DMA Form 3

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. DMEA-3233

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.

1cy to USBM, USGS, DOCKET 1cy retained in Re

Routing Slip

To:	600	Date	1-13-54
To:	Anderson	Date	1/15/54
To:	Oper Comm	Date	1-27-54
To:	600	Date	1-28-54
To:	Oper Comm	Date	3-10-54
To:	Oper Comm	Date	3-17-54
To:	Oper Comm	Date	3-7-54
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

Docket Copy
Surname:
Houk
Martin
Kilsgaard
Hedges
Mitchell

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

AUG 26 1954

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

Subject: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

Reviewed by
~~DMEA OPERATING COMMITTEE~~

Dear Mr. Laurence:

Reference is made to your memorandum of August 5, ~~(date)~~ 1954, submitting a topographic map and recommending a contract on this denied application.

Our letter of April 8, 1954, stated that the portion of the work directed toward gaining access to the Cilly Stope extension was partly development, and drifting southward was not justified as extensive bulldozing failed to indicate a mica shoot worth pursuing to depth. The topographic map does permit a more accurate location of the underground workings, but the target and the exploration approach remain basically the same. We must reaffirm the denial as the Cilly Stope area has been well explored.

We agree that historical producers have merit as potential sources of strategic mica, but at the same time we would like to see more work directed toward primary exploration on new pegmatites. We think there should be more bulldozing and trenching of new pegmatites, and shaft sinking exploration based on geologic information gained therefrom. Our records to date, based principally on reopening old mines, have not been too encouraging, and we wonder if we should not take longer shots on the new pegmatites in old districts.

The Field Team should do what it can to encourage exploration of new prospects. While it is true the applicants' main consideration is the immediate production of strategic mica, the DMEA Program should also lead to opening up new pegmatites and increasing the national mica resources. By working only old mines we may deplete our known sources of mica without adding corresponding new reserves. Our mica program has been in operation over three years and the new sources we have opened up have been relatively small. The foregoing is not written in a spirit of criticism but only to point out some of our thinking.

Sincerely yours,

Approved:

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

W. S. Martin
ACTING Chairman, Operating Committee (JHB)

s/ Thor N. Kilsgaard
Member, Geological Survey

LGHouk:gad 8/23/54

R.C.G.

Copy to: Admr. R. File
Docket
Operating Committee
Mr. Dietrich, 3061
Mr. Kilsgaard, 5227
Mr. Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 205 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

August 16, 1954

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region VII

Subject: Maps on DMEA-3233, Bennett & Westall Applicants - Cilly Mine.

Transmitted are six copies of the map for the subject mine. Through an oversight, these maps were omitted from the memo mailed from this office August 5, 1954.

Robert A. Laurence

Robert A. Laurence

Denied application

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1 POST OFFICE BLDG.
WASHINGTON 25, D.C.
KNOXVILLE 2, TENN.

August 5, 1954

Memorandum

TO: Operating Committee, D M E A - Washington

From: Field Team, DMEA - Region VII

Subject: Docket No. DMEA-3233 (mica) Bennett and Westall, Applicants
Cilly Mine, Y ancey County, N. C.

The Cilley Mine was examined by the field examiners on February 12, 1954. The report covering this examination was forwarded to Washington on February 17. Subsequent information was provided the Washington office on March 19, 1954. The application for exploration assistance was denied on April 8, 1954.

Since receiving the denial the applicants have contacted the Field Team several times regarding the possibility of having the application reconsidered. Also, we understand that they have contacted the Washington office by telephone regarding this possibility.

The Field Team advised the applicant that additional information substantiating their position would be needed before further consideration could be given. Recently they have submitted the attached topographic map of the area covered by their application. This map shows the character of the cut as it is now, as compared to the U.S.G.S. Map of 1944, as well as the elevation of the proposed shaft. Actually the collar elevation of the proposed shaft would be lowered to approximately 2710 feet by the proposed bulldozing.

The new topographic map permits a more accurate prediction of the underground conditions, and indicates that a drift extending to the south west at approximately 2615 feet elevation, from the bottom of a 100-foot shaft would be well under the old workings as shown on the 1944 U.S.G.S. map and cross sections which accompanied the field examination report.

The Field Team is still of the opinion that this deposit has merit as a potential source of strategic mica. Admittedly, this is an old mine, but almost all mica mines in the southeast where new reserves have been developed have been old ones.

We would like to request that reconsideration be given the subject application. The following program of exploration is offered :

Bulldoze shaft site and repair 100 yards of road.

Construct toolhouse and magazines.

Sink 100-foot, 2 compartment, 5' x 7' shaft at location shown on attached map.

Drive approximately 100 feet of drift on the footwall of the pegmatite southwest from the shaft, and crosscut to the hanging wall.

Estimated cost of the proposed work is as follows:

Shaft site preparation and road repair		
10 hrs. bulldozer @ $10.00/hr.	$100.00	
Buildings		
Toolhouse	75.00	
Exploder Magazine	13.00	
Powder magazine	25.00	$ 213.00
100-foot Shaft (60 shifts)		
Labor:		
1 - Miner @ $1.50/hr	720.00	
1 - Hoistman @ $1.25/hr	600.00	
2 - Laborers @ $1.00/hr	960.00	
Equipment (rental)		
Hoist @ $50/Mo.	150.00	
Compressor, drill, pump, etc. @ $240/Mo.	720.00	
Supplies:		
Timber - 8M @ $65/M	520.00	
Explosives	500.00	
Drill Steel	200.00	
Gasoline and oil	300.00	
Small tools	150.00	
Miscellaneous	180.00	~~$5,200.00~~
Estimated shaft cost.....		$5,000.00
100 feet 5' x 7' drift and/or crosscut (45 shifts)		
Labor:		
1 - Miner @ $1.50/hr	540.00	
1 - Hoistman @ $1.25/hr	450.00	
2- Laborers @ $1.00/hr	720.00	

Equipment: (rental)		
Hoist @ $50/Mo	$112.50	
Compressor, pump, drill, etc. @ $240/Mo.	560.00	
Supplies		
Timber, 1M @ $65/M	65.00	
Explosives	350.00	
Drill Steel	200.00	
Gasoline and oil	300.00	
Small Tools	100.00	
Miscellaneous, social security, etc.	102.50	
Estimated drift cost.....		$3,500.00
Estimated Total Cost of Project		$8,713.00

Robert A. Laurence By: Zm
Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION VII

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

File Copy
Surname:
Houk
Selfridge
Jones

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

APR 8 1954

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

Subject: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

Dear Mr. Laurence:

Reference is made to your memorandum of March 19, 1954, and our reasons for denial of the subject application.

A study of the factual data on this application indicates the lack of positive criteria to justify drifting southward along the pegmatite to prospect for a blind mica concentration. The extensive bulldozing above the area to be prospected by the drift, apparently, failed to indicate a lead worth pursuing to depth. The portion of the work directed toward gaining access to the downward extensions of the Cilly Stope is in part development and similar projects exploring for extensions of old stopes have not found many worthwhile extensions.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Approved:

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

Noted T. P. Thayer (TPT)
Member, Geological Survey

LGHouk:gad 4/5/54
Copies to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3061
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

P.S.

