DMEA 3178

DOCKET INDEX

ACTION DOCUMENTS

1	APPLICATION	DATE RECEIVED	9/28/53
2	CONTRACT	DATE	12/30/53
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MF-200 (A)
(February 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 25 1954

DOCKET NO. EA 316

COMMODITY Mica

Docket Copy

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

IDM-E 652

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 30th day of December, 195 3, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Joe Buchanan, J. R. Johnson, and Edgar Buchanan, Partners, Bakersville, North Carolina

hereinafter called the "Operator," as follows: and as set forth in Annexes I and II attached hereto and made a part hereof;

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 North Carolina, County of Mitchell, described as follows:[3] set forth in Annex I,

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

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

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

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

in or upon the described land; and shall bring the project to completion within a period of twelve (12) months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 50 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 $6,140.30, which is 50 percent of $12,280.60, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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) (Partner)

_____ (Partner)

By _____ (Partner)

By _____

Before Burton Hock Chamber

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—66329-1

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FEB 25 1954

EXPLORATION PROJECT CONTRACT
ZEB BUCHANAN, W. R. JOHNSON, AND EDGAR BUCHANAN, PARTNERS
DOCKET NO. DMEA-3176

ANNEX I

The land referred to in Article 2 of the contract form is known as The Bordon Mine and was leased for mining purposes to Zeb Buchanan, W. R. Johnson, and Edgar Buchanan for a period of five years by Mrs. Effie Buchanan and Milt Wilson, by an instrument dated July 31, 1953. It is located on a ridge between Laurel and Dry branches, about one airline mine north of Hawk, Mitchell County, North Carolina, and is described in the aforesaid lease, as follows:

"Beginning on a 16" water oak standing 14' Northwest of a 30' granite ledge; 12' Northeast of a 12" chestnut oak pointer. Running North 49° 30' East for 100' to a 6" blackgum, then N. 48° E. for 115' 6" to a 6" maple. Then S. 31° 30' East for 88' to a stake near a double maple. Then S. 50° E. for 39' to a 4" crabapple. Then S. 36° 30' W. for 129' to a 5" hickory. Then S. 35° 30' W. for 99' to a stake in the old sled road. Then N. 56° 30' W. for 124' along old road, to an 18" water oak in edge of old road. Then N. 1° E. for 66' to the beginning. Containing approximately .7 (seven-tenths) acres."

EXPLORATION PROJECT CONTRACT
ZEB BUCHANAN, W. R. JOHNSON, AND EDGAR BUCHANAN, PARTNERS
DOCKET NO. DMEA-3178

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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JUL 25 1954

ANNEX II

The following provisions are in lieu of Article 6 :

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts, plus one-half ($\frac{1}{2}$) per cent 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) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) per cent.)

c. Definitions.--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.

d. Lien for Payment.--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.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--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.

25 1954

EXPLORATION PROJECT CONTRACT
ZEB BUCHANAN, W. R. JOHNSON, AND EDGAR BUCHANAN, PARTNERS
DOCKET NO. DMEA-3176

EXHIBIT "A"

Description of the Work

Exploration for concentrations of strategic mica shall be accomplished in the area indicated on the attached map entitled "Sketch of Bordon Mine, Mitchell Co., N. C., DMEA-3176 (mica)." The work shall be done in two stages, as follows:

Stage I

1. Improve 1.5 miles of existing logging road to permit jeep travel.

2. Dewater and install temporary ladders in existing 65-foot shaft.

Stage II

1. Construct one toolhouse 10 feet by 15 feet, one powder magazine, and one exploder magazine.

2. Enlarge the existing 65-foot shaft to 5 feet by 7 feet in cross section and install a partitioned ladderway. Timber the shaft where necessary.

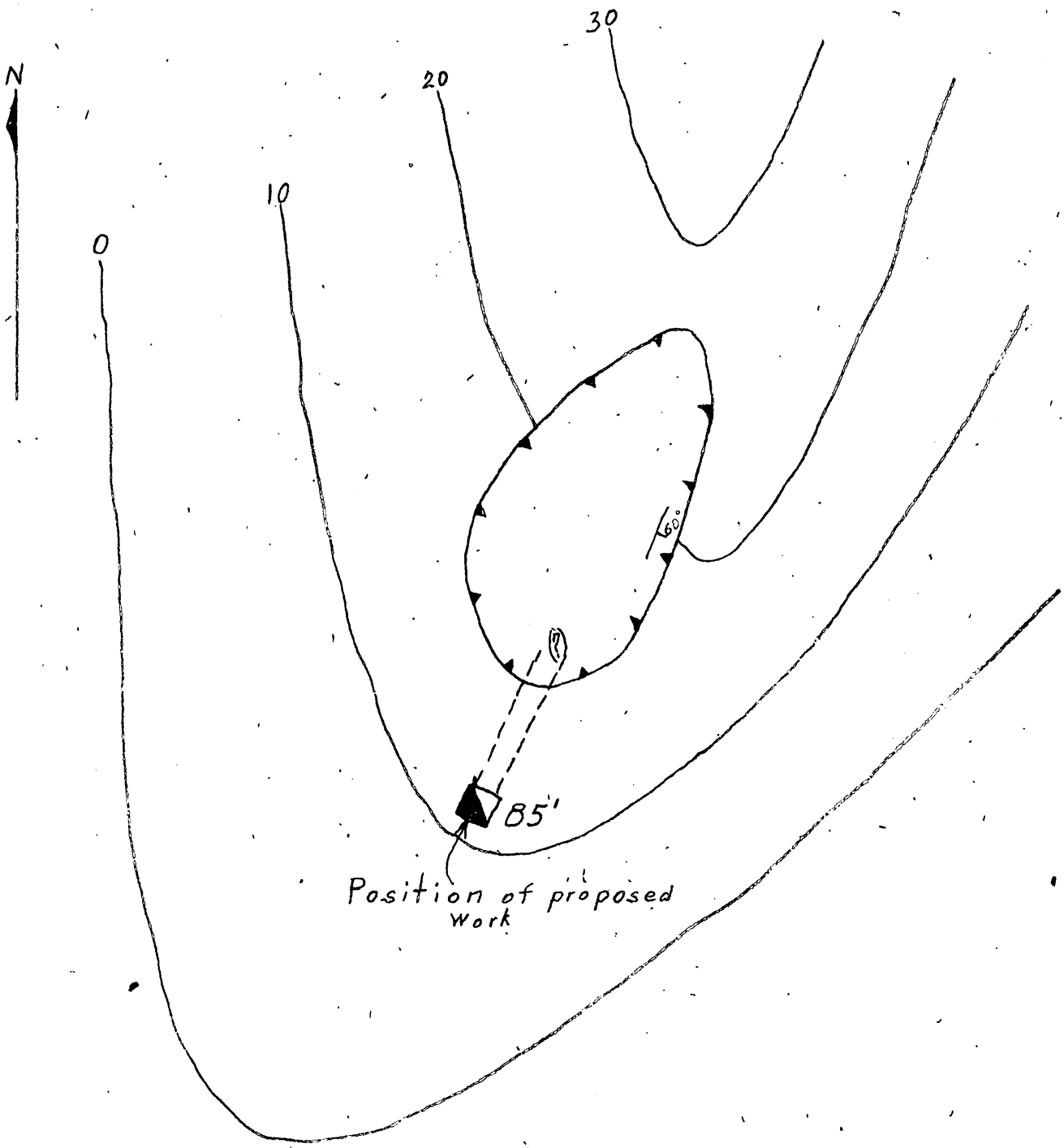
3. After the shaft is completed, 5-foot by 7-foot drifts shall be driven from the most promising points in the shaft, not in excess of 100 feet.

Stage II shall be undertaken only after Stage I has been completed and approved by the Government. The location, direction, inclination, and extent of all work must have prior written approval of the Government.

Agreed Unit Costs

Improving 1.5 miles access road.[1]		$500.00
Dewatering and installing temporary ladders in existing shaft, 85 feet @ $4.00/ft.		340.00
Constructing:	Toolhouse [1]	200.00
	Powder magazine [1]	50.00
	Exploder magazine [1]	25.00
Reconditioning shaft, 85 feet @ $26.00/ft.		2,210.00
Drifting, 100 feet @ $35.00/ft.		3,500.00
Total Estimated Agreed Unit Costs		$6,825.00
Government Participation @ 90%		$6,142.50

1/ The completed work constitutes the unit.



Sketch of
Bordon Mine
Mitchell Co., N.C.

0 20' 40'

Scale

DMEA-3178 (mica)

MF-203

OWNER'S CONSENT TO LIEN

(Copy)

RECEIVED

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of North Carolina, County of Mitchell, described as follows:1/ Beginning on a 16" water oak standing 14' Northwest of a 30' granite ledge; 12' Northeast of a 12" chestnut oak pointer. Running North 49° 30' East for 100' to a 6" blackgum, then N. 48° E. for 115' 6" to a 6" maple. Then S. 31° 30' East for 88' to a stake near a double maple. Then S. 50° E. for 39' to a 4" crabapple. Then S. 36° 30' W. for 129' to a 5" hickory. Then S. 35° 30' W. for 99' to a stake in the old sled road. Then N. 56° 30' W. for 124' along old road, to an 18" water oak in edge of old road. Then N. 1° E. for 66' to the beginning. Containing approximately .7 (seven tenths) acres.

