining properties.

(c) Sampling of the beryl content of the pegmatite.

Brush Beryllium - sampling of dumps	.21 BeO
Mineral Mills Test samples- Dump	.185
" " " outcrops	.23
U. S. Bureau of Mines Test sample	.25
" " Dump "	.20
" " " "	.23

Sampling of pegmatite for mica by Bureau of Mines indicated over 15% mica.
Operations of Mineral Mills Inc to produce scrap mics from the mica rich zone gave 14.2% mica recovery with losses varying from 3 to 5 per cent mica.

8- Names of Officers and directors-

Name and address	title	1950 salary	shares held
Albert Gushurst D Lead, S. D.	Pres.	None	200
A. I. Johnson D	Sec-Treas.	"	200
Ben Bell- Vice President Jackson, Calif.		"	50
John Knecht D Rapid City, S. Dak.		"	40
Chas Bennett D Raoid City, S. Dak.		"	30
Wray Sharp Evanston, Illinois		"	20
		Total	540

9- Common stock authorized 1,000 shares - $100 pa
" " Issued 540 "

10- Production shown on previous sheet.

11- It is estimated that when contemplated plant is built that production will total 14 tons of scrap mica daily and 1½ tons beryl with minor amounts of by-products of tantalite and feldspar.

12- Ore reserves have been estimated by Mineral Mills Inc at 175,000 tons of beryl-mica rich pegmatite having a recoverable value of 1.5% beryl and 14% mica with values of tantalite and feldspar undetermined. Purpose of present proposal in application is to establish actual reserves.

General Technical Data

Sheet 5

13- Access roads - Highway 16 is one mile West of mine- Gravelled road connects property to CB&Q RR and Highway 16.

14- Water would be available from wells drilled in area as previously mentioned.

15- Power line from Custer connects mine to source of power and average cost would be betwee 1¼ and 1½ cents per KWH.

16- For present project- Sampling would take two men with portable compressor- about week.
Diamond Drilling would be contracted at prevailing rates.

17- No necessity for use of present buildings for this projedt.