Apparently the proposed work to gain access to the Cilly stope would only encounter old workings and would not open up any new ground in this area.

R.C.B.

File Copy
Surname:

Anderson
Houk
Larrabee
Hodges
Sellwood
Bergman
Thayer

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

APR 8 1954

Bennett & Westall

Burnsville, North Carolina

Re: Docket No. DMEA-3233 - Mica
Bennett & Westall
Gilly Mine
Yancey County, North Carolina

Gentlemen:

Your application for aid for an exploration project and other reports available to us in Washington relating to the subject property have been reviewed.

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

Careful study of all our information indicates to us that the probability of disclosing significant reserves of mica by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittenderf (fwt

Administrator

WCAnderson:gad 3/8/54
Copy to: Admr. R. File
Docket File
Field Team, Region VII
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

R.C.B.

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

April 5, 1954

Memorandum

To: Mr. C. O. Mittendorf

From: Lawrence G. Houk

Subject: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

A study of the field team examination report and the field team's reply to our request for justification for a contract on the subject mine indicates that the application should be denied:

1. The drift southward along the pegmatite is to explore for a blind mica concentration, and extensive bulldozing above the area apparently failed to indicate a lead worth pursuing to depth.

2. All the mines shown on the map appear to be pod-like and to have been worked to a shallow depth.

3. In past experiences exploring for extensions of previously mined stopes have been discouraging.

4. The pegmatite appears to be pitching flatly to the North, and the area offers insufficient promise to justify Government participation.

5. It is recommended denial be based upon the improbability of making a significant discovery. The denial letter and a letter to the field team are attached, if you concur in this action.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 29 1954

March 26, 1954

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Acting Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3233, Cilly Mine, Yancey County, North Carolina

The following comments refer to additional information on the subject application contained in a letter dated March 19, 1954 from the DMEA Field Team, Region VII to the DMEA Operating Committee, Washington, D. C.:

1. The mica from this mine is non-ruby, but appears to be of strategic quality.

2. Although no production data are available the past workings are extensive, and evidence shows that mica concentrations occurred at least to a depth of 110 feet from the original surface.

3. Mining and exploration thus far have been conducted almost entirely in a mica zone near the footwall of the pegmatite.

4. The Field Team recommendation to approve the application for exploration assistance appears sound on the basis of the quality of the mica, the probability of extension laterally and in depth of the footwall mica zone, the possibility of the existence of a mica zone near the hanging wall of the pegmatite, and the apparently adequate mica mining experience of the applicants.

5. There are no data available to appraise the tenor of the ore, and no estimate of the quantity and grade of mica which might result from the proposed exploration is possible.

6. The possibility of the discovery and development of strategic mica as a result of the proposed exploration appear to be at least equal to the possibilities on approved mica exploration assistance contracts.

Donald R Irving

Donald R. Irving

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

March 19, 1954

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region VII

Subject: Docket No. DMEA-3233, (mica) Cilly Mine. Bennett and Westall

Enclosed herewith are six copies of form MF-203, with Owners signatures, received today from Mark Bennett.

Robert A. Laurence

Robert A. Laurence

MF-203
(Revised Jul[illegible]1953)

OWNER'S CONSENT TO LIEN

[illegible] OF THE [illegible]
Bureau [illegible] Administration
Received
[illegible] 22 1957

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

_____

_____

_____

_____

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/_____

_____

_____

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

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

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

4. Changes and added provisions_____

_____

_____

_____

Dated this _____ day of _____, 195___.

Margaret P. Smith [Seal]

Louisa R. Colwell [Seal]

Elizabeth F. Smith [Seal]

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

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

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

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 the 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, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

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.

Interior—Duplicating Section, Washington, D. C.

MF6 203

Owners Consent to Lien

Witness our hands and seals this the 20th day of October 1954.

Wm J Weaver Jr. (Seal) H. L. Bowen (Seal) W. T. Smith (Seal)

John B. Weaver (Seal) John O. Fleming (Seal) Ruby L. Smith (Seal)

Mary K. Weaver (Seal) Elizabeth W. Fleming (Seal) R. N. Silver (Seal)

Robert L. Smith (Seal) Mary W. Miles (Seal) Elizabeth Silver (Seal)

Edna M. Smith (Seal) Vincent N. Westall (Seal) _____ (Seal)

Sara S. Barber (Seal) Martha S. Westall (Seal) _____ (Seal)

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

_____

_____

_____

_____

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/_____

_____

_____

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

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

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

4. Changes and added provisions_____

_____

_____

_____

Dated this _____ day of _____, 195___.

Margaret H. Smith [Seal]

Lorenz P. Calhoun [Seal]

Elizabeth F. Smith [Seal]

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

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

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

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 the 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, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

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.

Interior—Duplicating Section, Washington, D. C. 47318

MF-203

Owners Consent Lien

Witness our hands & seals this the 20 day October 1954

Sara S. Barber (Seal)	Vernon Allen Kibbe (Seal)	W. F. Smith (Seal)
H. J. Barber (Seal)	Martha S. Westall (Seal)	Ruby R. Smith (Seal)
John O. Hessing (Seal)	(Seal)	(Seal)
Elizabeth W. Dearing (Seal)	(Seal)	(Seal)
Mary W. Mills (Seal)	(Seal)	(Seal)
(Seal)	(Seal)	(Seal)

Witness our hands and seals this the day of October 1953.

Margaret Smith	(Seal)	John B. Weaver	(Seal)	[illegible]	(Seal)
Lamar Lichner	(Seal)	Mary K. Weaver	(Seal)	Elizabeth Silver	(Seal)
Elizabeth E. Smith	(Seal)	Robert L. Smith	[Seal]		(Seal)
Wm J Weaver Jr.	(Seal)	Edna M. Smith	[Seal]		(Seal)
	(Seal)		[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 there is no obligation to repay the Government.

directly to the Government and to furnish the Government with copies of the Settlement Sheet. 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.

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

_____

_____

_____

_____

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/_____

_____

_____

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

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

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

4. Changes and added provisions_____

_____

_____

_____

Dated this _____ day of _____, 195___.

Margaret V. Smith [Seal]

Louise L. Calnert [Seal]

Elizabeth E. Smith [Seal]

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

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

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

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 the 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, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

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.

Interior—Duplicating Section, Washington, D. C. 47318

Owners Consent to Lien

Witness and hands and seals this the 20th day October 1954

Wm J Weaver Jr. (Seal) H. T. Barber (Seal) W. T. Smith Se

John B Weaver (Seal) John O. Hearing (Seal) Ruby R. Smith (Se

Mary K. Weaver (Seal) Elizabeth W. Hearing (Seal) I. T. Silver (Seal

Robert L. Smith (Seal) Mary W. Mills (Seal) Elizabeth K. Silver (Seal)

Edna M. Smith (Seal) Kimm Turner Lee (Seal) _____ (Seal)

Sara S. Barber (Seal) Martha S. Westall (Seal _____ (Seal)

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

_____

_____

_____

_____

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/_____

_____

_____

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

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

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

4. Changes and added provisions_____

_____

_____

_____

Dated this _____ day of _____, 195___.

Margaret H. Smith [Seal]

Louise R. Calvert [Seal]

Elizabeth E. Smith [Seal]

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

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

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

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 the 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, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

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.