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

2/ Zeb Buchanan, W. R. Johnson, & Edgar Buchanan, all of Bakersville, N. C., doing business as The Borden Mine.

hereinafter called the "Operator"; and

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

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

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

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

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

Dated this _____ day of _____, 195 ___.

/s/ M. S. Wilson [Seal]

/s/ Mrs. Ebby Buchanan [Seal]

_____ [Seal]

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

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

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

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

RELEVANT CONTRACT PROVISIONS

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

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

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

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

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

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

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

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

DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. DMEA-3178

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 Assistance

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.

1 cy to Reg. USBM, ~~USGS, and~~ Docket

Routing Slip

To:	Code 600 Rm 4637	Date	9-28-53
To:	Anderson	Date	9/20/53
To:	Open Corr	Date	10-7-53
To:	Code 600	Date	10-8-53
To:	Open Corr	Date	12-4-53
To:	600	Date	12-7
To:	Open Corr	Date	12-30-53
To:	Code 600	Date	1/5/54
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

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CONTROLLED DOCUMENT

Docket Copy
Surname:
Anderson
Hook
Chamberlin
Selfridge
Johnson

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

600

JAN 26 1955

Mr. Zeb Buchanan, et al.

Bakersville, North Carolina

Re: Docket No. DMEA-3178 - Miss
Zeb Buchanan, . R. Johnson and
Edgar Buchanan
Bordon Mine
Mitchell County, North Carolina
Contract No. DMm-E652

Dear Mr. Buchanan:

We are pleased to advise you that your performance of exploration work under the subject contract has been acceptable to the Government, and the account relating thereto has been closed. The final audit of the Contract Administration and Audit Division shows:

Total claimed for units of work performed	$5,611.00
Total Government contribution at 90 percent	$5,249.90

Your attention is called to the provision of the contract which requires you to keep and preserve your records and accounts of this transaction for a period of three years for possible future reference.

We sincerely regret that the work performed did not result in a certification of discovery or development under the provisions of the exploration contract. In the absence of such certification, the Government retains no claim or lien against the property or royalty on any production made after the date of this letter.

The Government thanks you for your interest and participation in the exploration program of the Defense Minerals Exploration Administration.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

WCAnderson:gad 1/25/55
Copy to: Mrs. Ebby Buchanan (Attached to Field Team copies for forwarding)
Mr. M. S. Wilson " " " "

Mr. Dietrich, 3061
Mr. Chambers

R.C.h.

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

Project Summary Report

By: Walter C. Anderson WCA January 25, 1955 WCA

1. Docket No. DMEA-3178 - Mica
Contract No. Idm-E652
Bordon Mine
Mitchell County, North Carolina

Operators: Zeb Buchanan, W. R. Johnson, and Edgar Buchanan, Partners
Bakersville, North Carolina

Application - Form MF-103 (Apr. 1952) received September 28,1953
Work proposed - bulldozing, 125 feet of shaft and 100 feet of drift. Amount requested - $10,150.00.

Operators' property rights: Lease for five years, dated 7/31/53.
Owner's Consent to Lien - date not shown on file copies.

2. Contract - Form MF-200(A) (Feb.1952), dated December 30, 1953.

Work authorized:

Improving access road	$500.00
Dewatering old shaft	340.00
Constructing toolhouse, powder and exploder magazines	275.00
Reconditioning shaft - 85 ft. @ $26.00/ft.	2210.00
Drifting - 100 ft. @ $35.00/ft.	3500.00
Total agreed unit costs	$6,825.00
Government participation @ 90%	$6,142.50

Amendments - none

Work completed:

Improving access road	$480.00
Dewatering old shaft	240.00
Construction - toolhouse, powder and exploder magazines	275.00
Reconditioning shaft - 51 ft. @ $26.00/ft.	1,326.00
Drifting - 94 ft. @ $35.00/ft.	3,290.00
Total accepted cost	$5,611.00
Government participation @ 90%	$5,049.90

Work began on February 17, 1954, and completed June 30, 1954.
About 50 lbs. of "mine run" mica recovered during project.
Field Team report received on July 26, 1954.
Operators' Final Report received on July 26, 1954.

3. Audit - certificate issued July 16, 1954.

Accepted cost	$5,611.00
Government participation @ 90 percent	$5,049.90

4. Certification of Discovery - none issued.

5. Comments -

How conducted - The work was done efficiently and on schedule in accordance with the terms of the contract.

Operation - good.

Engineering - Well planned and the reporting was good.

Geological premise - The premise that a "mica rich" pegmatite would continue was not substantiated, as it terminated a short distance from the shaft and very little mica was found.

Geological criteria upon which work was based:

1. Pegmatite 6 to 8 feet thick.
2. Very large mica books concentrated along margins of quartz mass.
3. Past production.

Criteria developed during project -

1. Conformable "cigar-shaped" pegmatite which terminated short distance from shaft.
2. Insignificant amounts of mica.

Future possibilities - Because the pegmatite is almost barren of mica and limited in size, this deposit offers no possibilities for an economical operation.

Recommendations:

The Nonmetallic Minerals Division concurs with the field team that a certification should not be issued. The Geological Survey and Bureau of Mines concur.

IN REPLY REFER TO:

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

August 4, 1954

Memorandum

REVIEW OF FIELD TEAM FINAL REPORT ON DMEA-3178 (mica)

To: Lawrence G. Houk, Defense Minerals Exploration Administration
From: R. D. Trace, U. S. Geological Survey
Applicant: Buchanan, Johnson, and Buchanan
Name of property: Borden Mine
Location of property: Mitchell County, North Carolina
Date of Field Team Report: July 20, 1954
Authorship of Field Team Report: Teague, Amos, and Shirley
Field Team's recommendation: No certification of discovery and no further exploration.
Comments: No reserves revealed.
ACTION RECOMMENDED: Follow Field Team's recommendation.

Bob Trace
R. D. Trace

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

July 30, 1954

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3178 (mica)

Applicant: Zeb Buchanan, W. R. Johnson, and Edgar Buchanan

Name and Location of Property: Bordon Mine
Mitchell County, North Carolina

Contract Number: Idm-E652

Date of Field Team Report: July 20, 1954

Date Rec'd. by Ceramic & Fertilizer Mtls. Br.: July 29, 1954

Field Team Recommendation:

1. That a certificate of discovery should not be issued.

Comments:

1. Exploration was by rehabilitating a 51-foot shaft and driving 94 feet of drift from the shaft bottom. Only 50 pounds of "mine-run" mica, mostly curved, and of no strategic value, was recovered during exploration.

2. Exploration disclosed no evidence of the existence of strategic mica.

Recommendation:

I concur in the field team's recommendation that a certification of discovery or development should not be issued.

W. F. Dietrich

W. F. Dietrich

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM POST OFFICE BLDG.
WASHINGTON 25, D.C.
KNOXVILLE 2, TENN.

July 23, 1954

Memorandum

To: Operating Committee, DMEA - Washington

From: Field Team, DMEA - Region VII

Subject: Final Report on: DMEA-3178, Idr-E 652 (mica) Bordon Mine
Mitchell County, North Carolina

Transmitted herewith are 4 copies each of the Operator's and Field Team final report on the Bordon mine exploratory work.

We agree with the conclusion that a certificate of discovery should not be issued.

Robert A. Laurence

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION VII

Wm. A. Beck

Wm. A. Beck, for V. J. Lynch
U. S. Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE

7-30-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FINAL REPORT
On
DMEA-3178, BORDON MINE
(mica)
Mitchell County, N. C.

BY

K. H. Teague, and D. H. Amos, Geologists
U. S. Geological Survey

and

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

July 20, 1954

Reviewed by
DMEA OPERATING COMMITTEE
7-30-54
(date)

FINAL REPORT
On
DMEA-3178, BORDON MINE (Mica) N. C.
Idm-E 652

Operators: Zeb Buchanan, W. R. Johnson, and Edgar Buchanan, Bakersville, N. C.

The Bordon Mine is on a ridge between Laurel and Dry Branches, about 1 airline mile north of Hawk, North Carolina in Mitchell County.

Work completed under the contract consisted of improving approximately 1.5 miles of existing logging road, dewatering an existing 60-foot shaft, constructing a toolhouse and two magazines, reconditioning and timbering of 51 feet of the dewatered shaft, and driving 94 feet of drift from the shaft. As no significant quantity of mica was discovered during the work, the contract was terminated effective June 30, 1954. No certification of discovery should be issued nor is additional exploratory work warranted.

Work began on February 17, 1954, and was completed on June 30, 1954. An existing road was improved for a total of about 1.5 miles and a toolhouse, powder magazine and exploder magazine constructed. An existing 60-foot combination vertical and inclined shaft was dewatered and temporary ladders were installed; 51 feet of this shaft was enlarged to 5' x 7' in cross-section. From the 60-foot level of the shaft a total of 62 feet of drifts were driven to the southwest. As the pegmatite terminated in this direction, a drift was driven N. 30° E. for 32 feet from the 50-foot level.

A conformable "cigar-shaped" pegmatite is exposed in the shaft, and laterals. It plunges about 40° in a S. 30-60° W. direction. The body is zoned having a quartz core up to eight feet thick enclosed by a zone of medium-grained plagioclase, quartz, microcline, muscovite and pyrite. The pegmatite terminates about 40 feet southwest of the bottom of the shaft.

About 50 pounds of "mine-run" mica was recovered during the project. Most was considerably curved.

No reserves were revealed by the work.

Expenditures:	(a)	Total approved	$6,825.00
	(b)	Total cost of project	5,611.00
	(c)	Governments' participation	5,049.90
	(d)	" share unexpended	1,092.60
	(e)	Value of production during opr.	None

The work was done in an efficient and satisfactory manner. No equipment was purchased under the contract.

July 20, 1954.

K. H. Teague, and D. H. Amos, Geologists
U. S. Geological Survey

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

FILE COPY

Anderson
Houk
Selfridge
H. Johnson

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

JUL 16 1954

Mr. Robert A. Laurence
Executive Officer, DMEA
Field Team, Region VII
Room 13, Post Office Bldg.
Knoxville 2, Tennessee

Subject: Docket No. DMEA-3178 - Mica
Zeb Buchanan, W. R. Johnson
and Edgar Buchanan
The Borden Mine
Mitchell County, North Carolina
Contract No. Idm-E652

Dear Mr. Laurence:

Reference is made to your memorandum of July 8, 1954, relating to the completion of subject project.

Please be advised you may consider this a completed project and no termination agreement is necessary.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (24B)

Approved:

J. H. Hedges (24B)
Member, Bureau of Mines

Philip W. Guild (24B)
Member, Geological Survey

WCAnderson:ag 7/14/54
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3061
Mr. Larrabee, 5216
Mr. Houk

RCB.

Spruce Pine, North Carolina
July 16, 1954

Mr. Robert A. Laurence, Executive Officer
DMEA, Region 7
Room 13, Post Office Building
Knoxville, Tennessee

Re: DMEA-3178, Idm-E652
Borden Mine
Final Engineering Report

Dear Mr. Laurence:

Work began on the Borden project during the first part of February, 1954. The work consisted of bulldozing a road to the mine, building tool shed and magazines, moving in and setting up machinery. We reconditioned 85 feet of existing shaft.

We drove a drift 48 feet to the Northwest, in pegmatite most of the way, but very little mica was recovered. All the mica that we did recover was scrap. At the 28 foot depth in this drift we ran another drift 14 feet to the West which was in slate most of the way and in some pegmatite with no mica recovered. We then drove another drift 32 feet to the Northeast, making a total of 94 feet of drifting, and no mica of commercial value was recovered.

The field team advised us to abandon this operation.

We wish to thank the field team for their efforts and fine cooperation in working on this project. If further information is required for completion of the records, please let us know.

Very truly yours,

Zeb Buchanan

Zeb Buchanan

P/b

RECEIVED
JUL 19 1954
Knoxville, Tenn.

Spruce Pine, North Carolina
July 16, 1954

Mr. Robert A. Laurence, Executive Officer
DMEA, Region 7
Room 13, Post Office Building
Knoxville, Tennessee

Re: DMEA-3173, Idm-3652
Borden Mine
Final Engineering Report

Dear Mr. Laurence:

Work began on the Borden project during the first part of February, 1954. The work consisted of bulldozing a road to the mine, building tool shed and magazines, moving in and setting up machinery. We reconditioned 85 feet of existing shaft.

We drove a drift 43 feet to the Northwest, in pegmatite most of the way, but very little mica was recovered. All the mica that we did recover was scrap. At the 28 foot depth in this drift we ran another drift 14 feet to the West which was in slate most of the way and in some pegmatite with no mica recovered. We then drove another drift 32 feet to the Northeast, making a total of 94 feet of drifting, and no mica of commercial value was recovered.

The field team advised us to abandon this operation.

We wish to thank the field team for their efforts and fine cooperation in working on this project. If further information is required for completion of the records, please let us know.

Very truly yours,

Zeb Buchanan

Zeb Buchanan

P/b

Spruce Pine, North Carolina
July 16, 1954

Mr. Robert A. Laurence, Executive Officer
DMEA, Region 7
Room 13, Post Office Building
Knoxville, Tennessee

Re: DMEA-3173, Idn-1652
Borden Mine
Final Engineering Report

Dear Mr. Laurence:

Work began on the Borden project during the first part of February, 1954. The work consisted of bulldozing a road to the mine, building tool shed and magazines, moving in and setting up machinery. We reconditioned 85 feet of existing shaft.

We drove a drift 43 feet to the Northwest, in pegmatite most of the way, but very little mica was recovered. All the mica that we did recover was scrap. At the 28 foot depth in this drift we ran another drift 14 feet to the West which was in slate most of the way and in some pegmatite with no mica recovered. We then drove another drift 32 feet to the Northeast, making a total of 94 feet of drifting, and no mica of commercial value was recovered.

The field team advised us to abandon this operation.

We wish to thank the field team for their efforts and fine cooperation in working on this project. If further information is required for completion of the records, please let us know.

Very truly yours,

Zeb Buchanan

Zeb Buchanan

P/b

Spruce Pine, North Carolina
July 16, 1954

Mr. Robert A. Laurence, Executive Officer
AEC, Region 7
Room 13, Post Office Building
Knoxville, Tennessee

Re: [illegible]-3176, Idr-[illegible]652
Borden Mine
Final Engineering Report

Dear Mr. Laurence:

Work began on the Borden project during the first part of February, 1954. The work consisted of bulldozing a road to the mine, building tool shed and magazines, moving in and setting up machinery. We reconditioned 85 feet of existing shaft.

We drove a drift 43 feet to the Northwest, in pegmatite most of the way, but very little mica was recovered. All the mica that we did recover was scrap. At the 28 foot depth in this drift we ran another drift 14 feet to the West which was in slate most of the way and in some pegmatite with no mica recovered. We then drove another drift 32 feet to the Northwest, making a total of 94 feet of drifting, and no mica of commercial value was recovered.

The field team advised us to abandon this operation.

We wish to thank the field team for their efforts and their cooperation in working on this project. If further information is required for completion of the records, please let us know.

Very truly yours,

Geb Buchanan

Geb Buchanan

B/b

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13, POST OFFICE BLDG.
WASHINGTON 25, D.C.
KNOXVILLE 2, TENN.

July 8, 1954

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region VII

Subject: DMEA-3178, Idm-E 652 (mica) Borden Mining Co., c/o Zeb Buchanan, Bakersville, N. C. Borden Mine. Mitchell County, N. C.

Operator has completed 94 feet of drift out of approved total of 100 feet in contract. Field examiners report no use doing the last 6 feet as there has been no indication of strategic mica, so far. Operator agrees with this and has recessed the work.

I would consider this as a completed project. Do we need a termination agreement? If so, please advise me and we will send one.

Field Team final report will be submitted as soon as it can be prepared.

Robert A. Laurence

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION VII

INTERIM REPORT

DMEA-3178 Idm-E652 (mica) BORDON MINE

OPERATOR: Zeb Buchanan, W. R. Johnson and Edgar Buchanan, Bakersville, N. C.

LOCATION: On a ridge between Laurel and Dry Branches, about 1 airline mile north of Hawk, Mitchell County, N. C.

Drifting has been in progress on this contract and now totals 94 feet. No additional exploration is warrented under contract and it is recommended that the contract be terminated.

Work conducted under the contract consisted of access road construction, dewatering and installation of temporary ladders in the existing 85 ft. shaft, enlarging the 85 ft. shaft to 5' x 7' in cross-section and drifting a total of 94 feet. 60 feet of drift was driven from the shaft bottom to the southeast. The body was essentially barren of mica and work was stopped in this direction when the body pinched out. New drift work was started to the northeast in promising looking pegmatite and was carried for 34 feet. Material encountered was composed primarily of quartz, feldspar and scattered blocks of muscovite mica, in a body about 8 feet thick. Due to the poor showing of possible strategic mica the operator was advised to discontinue work. The operators were cooperative with the examiners throughout this work and followed all suggestions closely.

L. E. Shirley
M.R.
L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

K. H. Teague
K. H. Teague & D. H. Amos, Geologists

July 1, 1954

INTERIM REPORT
On

DMEA-3178, Idm-E 652, BORDON MINE (mica)

Operators: Zeb Buchanan, W. R. Johnson, and Edgar Buchanan, Bakersville, N. C.

Location: On a ridge between Laurel and Dry Branches, about 1 airline mile North of Hawk, Mitchell County, North Carolina.

Drifting continues on this contract and now totals 78 feet; 16 feet of which is a new drift in a N. 20° E. direction from a point about 10 feet above the bottom of the rehabilitated shaft. The northwest half of this drift has been driven in quartz core and the other half in pegmatite consisting of feldspar, quartz and scattered books of muscovite. Country rock, biotite gneiss, is exposed on the southeast wall of the drift for the first 8 feet.

The Operator was advised to use the remaining footage of the contract in advancing the drift one more heading and then crosscutting to the northwest wall of pegmatite from the head of this new lateral.

Exam. Date: June 17, 1954.