Interior—Duplicating Section, Washington, D. C. 47318

MF*203 Owners Consent to Lien

Witness our hands and seals this the 20th day of October 1954

Wm J Weaver Jr. (Seal) H. T. Barber (Seal) W. P. Smith (Seal)

John B Weaver (Seal) John O. Pearing (Seal) Ruby P. Smith (Seal)

Mary K. Weaver (Seal) Elizabeth W. Pearing (Seal) R. M. Sellers (Seal)

Robert L. Smith (Seal) Mary W. Miles (Seal) Elizabeth Sib (Seal)

Edna M. Smith (Seal) & Vinna Stillwell (Seal) _____ (Seal)

Sara S. Barbee (Seal) Martha S. Westcott (Seal) _____ (Seal)

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

_____

_____

_____

_____

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/_____

_____

_____

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

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

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

4. Changes and added provisions_____

_____

_____

_____

Dated this _____ day of _____, 195___.

Margaret H. Smith [Seal]

Louise B. Colnert [Seal]

Elizabeth E. Smith [Seal]

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

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

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

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 the 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, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

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.

Interior—Duplicating Section, Washington, D. C. 47318

MF-203 Owners Consent to Lien

Witness and hands and seals this the 20th day October 1954

Wm J Weaver Jr. (Seal) H. T. Barber (Seal) W L Smith Seal)

John B Weaver (Seal) John O. Harris (Seal) Ruby R. Smith (Seal

Mary K. Weaver (Seal) Elizabeth W. Deaning (Seal) M. Silver (Seal)

Robert L. Smith (Seal) Mary W. Mills (Seal) Elizabeth S. Lane (Seal)

Edna M. Smith (Seal) Vivian Westall (Seal) _____ (Seal)

Sara S. Barbee (Seal) Matilda S. Westall (Seal _____ (Seal)

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

_____

_____

_____

_____

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/_____

_____

_____

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

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

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

4. Changes and added provisions_____

_____

_____

_____

Dated this _____ day of _____, 195___.

Margaret R. Smith [Seal]

Louise R. Cardwell [Seal]

Elizabeth E. Smith [Seal]

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

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

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

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 the 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, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

(b) 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.)

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.

Interior—Duplicating Section, Washington, D. C. 47318

MF#203 Owner's Consent to Lien

Witness our hands and seals this the 20th day of October 1954

Wm J Weaver Jr. (Seal) H. T. Barber (Seal) W L Smith (Seal)

John B Weaver (Seal) John O Hearing (Seal Ruby R. Smith Seal)

Mary K. Weaver (Seal) Elizabeth W Bearing (Seal) R J Dixon Seal)

Robert L. Smith (Seal) Mary W. Miles (Seal) Elizabeth Dixon (Seal)

Edna M. Smith (Seal) Vincent Tribble (Seal) _____ (Seal)

Sara S. Barber (Seal) Martha S. Westall (Seal) _____ (Seal)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1315, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 24 1954

March 19, 1954

Memorandum

To: Operating Committee, DMEA - Washington

From: Field Team, D M E A- Region VII - Knoxville, Tennessee

Subject: Docket No. DMEA-3233 - mica. Bennett and Westall. Cilly Mine, Yancey County, N. C.

Reference is made to your letter of March 17, 1954 on the subject application.

The South pegmatite, referred to in subject letter, and the Cilly pegmatite are continuous. There appears to be a gradual thinning of the pegmatite to the north; however, at the point of the proposed shaft (70 ft. northeast of the old Cilly shaft) the pegmatite is about 12 feet thick. Exposures in the vicinity of the open cut are rather poor, mainly because of slumpage, although minor folds in the wall rock plunge at a steep angle to the northeast suggesting that the mica concentration does likewise. As the mine is flooded, the examiners were unable to inspect the pegmatite in an unweathered condition. However, the extensive surface bulldozing conducted since the mine was operated during World War II has shown conclusively that there is no abrupt termination of the pegmatite to the northeast at the surface. Also, the location of the bulldozer cut, in respect to the underground openings, leaves one to infer that the mica producing zone is continuous near the footwall contact over a strike distance of approximately 75 feet. The additional footage recommended in the examination report is to be used for exploring the hanging wall zone of the pegmatite. So far as the field examiners have been able to determine, little exploration has been conducted on the southeast (hanging wall) contact.

There is no information available to the Field Team that indicates the mica zone mined at the Cilly Mine is either thinning or pinching with depth. Mr. Ralph Thompson, who was the last operator that worked the mine underground, is of the opinion that the mica concentration is persistant to depth. He states that when the mine was closed in October 1944 (because the mica was classified as non-ruby by the Colonial Mica Corp) mica concentrations occurred in the north and south faces and in the bottom of the mine (110-foot level).

No positive answer can be given as to whether or not 110 feet of drifting is justified to explore the pegmatite extension south of the Old Cilly shaft. This need could be appraised only after exploration is in progress; however, as previously mentioned, some of the 110 feet of level work is intended for use on the hanging wall of the pegmatite.

There is no reliable information available as to the depth of the Three Quarters Creek, Bittner and Beech Mines. Reports suggest that all have been worked to a depth of from 30 to 50 feet, but they are all flooded and the sides slumped and caved, making it impossible to tape them accurately.

The bulldozer cut, made about 1950, is approximately 70 feet deep. The present surface is estimated to be less than 10 feet above the top of the stope shown on the map attached to the examination report. Goldthwait in his report of Aug. 1944 for the U. S. G. S. mentions little about zoning in the Cilly pegmatite. He does point out that most of the previous procution has been from a footwall zone which is within two feet of the contact. Also he states: "Another likely source of mica is along the strike north of the present workings. This, however, does not appear as promising, inasmuch as some gneiss is present in the heading.

"Although there is no indication of mica concentrations, the pegmatite does continue to the east for an unknown distance. A hanging wall zone might be located."

The Field Team is of the opinion that this deposit is a good bet for a successful exploration project, and that the recommendation is consistent with previous recommendations and approved projects.

Robert A. Laurence

Robert A. Laurence

Wm. A. Beck

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

File Copy
Surname:
Houk
Selfridge
Mittendorf

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

600

MAR 17 1954

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

Subject: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

Dear Mr. Laurence:

Reference is made to your telephone conversation of March 12, 1954, with Mr. C. O. Mittendorf, on the subject application.

A study of the field team report fails to indicate the geologic premise upon which the proposed work is based. It is not certain from studying this report whether the pegmatite and mica shoot in the main workings are narrowing and pinching with depth and if the target is of sufficient size to justify the recommended expenditure. We wish to have your thoughts on this matter. In other words, what geological criteria do you have for expecting the mica shoot to persist to the depth where it will be intersected? To what depth have the Bittner Mine, the Beech Mine, and the Three Quarters Creek Mine been worked? Does the pegmatite on the extreme south end of the sheet justify drifting approximately 110 feet to explore in depth or would a more economic approach be to work from the surface? Are any structural controls apparent from the surface which would indicate a possibility of widening of the pegmatite between the South Pegmatite and the Cilly Mine?

Such additional information as you may have on the location of the present ground surface above the Cilly stope bottom, zoning or absence of zoning in the South Pegmatite and any geologic information you may have on the subject property and geologic habits of the mica shoots in this area should be forwarded to this office for further study.

Sincerely yours,

George C. Selfridge (JHB)
Chairman, Operating Committee

Approved:

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

Philip W. Guild (JHB)
Member, Geological Survey

LGHouk:gad 3/17/54
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3061
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

R.C.J. 3-17-54

File Copy
Surname:
Houk
Shield

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

March 16, 1954

Memorandum

To: Mr. C. O. Mittendorf

From: Lawrence G. Houk

Subject: Bennett & Westall - Docket No. DMEA-3233 - Mica
Cilly Mine
Yancey County, North Carolina

The proposed exploration appears to offer insufficient promise of finding sufficient reserves of strategic mica to justify the cost. Much of our analysis is based upon our assumptions as to the effect of the open-cut work performed subsequent to 1944 (when the maps and sections were completed). The field team's proposal may be divided into two sections:

1. The shaft sinking and a short drift to intersect the downward projection of the previously mined stope (Cilly Mine).

2. Drifting southward along the strike of the pegmatite to South Pegmatite.

The first portion of the work is to gain access to the down dip projection of the previously mined pegmatite containing a rich mica shoot in places up to 75% mica.

The work is apparently premised upon the continuation of the mica shoot downward. Section C-D in the accompanying map indicates a sheet mica zone exists at the bottom of the stope.

The production of $51,438.67 worth of mica during World War II was apparently recovered from this stope. Assuming the stope continues downward a distance equal to the distance already stoped, and the tenure of the ore continues unchanged, the Government would be returned approximately $2,550 in royalty.

The second phase of the proposed program, drifting southward along the strike, does not appear from the field team report to be justified on the basis that there is geologic probability of making a significant discovery. The target of the South Pegmatite is not described in the field team report.

3. Most of our past exploration in deeply weathered material around old workings has been unsuccessful. The statement in the field team report quoting the 1944 Geological Survey Report:

R.C.S.
3-17-54

"Another possible source of mica is south from the present shaft along the strike both above and below the level of the old workings", may be clarified by the field team to indicate the geologic reasons why mica shoots may exist in this particular area.

This Division does not object to work in old mine areas where geologically favorable information indicates a project is worthwhile. We do not feel that gaining access to old stopes or intersecting projected mica shoots a few tens of feet below old workings is good exploration. The field team should encourage exploration for new mines in old districts and new mines in new districts not simply providing access to small limited targets attached to old stopes.

The field team report on the subject property fails to mention the reason for recommending exploration at the subject mine. The geologic habit of the other mica shoots in the immediate district should be mentioned. The Cilly Mine stope appears to be bottoming out. What reason has the field team for believing the pegmatite and mica shoot continue to depth. The field team may have an alternate proposal for exploring the South Pegmatite.

LGHouk:gad 3/16/54
Copy to: Admr. R. File
Docket File
Mr. Houk

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

March 8, 1954

Memorandum

To: Administrator

From: Nonmetallic Minerals Division

Subject: A denial of exploration assistance and closing review.
Docket No. DMEA-3233 - Mica
Property: Cilly Mine, Yancey County, North Carolina.
Located 2.4 miles east of Burnsville, North Carolina.
Operator's property rights - lease for five years, dated May 5, 1952, and right of option for another five years.
Applicant: Bennett and Westall
Amount requested: $7,313.77
No contract: Application denied.

Docket Summary:

1/13/54 Received application, Form MF-103.
1/19/54 Memo from D. A. Brobst, USGS, recommending field team examination.
1/26/54 Memo from W. F. Dietrich, USBM, recommending field team examination.
1/28/54 Referral letter to field.
2/19/54 Received report of examination by Field Team, Region VII, by K. H. Teague, Geologist, USGS, D. H. Amos, Geologist, USGS, and L. E. Shirley, Mining Engineer, USBM. The Field Team recommends an exploration contract in the amount of $8,825.00.
3/1/54 Memo from D. M. Larrabee, USGS, concurring in field team's recommendation.
3/2/54 Memo from W. F. Dietrich, USBM, concurring in field team's recommendation.

Resume:

This is an old mine that has been worked intermittently since 1879, and during World War II produced $51,438.67 worth of mica. The field team recommends an exploration contract and submits an exploration plan which appears to be a development program to reach the old mine workings.

Because the existing shaft is not safe for operation, the field team proposes to sink a new 65 foot shaft at a point 70 feet to the north. Then from bottom of this new shaft, drive a drift back toward and 80 feet beyond the old shaft for an overall distance of 150 feet. This work is to cost $8,825.00. As we interpret the plan from the map attached to the report, the proposed drift goes through much of the old workings, some of which are even below the level of the drift, based on original sections compiled before open-cut work subsequent to 1944.

Comments:

Based on the past experience we are reluctant to recommend spending $8,825.00 for a proposal to reopen old workings.

The size of the target appears inadequate for the proposed expenditure. The justification to make the $8,825.00 is inadequate.

Therefore, the Nonmetallic Minerals Division recommends that the application for exploration assistance be denied.

W. C. Anderson

W. C. Anderson
Nonmetallic Minerals Division

P. S. In a telephone conversation February 23, 1954, the subject of reopening old mines as exploration projects was discussed with Mr. Laurence. He agreed that the policy of not reopening old mines was a good one but stated little mica was being produced from new mines.

File Copy
Surname:
Anderson

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

March 8, 1954

Memorandum

To: Administrator

From: Nonmetallic Minerals Division

Subject: A denial of exploration assistance and closing review.
Docket No. DMEA-3233 - Mica
Property: Cilly Mine, Yancey County, North Carolina.
Located 2.4 miles east of Burnsville, North Carolina.
Operator's property rights - lease for five years, dated May 5, 1952, and right of option for another five years.
Applicant: Bennett and Westall
Amount requested: $7,313.77
No contract: Application denied.

Docket Summary:

1/13/54 Received application, Form MF-103.
1/19/54 Memo from D. A. Brobst, USGS, recommending field team examination.
1/26/54 Memo from W. F. Dietrich, USBM, recommending field team examination.
1/28/54 Referral letter to field.
2/19/54 Received report of examination by Field Team, Region VII, by K. H. Teague, Geologist, USGS, D. H. Amos, Geologist, USGS, and L. E. Shirley, Mining Engineer, USBM. The Field Team recommends an exploration contract in the amount of $8,825.00.
3/1/54 Memo from D. M. Larrabee, USGS, concurring in field team's recommendation.
3/2/54 Memo from W. F. Dietrich, USBM, concurring in field team's recommendation.

Resume:

This is an old mine that has been worked intermittently since 1879, and during World War II produced $51,438.67 worth of mica. The field team recommends an exploration contract and submits an exploration plan which appears to be a development program to reach the old mine workings.

R.C.S. 3-30-54

Because the existing shaft is not safe for operation, the field team proposes to sink a new 65 foot shaft at a point 70 feet to the north. Then from bottom of this new shaft, drive a drift back toward and 80 feet beyond the old shaft for an over-all distance of 150 feet. This work is to cost $8,825.00. As we interpret the plan from the map attached to the report, the proposed drift goes through much of the old workings, some of which are even below the level of the drift, based on original sections compiled before open-cut work subsequent to 1944.