K. H. Teague D. H. Amos

K. H. Teague, and D. H. Amos, Geologists
U. S. Geological Survey

Z

INTERIM REPORT

DMEA-3178 Idm-E652 (mica) BORDON MINE

OPERATOR: Zeb Buchanan, W. R. Johnson and Edgar Buchanan, Bakersville, North Carolina.

LOCATION: On a ridge between Laurel and Dry Branches, about 1 airline mile north of Hawk, Mitchell County, N. C.

Drifting continues on this contract and now totals 62 feet. Work has been stopped on the southwest drift and incline, after further work disclosed that the pegmatite apparently terminates in this direction. Future drift work will be conducted to the northeast. Test holes have been drilled in this area to determine the thickness of the body to the hanging wall and some mica production is anticipated from this exploration. Material encountered in the last 17 feet of drift consisted of barren pegmatite which graded into biotite gneiss.

Suggestions were made concerning necessary retimbering of loft sections before attempting work to the northeast. Progress on this contract is satisfactory.

Mary L. Peelman for
L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

K. H. Teague D. H. Amos
K. H. Teague & D. H. Amos, Geologists
U. S. Geological Survey

June 3, 1954

INTERIM REPORT

DMEA-3178 Idm-E652 (mica) BORDON MINE

OPERATOR: Zeb Buchanan, W. R. Johnson and Edgar Buchanan, Bakersville, N. C.

LOCATION: On a ridge between Laurel and Dry Branches, about 1 airline mile north of Hawk, Mitchell County, N. C.

Drifting is underway and has advanced 45 feet on this contract. No change in the target is anticipated at this time.

Most of the drift footage has been driven in pegmatite composed of feldspar and quartz and barren of mica. A few small pieces of clear muscovite were recovered in the earliest work. From 0 to 17 feet the drift was driven S 25° W in pegmatite only, from 17 to 32 feet pegmatite was exposed along the right wall and the work was driven S 60° W, and from 32 to 45 feet (driven N 80° W) only wall rock is exposed. The body is plunging about 10° west and it was suggested to the operator that he return to a point 28 feet from the beginning of the drift and gradually incline the drift and attempt to keep his work in the body completely. Another examination will be made in the near future to see that this suggestion is complied with. Progress on this contract is satisfactory.

L. E. Shirley

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

D. H. Amos

D. H. Amos, Geologist
U. S. Geological Survey

May 21, 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 3, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 30, 1954

Mr. Zeb Buchanan

Bakersville, North Carolina

Re: DMEA-3178, Idm-E 652 (mica)
Bordon Mine, Mitchell County, N.C.

Dear Mr. Buchanan:

This is to confirm the verbal approval, given by Mr. Teague and Mr. Shirley last week, for you to begin Stage II of the work described under exhibit "A" of the Bordon contract. Specific approval is given to the construction of the toolhouse, powder magazine and exploder magazine, and to enlarge the shaft to 5 x 7 feet in cross-section, install a partitioned ladderway, and timber the shaft where necessary. Completed items may thus be included for payment on your March voucher.

Level work from the shaft should not be begun until examined and approved by Mr. Teague and Mr. Shirley. They will next visit the Bordon mine on April 8.

Very truly yours,

Robert A. Laurence

RAL/sm
cc
Beck
Lynch
Opr. Com.
Files

INTERIM REPORT

DMEA-3178 Idm-E652 (mica) BORDON MINE

OPERATOR: Zeb Buchanan, W. R. Johnson and Edgar Buchanan, Bakersville, N. C.

LOCATION: On a ridge between Laurel and Dry Branches, about 1 airline mile north of Hawk, Mitchell County, N. C.

Unwatering and other work outlined under Stage I of the contract has been completed to a depth of 62 feet. The bottom contains an unestimated amount of muck which, when removed, will increase the total depth. Most of the old timber and lofting were examined and is in good condition. The most promising points of exploration were spotted and discussed with the operators. Enlargement of the shaft to 5' x 7' in cross section and installation of a partitioned ladderway will begin as soon as written approval is received by the operator from the Regional Office. Progress on this contract is satisfactory.

L. E. Shirley

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

K. H. Teague

K. H. Teague, Geologist
U. S. Geological Survey

March 25, 1954

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

March 19, 1954

Mr. Zeb Buchanan

Bakersville, North Carolina

Re: DMEA-3178, Idm-E 652 (mica)
Bordon Mine

Dear Mr. Buchanan:

Your voucher and monthly report for February have been received.

Please read exhibit "A" of the contract. You will note that Stage II is to be undertaken only after Stage I has been completed and approved by the Government. The toolhouse and magazines are all listed as item 1 of Stage II, and therefore should not have been begun at this time. For that reason, the $275.00 charged to these items is deducted from your voucher, and it is approved for payment of 90% of $480.00, or $432.00.

No additional work under Stage II should be done before completion of Stage I. No payment for any items under Stage II can be made unless and until Stage I has been completed and approval of Stage II has been made. Please note further that the location, direction, inclination and extent of all work (under Stage II) must have prior written approval of the Government. Work done without this approval will not be paid for with government funds.

Mr. Teague and Mr. Shirley will be at the Bordon mine on Thursday March 25. If you have any questions about this, they will be glad to explain further. If Stage I is complete, or nearly so, at that time, you should arrange with them for examination and approval.

Very truly yours,

Robert A. Laurence
Executive Officer, DMEA
Region VII

RAL/sm
cc:
Beck
Lynch
Files
Opr. Com.

PROPERTY OF THE UNITED
Defense Minerals Administration
RECEIVED
MAR 22 1954

INTERIM REPORT

DMEA-3178 Idm-E652 (mica) BORDON MINE

OPERATOR: Zeb Buchanan, W. R. Johnson and Edgar Buchanan, Bakersville, N. C.

LOCATION: On a ridge between Laurel and Dry Branches, about 1 airline mile north of Hawk, Mitchell County, N. C.

Starting date on an access road to this mine is February 17, 1954. Construction of the access road has been completed. It is passable only by jeep in wet weather. Unwatering of the existing shaft is underway, but not complete. Equipment at the site consists of a gasoline powered hoist, 105 c.f.m. air compressor with necessary drilling attachments and miscellaneous hand tools. A straight leg and boom pole for hoisting frame has been rigged. Another examination will be made as soon as the mine is unwatered and installation of the ladders is complete.

L. E. Shirley

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

K. H. Teague D. H. Amos

K. H. Teague & D. H. Amos, Geologists
U. S. Geological Survey

March 12, 1954

a

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13, POST OFFICE BLDG.
WASHINGTON 25, D. C.
KNOXVILLE 2, TENN.

Defense Minerals Administration
RECEIVED
25 1954

February 23, 1954

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region VII

Subject: Signed Contract - DMEA-3178, Idm-E 652. Zeb Buchanan, W. R. Johnson, and Edgar Buchanan, Partners.

Transmitted herewith are three signed copies of the subject contract. The usual distribution of the other copies has been made.

Robert A. Laurence
Robert A. Laurence

FILE COPY
Surname:

Anderson
Houk
Selfridge

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

DEC 30 1953

Mr. Robert A. Laurence
Executive Officer, DMEA
Field Team, Region VII
Room 13, Post Office Bldg.
Knoxville 2, Tennessee

Subject: Docket No. DMEA-3173 - Mica
Zeb Buchanan, W. R. Johnson
and Edgar Buchanan
The Bordon Mine
Mitchell County, North Carolina

Dear Mr. Laurence:

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

If the contract meets with your approval present it to the partners for approval and signature. Please explain to the partners that the contract, when executed, is a firm commitment under the terms of which it is obligated to complete the work outlined at the agreed unit cost. If any part of this contract does not have either your approval or that of the partners and cannot be amended within your delegated authority, then the original and all copies of the contract are to be returned to this office, together with the proposed changes for consideration.

After execution of the contract, the copies are to be distributed in the usual manner.

Sincerely yours,

George C. Selfridge (JHB)
Chairman, Operating Committee

Approved:

J. H. Hedges (JHB)
Member, Bureau of Mines

D. M. Larrabee (JHB)
Member, Geological Survey

Enclosures 6

WCAnderson:ag 12/28/53
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

R.C.G. 12-30-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
ROOM 13, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

December 10, 1953

Memorandum

To: Operating Committee, D M E A - Washington

From: Field Team, Region VII

Subject: DMEA-3178 (mica) Zeb Buchanan, W. R. Johnson and Edgar Buchanan, The Bordon Mine, Mitchell County, North Carolina

Reference is made to your letter of December 4, 1953.

The Field Team overlooked the need for a more complete breakdown of cost figures in the examination report of subject mine. In order to adequately examine the existing shaft after it is dewatered, it will be necessary to install temporary ladders. These ladders may be reused after the existing shaft is trimmed. It is recommended that the following estimates be used:

Stage I

Improve 1.5 miles of access road	$500.00
Dewater and install temporary ladders in existing 85-foot shaft @ $4/ft.	340.00
Estimated Cost Stage I.....	$840.00

Stage 2

Tool House	$200.00
Powder magazine	50.00
Exploder magazine	25.00
Trim to 5' x 7' and install partitioned ladderway in 85-ft. Shaft @ $26/ft.	$2,210.00
100 ft. drift @ $35/ft.	3,500.00
Estimated Cost of Stage I & 2	$5,985.00

Reference is made to the size of the area covered by the applicants lease and the location of proposed work. The area is

6,825.00

roughly rectangular in shape, being about 220 feet long by 140 feet wide. The long dimension is parallel to the strike of the pegmatite and the dip is steep, so that there is no danger of the pegmatite dipping out of the lease area. The Field Team is of the opinion that the leased area is adequate for the exploration.