Comments:

Based on the past experience we are reluctant to recommend spending $8,825.00 for a proposal to reopen old workings.

The size of the target appears inadequate for the proposed expenditure. The justification to make the $8,825.00 is inadequate.

Therefore, the Nonmetallic Minerals Division recommends that the application for exploration assistance be denied.

W. C. Anderson
Nonmetallic Minerals Division

WCAnderson:gad 3/8/54

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

P. S. In a telephone conversation February 23, 1954, the subject of reopening old mines as exploration projects was discussed with Mr. Laurence. He agreed that the policy of not reopening old mines was a good one but stated little mica was being produced from new mines.

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 1 - 1954

February 24, 1954

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-3233 (mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. M. Larrabee, U. S. Geological Survey
Applicant: M. W. Bennett and Vencent Westall, Burnsville, N. C.
Name of property: Cilly Mine
Location of property: Yancey Co., N. C.
Date of field team report: February 16, 1954.
Authorship of field team report: K. H. Teague, L. E. Shirley, and D. H. Amos.
Field team's recommendation: 65' shaft
150' drifts and crosscuts

Cost $8,825

Comments: This would appear to be a possible source of economically recoverable strategic mica, judging from War II history.

ACTION RECOMMENDED: Follow field team's recommendation.

D M Larrabee
D. M. Larrabee
per DAB

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 2 - 1954

March 1, 1954

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3233

Applicant: Mark W. Bennett and Vencent Westall

Name and Location of Property: Chilly Mine
Yancey County, North Carolina

Date of Field Team Report: February 17, 1954

Date Rec'd by Ceramic & Fertilizer Mats. Branch: February 25, 1954

Field Team Recommendation:

1. A contract for exploration in the amount of $8,825.

Comments:

1. Exploration by a 65-foot 2-compartment shaft and 150-foot drift and/or crosscut.

2. Proposed exploration is consistent with good engineering practices, and eliminates the hazards involved in the applicant's original proposal.

Recommendation:

I concur in the field team's recommendation for an exploration project in the amount of $8,825.

W. F. Dietrich

W. F. Dietrich

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

February 17, 1954

Memorandum

To: Operating Committee, D M E A - Washington

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

Subject: Examination Report on DMEA-3233, Cilly Mine-North Carolina

Transmitted are four copies of the subject report with six extra copies of the map. The Field Team is in agreement with the recommendations set forth in the report, but no "Owner's Consent to Lien" has been obtained. The applicants informed the examiners that one of the property owners had refused to sign the MF-203; however, they are making another attempt to secure the necessary signature. If the "Owner's Consent to Lien" cannot be obtained, both the applicants are willing to sign the "Guarantee."

Wm. A. Beck, Acting
Executive Officer, DMEA
Region 7

Benjamin Gildersleeve, Geologist
U. S. Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE
2-26-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR

RECEIVED
1954

gcl
3/9/54

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM, REGION VII

On

DMEA-3233, CILLY MINE
Yancey County, N. C.

(mica)

By

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

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

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

February 16, 1954

Reviewed by
DMEA OPERATING COMMITTEE
2-26-54
(date)

FIELD EXAMINATION REPORT
ON
DMEA-3233, CILLY MINE (mica)

Applicant: Mark W. Bennett and Vencent Westall, Burnsville, N. C.

The field examiners are of the opinion that this deposit has merit for exploration. Considerable mica has been produced in the past and exploration appears justified below the past work. The examiners believe the approach to exploration should be different from the proposed exploration. The applicants are in agreement with this change.

The deposit was examined on February 12, 1954. Mark W. Bennett, Yates Bennett and Ralph Thompson accompanied the examiners. Two hours were spent on the examination.

The mine is 2.4 miles by road east of Burnsville, Yancey County, North Carolina. It is about 100 yards west of the Three Quarters Creek road (gravel road).

The applicants are competent to conduct the proposed exploration.

The property is held under a 10 year lease. Area covered by the lease is adequate for the proposed exploration.

There are no present surface facilities on the property. Present works consist of a large open cut about 70 feet deep, a caved adit, and a vertical shaft. The shaft was about 110 feet deep prior to dozing the open cut.

The following information is taken from a report by Lawrence Goldthwait, U.S.G.S., August 1944:

"The country rock of the Cilly area is a biotite gneiss, locally grading into a schist that contains much biotite at contacts with the pegmatite. The general trend of the foliation is northeast, with nearly vertical dips. Small lenticular plagioclase patches as much as an inch in diameter are common in the gneiss. A few garnets are also present. Much of the gneiss has been deeply weathered and is stained. At the Cilly mine, part of the extensive old lower tunnel was cut in a deeply weathered hornblende gneiss. Faults are common, particularly in the southern portion of the area, and several of the pegmatite contacts are fault contacts. At the southwest end of the old Cilly tunnel is such a fault contact. Numerous faults also occur within the pegmatite.

"The pegmatite in the recent workings is a dike-shaped mass that dips steeply near the surface and becomes less steep at a depth of seventy feet. It plunges northward. It is at least forty feet thick. At the northern end of the upper workings the pegmatite seems to be pinching out and the face shows some gneiss.

"The pegmatite consists cheifly of plagioclase, quartz with some muscovite, with a very little biotite. No microcline is present. Garnets,

as crystals ranging in size from one-sixteenth of an inch up to one and a half inches, often occurring in rows, are generally clear and fresh, though shattered. Granular masses of garnets are also present. Quartz is rather evenly distributed throughout the pegmatite, and there is a tendency toward graphic intergrowths with feldspar along the middle of the east wall.

"In the main underground workings, where the west wall and floor are gneiss (footwall) and the east wall is pegmatite, the best mica is located near the footwall at a level close to the bottom of the shaft cribbing. The heading thrity feet lower shows a zone that averages fourteen inches in thickness and extends two feet above the footwall for a distance of twelve feet. This zone is about 75% mica.

"The muscovite is clear and rum colored. The operator reported no trouble with staining, and there appears to be little tying or "A" structure. Approximately 5% of the mine-run block mica was recovered as trimmed sheet and punch.

"The operator is working (1944) down the dip of the pegmatite, a procedure that should yield the most mica, particularly close to the footwall. Although mica probably occurs along the strike of the vein to north and south, the operators believe that the best policy is to work to greater depth along the footwall in the present workings.

"Another possible source of mica is south from the present shaft along the strike, both above and below the level of the old workings."

The first work was done in 1879 by a Mr. Cilly. The mine was operated during World War II and 8,514.12 pounds of sheet mica was sold to Colonial Mica Corporation for $51,438.67.

Manpower and supplies are readily available. There is a 1-phase electric line about 100 yards from the site.

The examiners are of the opinion that the method of exploration proposed by the applicants would neither be safe nor the most effective. The proposed dozing would create a hazardous bank and would necessitate moving excessive material. It is believed a more realistic approach would be to sink a shaft about 70 feet north of the existing shaft and then drift south under the old work.

Estimated Cost of proposed work:

Bulldozing shaft site and repair of 100 yards of access road	$100.00
Toolhouse	150.00
Magazine - Cap	25.00
Magazine - powder	50.00
65-foot 5' x 7', 2-compartment timbered shaft @ $50/ft.	$3,250.00
150-foot 5' x7' drift and/or crosscut @ $35/ft	5,250.00
Estimated Total Cost.....	$8,825.00

Estimated time required : 110 shifts

February 12, 1954

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

and

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

ZB

FILE COPY
surname:

Anderson
Houk
Guild
Selfridge
Hedges

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

600

JAN 28 1954

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

Subject: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey 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, dated January 15, 1954, and from the Bureau of Mines, dated January 25, 1954, are enclosed for your information.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

Approved:

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

s/ Philip N. Gued (JHB)
Member, Geological Survey

Enclosures 4
WCAnderson:gad 1/27/54
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

R.C.S. 1-28-54

FILE COPY
surname:

Anderson
~~Gould~~
~~Hedges~~
~~Stillwagon~~
~~Johnson~~

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

600

JAN 28 1954

Bennett & Westall

Burnsville, North Carolina

Re: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

Gentlemen:

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 (for)

Administrator

WCAnderson:gad 1/27/54

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

R.C.G. 1-28-54

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

January 25, 1954

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3233

Applicant: Bennett & Westall
Name and Location of Property: Chilly Mine, Yancey County
North Carolina
Date of Application: January 13, 1954
Rec'd. by Ceramic & Fertilizer Materials Branch: January 13, 1954
Estimated Cost: $7,314
Comment:

1. Geological Survey (Professional Paper 225, p. 59.) reported that 409 pieces of mica from this mine were tested and found to be 100 percent E-1 capacitor quality. The color was described as brownish olive.
2. We have no record of mica from the mine being sold to Colonial Mica.

Recommendation:

It is recommended that the field team visit this property when a member of the field team is in that vicinity to ascertain if an exploration program is justified.

W. F. Dietrich

W. F. Dietrich

Mr. Anderson

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 18 1954

IN REPLY REFER TO:
G-MD-CNM

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

January 15, 1954

Memorandum

REVIEW OF APPLICATION DMEA-3233 (Mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. A. Brobst, U. S. Geological Survey
Applicant's name and address: Mark W. Bennett and Vencent Westall
Burnsville, North Carolina.
Name of property: Cilly mine.
Location of property: Approximately 15 miles from Spruce Pine, North Carolina.
Summary of applicant's proposal: A three month project is proposed in which overburden is to be removed as deep as necessary to sink a 60-foot shaft safely. A drift 100 feet long will be driven from the shaft, The project will cost a total of $7,313.77.
Sources of information on applicant's property: No information is available.
Comments:
This is an ambitious program for a prospect that is evidently in bad ground. There is no information about the pegmatite to be worked, no sketch, or other data to judge the merit of the project. More data is needed and the property should be examined before any decisions are made.
RECOMMENDATION:
Examination by the Field Team.

D. A. Brobst
D. A. Brobst

Defense Materials Administration
RECEIVED
JAN 25 1954

BENNETT & WESTALL
BURNSVILLE, N. C.

Lawrence G. Houk, Chief
Nonmetallic Minerals Div.

Re: Docket No. DMEA-3233-Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

Dear Sir:

This is to advise that we understood the new process under the new government participation rate.

We would appreciate you processing this application under this program.

Thanking you very much, I remain

Yours very truly,

BENNETT & WESTALL

Mark W Bennett

Mark W. Bennett
Partner

MWB:np

FILE COPY
SURNAME:

Anderson
Houk
Matscheko

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

600

JAN 19 1954

Bennett & Westall

Burnsville, North Carolina

Re: Docket No. DMEA-3233 - Mica
Bennett & Westall
Cilly Mine
Yancey County, North Carolina

Gentlemen:

Reference is made to your application for exploration assistance for mica.

On November 3, 1953, Amendment No. 3 to DMEA Order-1 became effective and limited Government participation in the case of mica to 75 percent of the approved costs. Inasmuch as your application was received after November 3, 1953, please advise this office in writing if you desire to have your application processed under the new Government participation rate. The processing of your application will be deferred until receipt of your reply.

A copy of our release of November 3, 1953, is enclosed for your information.

Sincerely yours,

SIGNED

Lawrence G. Houk, Chief
Nonmetallic Minerals Division

Enclosure

WCAnderson:gad 1/18/54
Copy to: Admr. R. File
Docket File
Field Team, Region VII
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

RCg.
1-19-54

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

January 13, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region VII

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number DMEA-3233

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

DMEA - 3233 Bennett & Westall

ROBERT E. ADAMS

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

Bennett & Westall
Burnsville
North Carolina

January 13, 1954

Subject: DMEA-3233
Re: Exploration Assistance
Cilly Mine

Dear Sirs:

The receipt of your application dated January 8, 1954, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3233 and referred to the Nonmetallics Division.

Kindly refer to DMEA-3233 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams
Chief, Operations Control
and Statistics Division

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

Defense Minerals Administration
RECEIVED
JAN 13 1954

January 11, 1954

Memorandum

To: Operating Committee, D M E A Washington

From: Executive Officer, DMEA - Region 7

Subject: Application, Bennett & Westall, Burnsville, N. C.
Cilly Mine, Yancey County, N. C. (mica)

Enclosed are 3 copies of an application from Bennett and Westall, for aid in exploring the Cilly Mine in Yancey County, North Carolina, with a copy of the lease. I have written to the applicants requesting signed copies of Owner's Consent to Lien.

Robert A. Laurence

Robert A. Laurence

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 13 1954

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-3233
Metal or Mineral
Date Received 1-13-54
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: Bennett & Westall, Burnsville, 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

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

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

(*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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ 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 1-8, 195[illegible]

Bennett & Westall
(Applicant)

By Mark W Bennett

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

BENNETT & WESTADL
BURNSVILLE, N. C.
(Cilly Mine)

Form MF - 103 (Rev.)

1. (a) Mark W. Bennett, Vencent Westall, Burnsville, N. C.
Bennett & Westall, Burnsville, N. C.
(b) Partnership
(c) Does Not Apply
(d) Mark W. Bennett, Vencent Westall, Burnsville, N. C.

2. Complied with

3. (a) See lease attached
(b) Cilly Mine
(c) Lessee
(d) Copy of lease attached to original copy of MF - 103.
(e) Not applicable
(f) Not applicable

4. (a) This mine was worked during world war Two. The shaft which was worked became dangerous and all the work stopped. After this operation was closed other parties went in with bulldozer and tried to move side of mountain and did move considerable dirt, but mine and banks fell in so they stopped.
(b) This mine produced mica during world war two but we have no records. Please refer to Colonial Mica Company records.
(c) This mine did produce strategic mica and if a new shaft is put where it will be safe we are sure it will produce again.
(d) Good roads to mine maintained by State Highway Commission. The mine is approximately fifteen miles from Spruce Pine, N. C.
(e) Manpower, material, supplies, equipment, water, and power is available.

5. (a) Strategic mica
(b) It is proposed to move the over burden down to where it will be safe to sink a 60 foot shaft and drive a 100 foot drift. We have no maps available now.
(c) Work will begin within 30 days and will be completed within 3 months.
(d) Parties in this lease have had experience in mica mining for a number of years. Best known mica miners in this section will be employed to operate this mine.