Robert A. Laurence

Robert A. Laurence
Executive Officer, DMEA
Region 7

Wm. A. Beck, for V. J. Lynch
U. S. Bureau of Mines

FILE COPY
SURNAME:

Mr. Anderson
Houk
Larrabee
Selfridge
Johnson
Mathews

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

600

DEC 4 1953

Mr. Robert A. Laurence
Executive Officer, DMEA
Field Team, Region VII
Room 13, Post Office Bldg.
Knoxville 2, Tennessee

Subject: Docket No. DMEA-3178 - Mica
Zeb Buchanan, W. R. Johnson
and Edgar Buchanan
The Borden Mine
Mitchell County, North Carolina

Dear Mr. Laurence:

Enclosed are copies of reviews by the Geological Survey and the Bureau of Mines of the Report of Examination by the Field Team on the subject property.

Both the Geological Survey and the Bureau of Mines suggest the project be carried out in two stages. In order to follow the suggestion by the Geological Survey, please note we will need the cost for dewatering the old shaft. However, can examination be carried out safely and satisfactorily without additional outlay of money (beyond pumping cost), for reconditioning the shaft?

We note that the Field Team states that the area of 0.7 acres covered by the lease is adequate for the proposed work. Just offhand, it seems to us a rather small area to carry on a $6,850.00 exploration project where considerable mining has already been done.

Before continuing with the processing of this application, we will appreciate having your views on the suggestions and comments by the Geological Survey and the Bureau of Mines and reassurance by the Field Team that the area under the lease is adequate.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

WCAnderson:gad 12/2/53

Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

Approved:

J. H. Hedges (JHB)
Member, Bureau of Mines

D. M. Larrabee (JHB)
Member, Geological Survey

Enclosures 2

12-4-53

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

Defense Minerals Administration
RECEIVED
NOV 10 1953

November 10, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3178, Mica

Applicant: Zeb Buchanan, W. R. Johnson, and Edgar Buchanan
Name and Location of Property: Bordon Mine, Mitchell County
North Carolina
Date of Field Team Report: October 26, 1953
Field Team's Recommendation:

1. Improve existing logging road.
2. Trim and install ladderway in 85 foot existing shaft.
3. Exploration by a 100 foot drift.
4. Total estimated costs - $6,825.

Comments:

1. It is suggested the project be considered in two stages. Stage I, reconditioning of the existing shaft. Stage II, examination of the shaft after it has been dewatered to determine if further exploration is justified and if so, the best method for exploration.

Recommendation:

I concur in the field team's recommendation for an exploration program, but suggest consideration of the program in two stages.

W. F. Dietrich

W. F. Dietrich

IN REPLY REFER TO:

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

Department of the Interior
Defense Minerals Administration
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November 3, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-3178 (Mica).

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. A. Brobst, U. S. Geological Survey
Applicant: Buchanan, Johnson & Buchanan
Name of property: Bordon Mine
Location of property: On a ridge between Laurel and Dry Branches, about 1 mile north of Hawk, Mitchell County, N. C.
Date of field team report: October 26, 1953
Authorship of field team report: K. H. Teague and L. E. Shirley
Field team's recommendation: Includes improving 1.5 miles of logging road to the mine, dewatering and rehabilitating a shaft, cutting of 100 feet of drift, and the construction of exploder and powder magazines and a tool house. Estimated costs are shown below.

Comments:

1. The examiners propose a realistic approach to exploration of a property which apparently holds promise as a producer of strategic ruby mica.

2. Although the field team's report suggests that the work be done in two stages, they do not specifically set up the costs on that basis. Approval for this contract should not be granted without setting up the work plan in stages.

3. Cost of dewatering the shaft is omitted from the cost schedule. Check with the field team for an estimate.

4. The following plan is suggested:

Stage I	
Improve the 1.5 miles of road	$500.00
Tool house	200.00
Dewater the old shaft	?
Examination of the shaft by the field team to determine the advisability of Stage II	
	$700.00 +

Stage II	
Powder magazine	$ 50.00
Exploder "	25.00
Trim and install ladderway in 85 ft. of shaft at $30.00/ft.	2550.00
100 feet of drift at $35/ft.	3500.00
	$ 6,125.00
Estimated Grand Total	6,825.00 +

ACTION SUGGESTED:

Follow field team's recommendation for exploration, but set up the work in two stages.

D. A. Brobst

D. A. Brobst

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
ROOM 13, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

C O P Y

October 27, 1953

Memorandum

To: Operating Committee, D M E A - Washington

From: Field Team, D M E A - Region 7

Subject: Field examination Reports

Transmitted herewith are four copies of field examination reports with six extra copies of maps on the following:

DMEA-3177. Goodmica Mining Co. North Carolina (mica)

DMEA-3178, Buchanan, Johnson and Buchanan, North Carolina

The Field team is in agreement with the recommendations set forth in the reports.

/s/
Robert A. Laurence
Executive Officer, DMEA
Region 7

/s/
Wm. A. Beck, for V. J. Lynch
U. S. Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
11-2-53
(date)

Mr. Carder copy

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM, REGION VII

ON

DMEA-3178, BORDON MINE (mica)
Mitchell County, N. C.

BY
Kefton H. Teague, Geologist
U. S. Geological Survey

and

Lawrence E. Shirley, Mining Engineer
U. S. Bureau of Mines

October 26, 1953

Reviewed by
DMEA OPERATING COMMITTEE
11-2-53
(date)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Field Team Report on

BORDON MINE
DMEA-3178, (mica)
Applicants: Zeb Buchanan, W. R. Johnson, and Edgar Buchanan
Bakersville, North Carolina

Evidence available at this deposit is sufficient to justify exploration assistance. The total past production is unknown, but apparently considerable mica and feldspar have been produced.

The deposit was examined on October 19, 1953. All of the applicants- Zeb Buchanan, W. R. Johnson and Edgar Buchanan, accompanied the examiners on the inspection which required three hours.

The Bordon (Bardon) mine is on a ridge between Laurel and Dry Branches, about one airline mile north of Hawk, Mitchell County, North Carolina. Access is by a steep logging trail up Laurel Branch. At present access is possible only by walking; however, the logging road can be improved sufficiently to permit travel by jeep during periods of dry weather. About 1.5 miles of road will require improvement.

All of the applicants have had mica and feldspar mining experience. If assistance is granted, Edgar Buchanan will supervise the work. He appears competent to conduct the proposed work.

The applicants hold the mine by lease. Area covered by the lease (approx. 0.7 acres) is adequate for the proposed work.

This mine has been worked intermittently for feldspar and mica over a period of many years. The most recent operations were during the period of June 1943 to June 1944. The Colonial Mica Corporation purchased $6613.27 worth of mica from this mine. Production prior to World War II is unknown. The openings include a slumped open cut 50 feet long, 30 feet wide, and 25 feet deep. An inclined shaft, reported to be 85 feet deep is 15 feet from the south end of the cut. There are no reported laterals southwest from the shaft. The country rock is a mica schist whose foliation strike N. 25° E. and dips 60° SE.

The pegmatite body is not exposed, but the shape of the cut suggests that it ranges from 6 to 8 feet in thickness. It may pinch and swell along its strike. The chief pegmatite minerals are plagioclase, microcline, quartz, and mica. Much of the quartz evidently occurs as veins or relatively large, pod-like masses. The mica is ruby to reddish brown, and in general is of good quality. Some is ruled. The books appear to have been concentrated, at least in part, along the margins of quartz masses.

According to several reports, one of the books was among the largest ever encountered in the Bakersville area.

At present the shaft is filled with water to within 25 feet of the collar; however, reports are that very little water is normally made in the shaft. For the first 25 feet the shaft is vertical and 5' x 5' in cross section. Below that level it is inclined on the pegmatite and reports indicate that the shaft may not be more than 4' x 4' in cross section. Reports are that a lateral, driven from about the 35-foot level connects with the open cut to the northeast. The upper 15 feet of the shaft is timbered with split chestnut, and appears to be in good shape.

The "mica shoot" is reported to rake to the southwest and was cut by the shaft between the 35 and 50-foot levels. This report may be valid inasmuch as minor folds in the country rock rake to the southwest at an angle of about 50°.

The applicants proposal which includes considerable bulldozing at the mine site has questionable value. The field examiners are of the opinion that the most logical and economical approach to use in exploring the deposit is to use the existing shaft and conduct exploration from it. Before exploration can begin, access should be provided for jeep transportation. After access is provided, the shaft should be dewatered and the field examiners be permitted to examine it. If possibilities at this point justify, all or the necessary part of the existing shaft should be trimmed to 5' x 7', timbered where necessary and separate manway installed. Laterals, not to exceed 100 linear feet, should then be driven from the most promising points in the shaft. It is possible that it will not be necessary to trim the shaft to the bottom if promising mica bearing pegmatite is found at higher levels.

The above recommendations were discussed with the applicants and it meets with their approval.