6. (a) None
(b)

Foreman	60-8 hr. dys.	@ 1.50/hr.	$720.00	
Driller	50-8 hr. dys.	@ 1.25/hr.	500.00	
2 Muckers	50-8 hr. dys.	@ 1.00/hr.	800.00	
Hoistman	50-8 hr. dys.	@ 1.25/hr.	500.00	
Carpenter	4 -8 hr. dys.	@ 1.25/hr.	40.00	
Labor	15-8 hr. dys.	@ .90/hr.	108.00	
Engineer	2 -8 hr. dys.	@ 25.00/hr.	50.00	$2,718.00

BENNETT & WESTALL
BURNSVILLE, N. C.
Cilly Mine

Form MF - 103 (Rev)

6. (c) Air hose & small tools			300.00	2718
Steel (3) sets intrasit			270.00	
Power			100.00	670.00
(d) Rented:				
Air Compressor	3 mos.	@ 200.00/mo.	600.00	
Jack Hammer	3 mos.	@ 25.00/mo.	75.00	
Hoist	3 mos.	@ 100.00/mo.	300.00	
Bulldozer with blade	120 hrs	@ 10.00/hr.	1200.00	$2,175.00
Purchased:				
Column & arm			175.00	
Dynamite & Exploders			600.00	775.00
Furnished by operator:				
Water pump & pipe	3 mos.	@ 10.00/mo.	30.00	
Fan	3 mos.	@ 10.00/mo.	30.00	
Jeep	3 mos.	@ ~~10.00~~/75.00	225.00	285.00
(e) None				
(f) Tool house and 2 magazines			250.00	
(g) Insurance			250.00	
Payroll taxes (1½ % of $2718.00)			40.77	
Misc. Gen. Repair and Maintenance			100.00	390.77
(h) Contingencies, wiring, fuel, oil & miscellaneous supplies			300.00	300.00

7. (a) Yes
(b) Money and with use of equipment owned by partners.

Total
$ 7393.77

7313.77

STATE OF NORTH CAROLINA

COUNTY OF YANCEY

THIS MINING LEASE made this the 5th day of May, 1952 between MARTHA WESTALL and husband, VINCENT WESTALL, W. L. SMITH and wife, RUBY SMITH, ELIZABETH SILVERS and husband, R. N. SILVERS, all of the Yancey County, North Carolina, SSARAH BARBEE and husband H. T. BARBEE, of Cabarrus County, North Carolina, LOUISE S. CALVERT, MARGARET P. SMITH, ELIZABETH E. SMITH, W. J. WEAVER and wife, KATHLEEN WEAVER, all of Buncombe County, North Carolina, R. L. SMITH and wife, EDNA SMITH, of Mecklenburg County, North Carolina, parties of the first part, and MARK W. BENNETT and VINCENT WESTALL of Yancey County, North Carolina, parties of the second part,

W I T N E S S E T H:

That the said parties of the first part in consideration of the agreements hereinafter contained to be performed by the parties of the second part, do hereby bargain and lease for a period of FIVE YEARS from the date hereafter, for mining purposes, that tract of land, with right of ingress and egress, located in Burnsville Township, Yancey County, North Carolina, and more particularly described as follows:

> BEGINNING at a dogwood at Horace Nanney's S. E. corner and runs West with his line to his S. W. corner at a blackgum; then South 500 feet to a chestnut oak; then E. 500 feet to a stake at Three Quarter Creek; then North with Three Quarter Creek to the BEGINNING corner.
>
> The above description includes what is known as the Old Cilly Mica Mine.

TO HAVE AND TO HOLD said land unto the said parties of the second part, their successors and assigns, for mining purposes, for the aforesaid period of five years from date hereof, upon compliance with the following conditions:

1. The rental or royalty under the terms of this lease shall be as follows:
   (a) A 1/8th royalty in value for all mica mined and sold from said land;
   (b) Fifty cents per ton for all feldspar mined and removed from said premises; and
   (c) Should any other minerals be mined and sold from said premises, then the partys of the second part, their successors and assigns, shall pay the parties of the first part the customary royalty in this locality for such minerals.

2. That the partys of the second part furnish to the parties of the first part, with each royalty payment the shipping weights, sale weights and sale price invoices, which shall determine the weights and prices on which royalty payments are made.

3. That the payment of rental or royalty shall be made on the 10th day of each month for all minerals mined and sold from said premises during the previous month, and the payment of said royalty shall be made to Dr. E. E. Smith, Asheville, North Carolina, or her agent, to be distributed by her to the parties of the first part according to their respective interests.

4. That the parties of the second part, their successors and assigns, shall keep the mines operated by them on the leased premises free from waste and muck, and upon termination or surrender of this lease to leave the mine or mines free from all such muck or waste as he may blast or dig loose in said mine or mines, and that he carry on the work in a miner like way.

5. That any failure on the part of the parties of the second part, their successors and assigns, to make the monthly payments of the royalties herein set out, or failure to carry on the work in a miner like manner, or failure to work the mines for more than thirty (30) days, unless hindered by unavoidable accidents or other causes beyond their control, will render this lease void at the option of the parties of the first part.

6. That the parties of the first part shall not be liable for wages, personal injuries or in any manner to the employees of the parties of the second part.

AND THE PARTIES OF THE FIRST PART AGREE THAT THE PARTIES OF THE SECOND PART SHALL:

1. Have a right to dig, quarry or in any other manner search for oand obtain mica, feldspar or any other minerals on said land.

2. Have a right of ingress and egress to such minerals or mineral on said lands, with the right to construct such roads that are necessary to remove said mineral.

3. Have a right to construct buildings or machinery and equipment on said premises reasonably necessary for operations under the terms of this lease and have the right to remove same from the premises at any time provided all royalties have been paid.

4. Have a right to such land as is reasonably necessary for dumping waste, building pipe lines and such timber from the land described herein as reasonably necessary for said operations.

5. Have a right to renew this lease at the end of five years from the date of same for an additional five years on condition that all the terms and conditions of this lease have been fully carried out and complied with. And that such renewal may be made by giving notice to the parties of the first part within 30 days before the expiration date of the first five years to that effect.

IN TESTIMONY WHEREOF, the parties of the first part and the parties of the second part have hereunto set their hands and seals the day and year first above written.

Martha Westall (SEAL)
Martha Westall

Vincent Westall (SEAL)
Vincent Westall

W. L. Smith (SEAL)
W. L. Smith

Ruby Smith (SEAL)
Ruby Smith

Elizabeth Silvers (SEAL)
Elizabeth Silvers

R. N. Silvers (SEAL)
R. N. Silvers

Sarah Barbee (SEAL)
Sarah Barbee

H. T. Barbee (SEAL)
H. T. Barbee

Louise S. Calvert (SEAL)
Louise S. Calvert

Margaret P. Smith (SEAL)
Margaret P. Smith

Elizabeth E. Smith (SEAL)
Elizabeth E. Smith

W. J. Weaver (SEAL)
W. J. Weaver

Kathleen C. Weaver (SEAL)
Kathleen Weaver

R. L. Smith (SEAL)
R. L. Smith

Edna Smith (SEAL)
Edna Smith

PARTIES OF THE FIRST PART

Mark W. Bennett (SEAL)
Mark W. Bennett

Vincent Westall (SEAL)
Vincent Westall

PARTIES OF THE SECOND PART.