Estimated Cost:

Improve 1.5 miles of existing logging road to permit jeep travel-------- ----------$	500.00
10' x 15' tool house	200.00
Powder magazine	50.00
Exploder Magazine	25.00
Trim and install ladderway in 85-foot existing shaft @ $30.00/ft.	2550.00
100 feet of drift @ $35.00/ft.	3500.00
Total Estimated Cost	$6,825.00

Estimated time required six months.

October 26, 1953.

K. H. Teague, U. S. G. S.

Lawrence E. Shirley, U.S.B.M.

zm

FILE COPY
SURNAME:

Anderson
Lynch
Hedges
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Selfridge
Fairman

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

600

OCT - 7 1953

Mr. Web Buchanan

Bakersville, North Carolina

Re: Docket No. DMEA-3178 - Miss
Web Buchanan, W. R. Johnson and
Edgar Buchanan
The Borden Mine
Mitchell County, North Carolina

Dear Mr. Buchanan:

Your application for assistance in exploring the subject property has been reviewed by the Nonmetallic Minerals Division of the Defense Minerals Exploration Administration and has been referred to Mr. Robert A. Laurence, Executive Officer, DMEA Field Team, Region VII, Room 13, Post Office Building, Knoxville 2, Tennessee, for further consideration and possibly a field examination.

The Regional Office will contact you at an early date if an examination is to be made. Any assistance that you may give the members of the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

MCAnderson:gad 10/6/53

Copy to: Admr. R. File
Docket File
Operating Committee
Field Team, Region VII
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

HHR
10-7-53

FILE COPY
SURNAME:

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

630

Anderson
Houk
Selfridge

OCT - 7 1953

Mr. Robert A. Laurence
Executive Officer, DMEA
Field Team, Region VII
Room 13, Post Office Bldg.
Knoxville 2, Tennessee

Subject: Docket No. DMEA-3178 - Mica
Zeb Buchanan, J. R. Johnson and
Edgar Buchanan
The Borden Mine
Mitchell County, North Carolina

Dear Mr. Laurence:

Please review the subject application and arrange for a field examination if you deem it advisable.

Copies of memoranda from the Geological Survey and the Bureau of Mines are enclosed for your information.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JB)

Approved:

J. H. Hedges (JB)
Member, Bureau of Mines

T. P. Thayer (JB)
Member, Geological Survey

Enclosures 4

WCAnderson:gad 10/6/53
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

HHH 10-7-53

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 5 1953

October 2, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Acting Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3178, Mica, Borden Mine, Zeb and Edgar Buchanan and W. R. Johnson, Mitchell County, North Carolina

No data are available in this office on subject mine. It is suggested the field team visit this mine when a member of the field team is in that vicinity to ascertain if an exploration program is justified.

Donald R. Irving

Donald R. Irving

IN REPLY REFER TO:
G-MD-CNM

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 29 1953

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

September 28, 1953

Memorandum 4

REVIEW OF APPLICATION DMEA-3178 (Mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: Donald A. Brobst, U. S. Geological Survey
Applicant's name and address: Zeb Buchanan, W. R. Johnson and Edgar Buchanan all of Bakersville, North Carolina.
Name of property: The Borden Mine.
Location of property: 5 miles from Bakersville, near Hawk, Mitchell County, North Carolina.
Summary of applicant's proposal:

1. Prepare the site and trench with a bulldozer.
2. Sink 5x7 ft. shaft for 125 ft.
3. Drift for 100 ft.

Costs:	40 hrs. bulldozing at $10/hr.	$400.00
	125' of 5x7 shaft at $50/ft.	6,250.00
	100' of drift at $35/ft.	3,500.00
	Estimated total cost	$10,150.00 in about 9 mos. work.

Sources of information on applicant's property:
The Survey has no information on this mine.
Comments:

1. The applicants claim to be able to produce ruby mica of strategic quality from this mine.
2. There is no geology on the applicants' sketches so a field examination to determine (1) geology of the pegmatite, (2) the quality of the mica, and (3) the soundness of the applicants' approach to exploration.

RECOMMENDATION:
" Refer the application to the field team for an examination of the property. "

Donald A. Brobst
Donald A. Brobst

Zeb Buchanan, et al
Bakersville
North Carolina

September 28, 1953
Subject: DMEA-3178
Re: Exploration Assistance
The Borden Mine

Dear Mr. Buchanan:

The receipt of your application dated September 24, 1953, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3178 and referred to the Nonmetallic Minerals Division.

Kindly refer to DMEA-3178 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Chief, Operations Control
and Statistics Division

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 28 1953

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

Not to be filled in by applicant

Docket No. DMEA-3178
Metal or Mineral Mica
Date Received 9-28-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Zeb Buchanan, W. R. Johnson & Edgar Buchanan all of Bakersville, N. C.

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

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

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

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

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

(*b*) State any mine name by which the property is known. The Borden Mine

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

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

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

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

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

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

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

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

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

42-R1035.2.

roject.—(*a*) State the mineral or minerals for which you wish to explore .....

.....

oposed work, including a map or sketch of the property showing a plan (and cross sections if needed) ings, and the location of the proposed exploration work as related to such features as contacts, tc.

ill start within ..... days and be completed within ..... months from the date of an exploration

e operating experience and background of the applicant with relation to the ability to carry out such explo-, and also that of the person or persons who will supervise the operations.

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

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

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

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

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

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

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

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

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

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

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

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

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated September 24, 1953

.....
(Applicant)

By Zeb Buchanan

.....

.....

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

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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SEP 2 3 1953

MF 103

1. (a) Zeb Buchanan, W. R. Johnson & Edgar Buchanan all of Bakersville, N. C.

(b) Partnership, N. C.

2. (No answer

3. (a) The lease is attached as exhibit A.

(b) Borden Mine.

(c) Lessee

(d) Lease is attached as exhibit A in 3 (a) above.

(e) Not the owner

(f) Land is held by landlord. No land patents involved.

4. (a) Physical works set work on map attached as exhibit B.

(b) First worked by Starling Buchanan who got a large block of mica, which is on display in the Museum in Washington. It was last worked by Wilson & Greene , who had a loan and payed loan back. They worked at this mine approximately one year. The mine has a record as one of the best ruby mica producers.

(c) Past work has consisted of one shaft 100 feet deep. We have no geographical reports on this mine.

(d) The mine is located 5 miles from Bakersville , N. C. near Hawk, N. C. It is about 2 miles to the power line.

(e) There is ample experienced mining manpower available. No difficulty is contemplated in obtaining equipment and supplies.

5. (a) It is anticipated that the pegmatite contains additional quantities of Ruby Mica of stockpile grade.

(b) The first thing that will have to be done is some bulldozing. Then we propose to sink a 5 x 7 shaft 125 feet. Then we propose to drift 100 feet. If the Field Team or any other person with authority should suggest that additional exploration be done then the applicants will be willing to conduct that exploration.

(c) The work will be started as soon as the contract is approved by the Government. And the work should be concluded within 9 months.

(d) Personal histories attached.

6. Estimate of Cost

(a) Independent contractors - None

(b through h) It is estimated that cost involved is as follows:

40 hrs.	Bulldozing	@ $10.00	per Hr.	$ 400.00
125 feet	Shaft	@ $50.00	per ft.	6250.00
100 ft.	Drift	@ $35.00	per ft.	3500.00
			Total	$10,150.00

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 2 1953

MINING LEASE

State of North Carolina Mitchell County:

This indenture made this 31 day of July, 1953

between Mrs. Ebbie Buchanan and Milt Wilson

of Mitchell County and State of North Carolina, as party of the first part, and known as lessor s, and Zeb Buchanan, W. R. Johnson & Edgar Buchanan

of Mitchell County and State of North Carolina, party of the second part and known as lessee.

WITNESSETH, That the parties of the first part in consideration of One Dollar in hand received and hereby acknowledged by the lessor s, and in consdderation of the agreements hereinafter contained, on the part of the party of the second part to be performed, hereby bargains, leases and grants to the party of the second part, and his heirs and assigns, for the period of five years from the date of this agreement, the following described real property, for mining purposes, in the County and State first above written, to wit:

Beginning on a 16" water oak standing 14' northwest of a 30' granite ledge; 12' North east of a 12" chestnut oak pointer. Running North 49°30' East for 100' to a 6" Blackgum then N-48°E for 115' 6" to a 6" Maple. Then S - 31°30' East for 88' to a stake near a double maple. Then S- 50°E for 39' to a 4" crabapple. Then S- 36°30' W for 129' to a 5" hickory. Then S-35°30' W for 99' to a stake in the old sled Road. Then N-56°30' W. for 124' along old road, to an 18" water oak in edge of old road. Then N-1° E for 66' to the beginning. Containing approximately .7 (seven tenths) acres.

TO HAVE AND TO HOLD the said lands to him, for mining purposes, the said lessee and his heirs and assigns for the aforesaid period of five years in compliance with the conditions of this instrument, for the purpose and with the right to dig, quarry, search, explore for, obtain, and remove ~~and~~ any kind of minerals, metals or fossils, and particularly mica, and to conduct the same to any extent the said party of the second part, the lessee, may desire. And it is hereby agreed between the parties to this agreement that the party of the second part is to have the use of any unoccupied buildings on said lands for mining purposes, and that he shall have the right to erect such buildings as he needs to carry on such mining operations during the period of this lease, and that the party of the second part shall keep the same in as good condition as when received, unavoidable accidents excepted. And it is also agreed by the party of the second part that no unnecessary damage is to be done to the lands herein leased during the period of this lease and the continuance of said lease, but the said party of the second part shall have right to take from said lands leased to the party of the second part any wood or timber the party of the second part may need to carry on said mining operations or which may be needed to carry on the addition to existing buildings or to erect new buildings or sheds on said lands. (Timber of high or special market value is excepted and shall not be used by the lessee.) And it is hereby agreed that the party of the second part, the lessee, is to have right-of-way of ingress and egress to said mines or land upon which exploration is being conducted.

AND IT IS FURTHER AGREED That the party of the second part, the lessee hereby agrees to pay to the said part___of the first part, or his or their heirs or assighs, a rental royalty of_____

_____

on the minerals taken and sold from said mines which shall be for the use of the said lands for the aforesaid period of five years. The said amounts shall be payable on the computation of selling bills on the tenth day of each month covering sales made during the previous month. Any minerals other than those set forth above which may be taken and sold shall be paid for and at the usual roualty rate of the minerals taken.

AND IT IS FURTHER AGREED That the lessee, the party of the second part, his heirs or assigns, shall have the option to renew this lease and to extend the period of its running for an additional five years from the date of its present termination. The option shall be exercised by giving formal written notice to the part___of the first part or by the continuation of any mining operations then being conducted. The lessor___ reserve the right to use the land, or convey the same not conflicting with this lease, but under any conveyance the terms of this lease must be recognized by the grantee, purchaser, or assigns thereof. And it is agreed that the lessee may assign this mining lease or any part thereof and that he may sublease.

AND IT IS FURTHER AGREED That the lessee, the party of the second part, his heirs or assigns, is hereby given an option to purchase all the right, title and interest, legal and equitable to an in the real estate described and set forth in this lease for a total purchase price of $_____, said purchase price to be paid in full within three years from the date of this instrument and it isagreed that all rental royalties paid to the party of the first part shall apply toward and be a part of the total purchase price above set forth, and that at such time that the total purchase price is paid in the form of royalties or a lump sum payment or a combination of both, the party of the first part will execute a special warranty deed to the party of the second part and that a tender of the remaining purchase price at any time within the next three years shall entitle the party of the second part to specific performance of this option contract.

BUT IT IS EXPRESSLY AGREED That unless mineral or fossil material of practical value for mining purposes shall be found within a period of two years from the date of this instrument, the lease may be terminated by the lessee at any time thereafter on thirty days notice to the lessor___. The lessee agrees that during the period of this lease or the continuance of this lease that work in said mines or exploration for new mines within the area leased shall not cease longer than ninety days at any one time, unavoidable accidents excepted.

WITNESS our hands and seals the day and year first above written.

Witness:

C. A. Ramsey
Notary Public

My commission expires 8/30/53

Milt. Wilson (Seal)

Ebbie Buchanan (Seal)

Milt. Wilson (Seal)

STATE OF NORTH CAROLINA

MITCHELL COUNTY

Personally appeared before me, this day, Ebbie Buchanan and Milt Wilson, to me well known, who acknowledged due execution of the foregoing instrument.

I further certify that the signature on the first line at the bottom of the second sheet of the foregoing instrument was affixed in my presence by Milt Wilson, one of the lessors therein named, but because he signed different than his name appeared at the beginning of the said instrument the signature was stricken out and he signed on the last line of sheet number two in the same manner as his name appears in the beginning.

This the 31st day of July, 1953.

C. A. Ramsey
NOTARY PUBLIC

My commission expires August 30th, 1953.

ZEB BUCHANAN

Mr. Zeb Buchanan was borned 54 years ago. He lives at Bakersville, North Carolina. He has been engaged in mining and farming all his life. He has a fine reputation for honesty and trustworthyness. For references write the following:

Mr. Walter Berry
Bakersville
N. C.

Mr. Udd Blevins
Bakersville
N. C.

Mr. Frank Greene
Bakersville
N. C.

RILEY JOHNSON

Mr. Riley Johnson is 50 years old and lives at Bakersville, North Carolina. He has been a miner and farmer all his life. He has a fine reputation in his community.

For references:

Mr. Frank Greene
Bakersville
N. C.

Mr. Walter Berry
Bakersville
N. C.

Mr. Edd Blevins
Bakersville
N. C.

EDGAR BUCHANAN

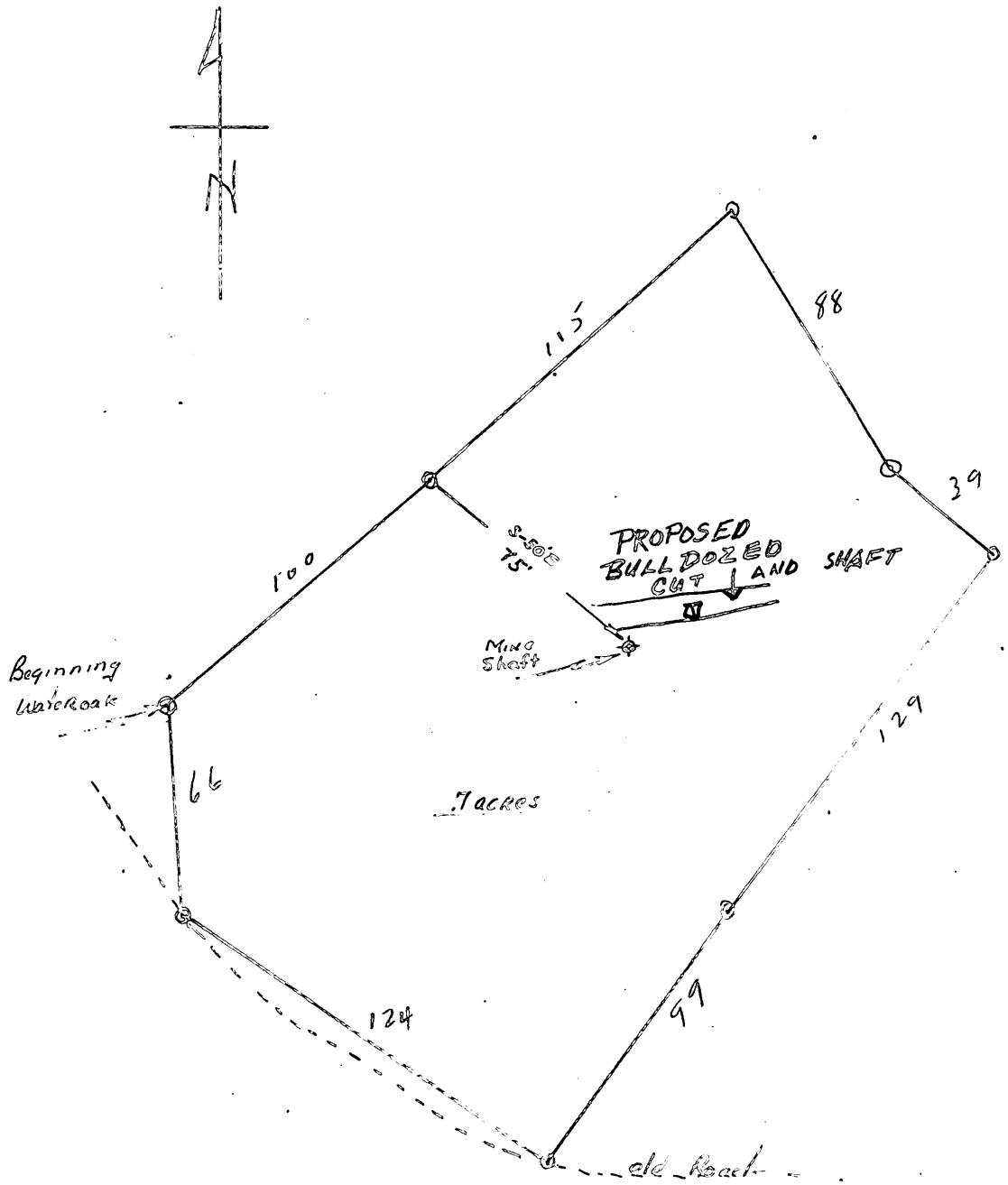
Mr. Edgar Buchanan was borned 44 years ago. He lives at Bakersville, North Carolina. He has been a miner and farmer all his life. He has a fine reputation in his community.

For references:

Mr. Frank Greene
Bakersville
N. C.

Mr. Walter Berry
Bakersville
N. C.

Mr. Edd Blevins
Bakersville
N. C.



SURVEY
OF
THE BORDEN MINE

SCALE 1 IN = 50 FEET

Zeb Buchanan
Bakersville, N.C.

Mr. Lawrence A. Houk
Nonmetallic Minerals Division
Department of Interior DMEA
Washington 25, D. C.

MF-200 (A)
(February 1952)

DOCKET NO. DMEA [illegible]

COMMODITY [illegible]

Extra Copy
IDM-E 652

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

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 30th day of December, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] [illegible] Carolina, North Carolina

hereinafter called the "Operator," as follows: [illegible]

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 North Carolina, County of [illegible], described as follows:[3] [illegible]

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: [illegible]

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

in or upon the described land; and shall bring the project to completion within a period of [illegible] 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 [illegible] 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 $[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 check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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* .....

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.....

.....

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

.....(Operator) (Partner)

.....(Partner)

By ..... (Partner)

By C. O. Mittendorf

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—66329-1

EXPLORATION PROJECT CONTRACT
ZEB BUCHANAN, W. R. JOHNSON, AND EDGAR BUCHANAN, PARTNERS
DOCKET NO. DMEA-3176

ANNEX I

The land referred to in Article 2 of the contract form is known as The Bordon Mine and was leased for mining purposes to Zeb Buchanan, W. R. Johnson, and Edgar Buchanan for a period of five years by Mrs. Effie Buchanan and Milt Wilson, by an instrument dated July 31, 1953. It is located on a ridge between Laurel and Dry branches, about one airline mine north of Hawk, Mitchell County, North Carolina, and is described in the aforesaid lease, as follows:

"Beginning on a 16" water oak standing 14' Northwest of a 30' granite ledge; 12' Northeast of a 12" chestnut oak pointer. Running North 49° 30' East for 100' to a 8" blackgum, then N. 48° E. for 115' 6" to a 6" maple. Then S. 31° 30' East for 68' to a stake near a double maple. Then S. 50° E. for 39' to a 4" crabapple. Then S. 36° 30' W. for 129' to a 5" hickory. Then S. 35° 30' W. for 99' to a stake in the old sled road. Then N. 58° 30' W. for 124' along old road, to an 18" water oak in edge of old road. Then N. 1° E. for 66' to the beginning. Containing approximately .7 (seven-tenths) acres."

EXPLORATION PROJECT CONTRACT
ZEB BUCHANAN, W. D. JOHNSON, AND EDGAR BUCHANAN, PARTNERS
DOCKET NO. DMEA-3178

ANNEX II

The following provisions are in lieu of Article 6 :

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts, plus one-half ($\frac{1}{2}$) per cent 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) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) per cent.)

c. Definitions.--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.

d. Lien for Payment.--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.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--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.

EXPLORATION PROJECT CONTRACT
ZEB BUCHANAN, W. R. JOHNSON, AND EDGAR BUCHANAN, PARTNERS
DOCKET NO. DMEA-3178

EXHIBIT "A"

Description of the Work

Exploration for concentrations of strategic mica shall be accomplished in the area indicated on the attached map entitled "Sketch of Bordon Mine, Mitchell Co., N. C., DMEA-3178 (mica)." The work shall be done in two stages, as follows:

Stage I

1. Improve 1.5 miles of existing logging road to permit jeep travel.

2. Dewater and install temporary ladders in existing 85-foot shaft.

Stage II

1. Construct one toolhouse 10 feet by 15 feet, one powder magazine, and one exploder magazine.

2. Enlarge the existing 85-foot shaft to 5 feet by 7 feet in cross section and install a partitioned ladderway. Timber the shaft where necessary.

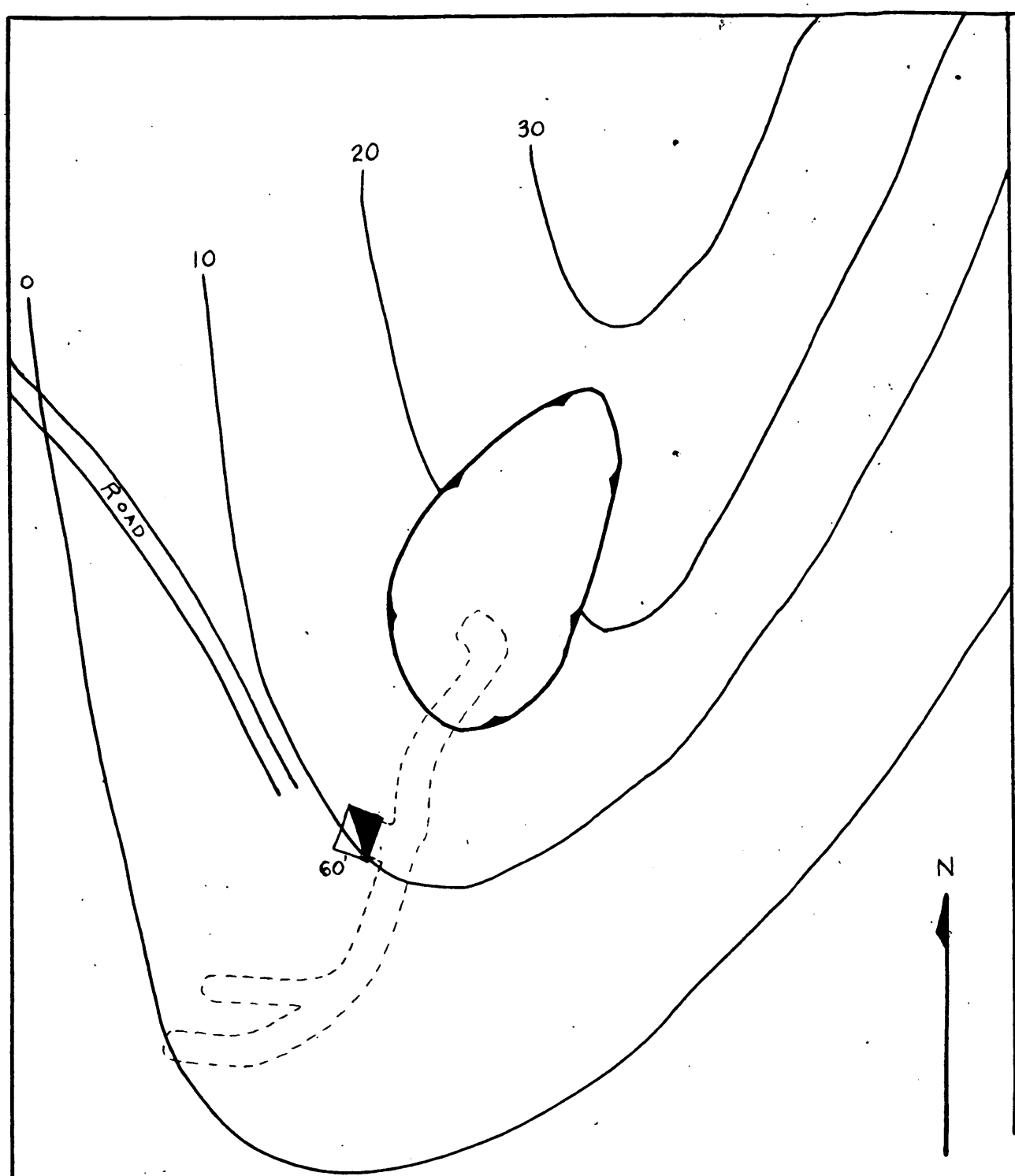
3. After the shaft is completed, 5-foot by 7-foot drifts shall be driven from the most promising points in the shaft, not in excess of 100 feet.

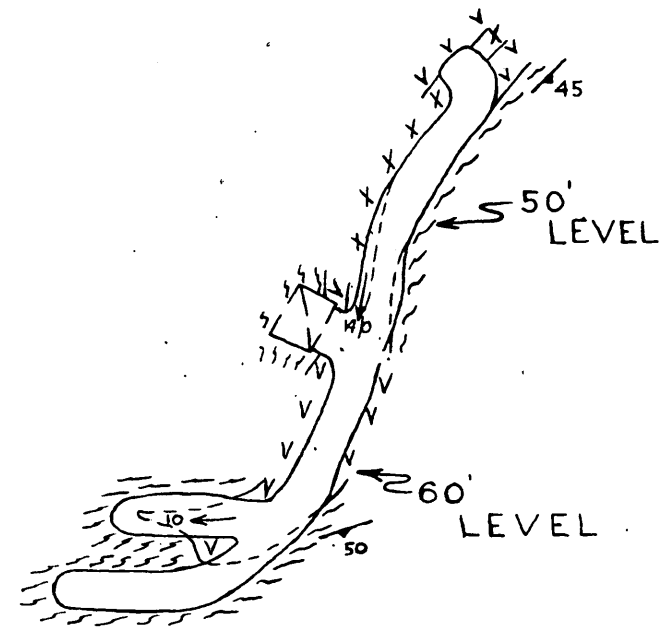
Stage II shall be undertaken only after Stage I has been completed and approved by the Government. The location, direction, inclination, and extent of all work must have prior written approval of the Government.

Agreed Unit Costs

Improving 1.5 miles access road.[1]		$500.00
Dewatering and installing temporary ladders in existing shaft, 85 feet @ $4.00/ft.		340.00
Constructing:	Toolhouse [1]	200.00
	Powder magazine [1]	50.00
	Exploder magazine [1]	25.00
Reconditioning shaft, 85 feet @ $26.00/ft.		2,210.00
Drifting, 100 feet @ $35.00/ft.		3,500.00
Total Estimated Agreed Unit Costs		$6,825.00
Government Participation @ 90%		$6,142.50

1/ The completed work constitutes the unit.





PLAN

0 20' 40'

SCALE

SKETCH OF

BORDON MINE

MITCHELL CO., N.C.

DMEA-3178