STATE OF NORTH CAROLINA

COUNTY OF YANCEY

Personally appeared before me this day Martha Westall and husband, Vincent Westall, W. L. Smith and wife, Ruby Smith, Elizabeth Silvers and husband R. N. Silvers, and acknowledged the due execution of the foregoing Minine Lease for all the purposes therein expressed.

Witness my hand and notarial seal this the 1 day of ~~May, 1952.~~ October 1953

Louise Silver
Notary Public

My commission expires 8-11 1954

STATE OF NORTH CAROLINA

COUNTY OF CABARRUS

Personally appeared before me this day Sarah Barbee and husband H. T. Barbee, and acknowledged the due execution of the foregoing Mining Lease for all the purposes therein expressed.

Witness my hand and notarila seal this the 17 day of ~~May~~ October, 1952.

C L Black
Notary Public

My commission expires 2-8-54 19__.

STATE OF NORTH CAROLINA

COUNTY OF BUNCOMBE

Personally appeared before me this day Louise S. Calvert, Margaret P. Smith, Elizabeth E. Smith, ~~W. J. Weaver and wife, Kathleen Weaver~~, and acknowledged the due execution of the foregoing Minine Lease for all the purposes therein expressed.

Witness my hand and notarial seal this the 16th day of ~~May~~ July, 1952.

Lucile Sellars
Notary Public

My commission expires Sept. 19, 1953.

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

Personally appeared before me thisday R. L. Smith and wife, Edna Smith, and acknowledged the due execution of the foregoing Mining Lease for all the purposes therein expressed.

Witness my hand and notarial seal this the 9 day of ~~May~~ July, 1952.

Margaret L. Smith
Notary Public

My commission expires Oct. 24 1952.

STATE OF NORTH CAROLINA

COUNTY OF YANCEY

Personally appeared beforeme this day Mark W. Bennett and Vincent Westall, named as parties of the second part in the foregoing Mining Lease, and acknowledged the due execution of said lease for all the purposes therein expressed.

Witness my hand and notarial seal this the 8 day of ~~May~~ OCT, 1952.

Bernie Kennedy
Notary Public

My commission expires 9-8-54 19__.

STATE OF NORTH CAROLINA

COUNTY OF BUNCOMBE

Personally appeared before me this day W. J. Weaver and wife, Kathleen Weaver, and acknowledged the due execution of the foregoing Mining Lease for the purposes therein expressed.

Witness my hand and notorial seal this the 17th day of July, 1952.

Christine E. Brookshire
Notary Public

My comission expires Oct. 31 1952

NORTH CAROLINA, Yancy County:

The foregoing certificate (s) of Louie Silver, C. L. Silver, Lucile Silvers, Margaret L. Deck, J. Bernie King & Ruth Brockwell

each a Notary Public of the County and State designated, duly authenticated his official seal affixed, has (have) been duly examined and found to be in proper form according to law, and the execution of the said instrument is hereupon adjudged sufficiently proven. Let the instrument, with the certificates, be registered.

This 8 day of Feb'y, 1943.

CLERK SUPERIOR COURT.

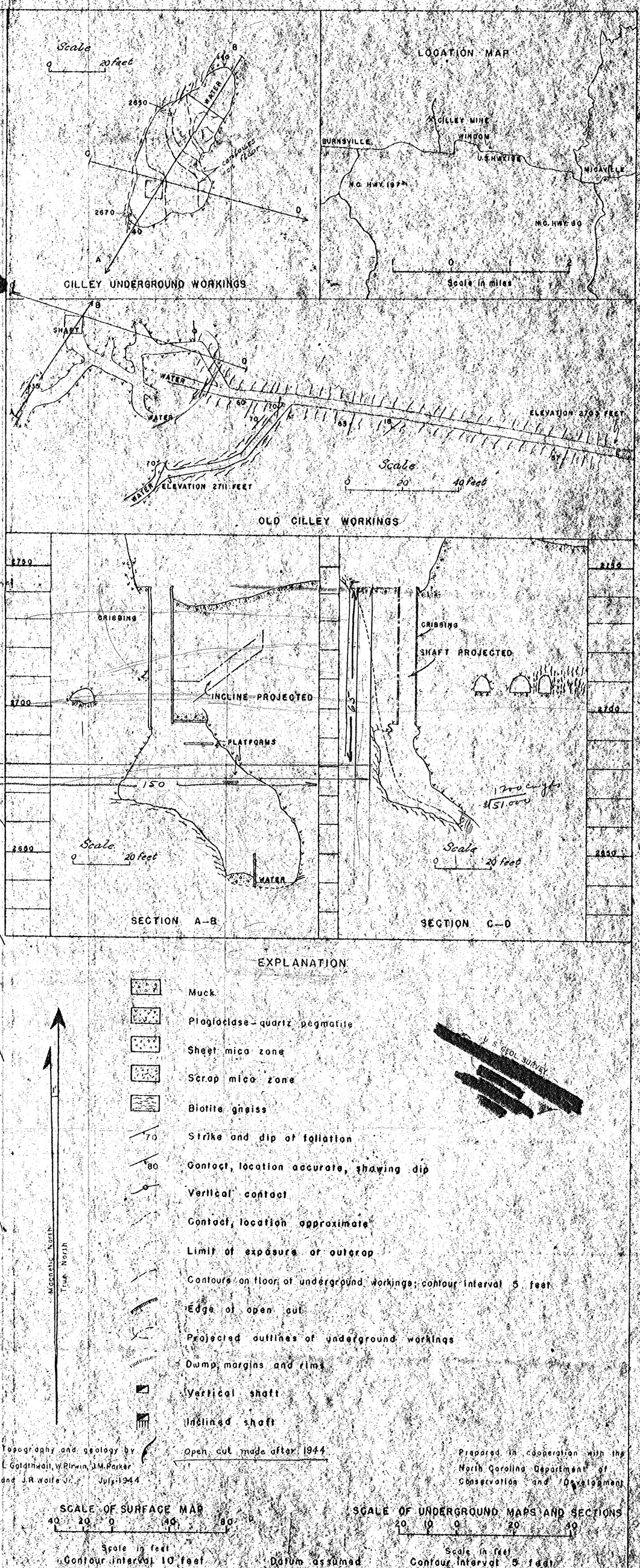
UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS
EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

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

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STRATEGIC MINERALS INVESTIGATIONS
PRELIMINARY MAP



EXPLANATION

- Muck
- Plagioclase-quartz pegmatite
- Sheet mica zone
- Scrap mica zone
- Biotite gneiss
- 70 Strike and dip of foliation
- 80 Contact, location accurate, showing dip
- Vertical contact
- Contact, location approximate
- Limit of exposure or outcrop
- Contours on floor of underground workings; contour interval 5 feet
- Edge of open cut
- Projected outlines of underground workings
- Dump, margins and rims
- Vertical shaft
- Inclined shaft
- Open cut made after 1944

Magnetic North
True North

Topography and geology by L. Goldman, W. Pirwin, J.M. Parker and J.R. Wolfe Jr., July 1944

Prepared in cooperation with the North Carolina Department of Conservation and Development

SCALE OF SURFACE MAP
40 20 0 40 80
Scale in feet
Contour interval 10 feet Datum assumed

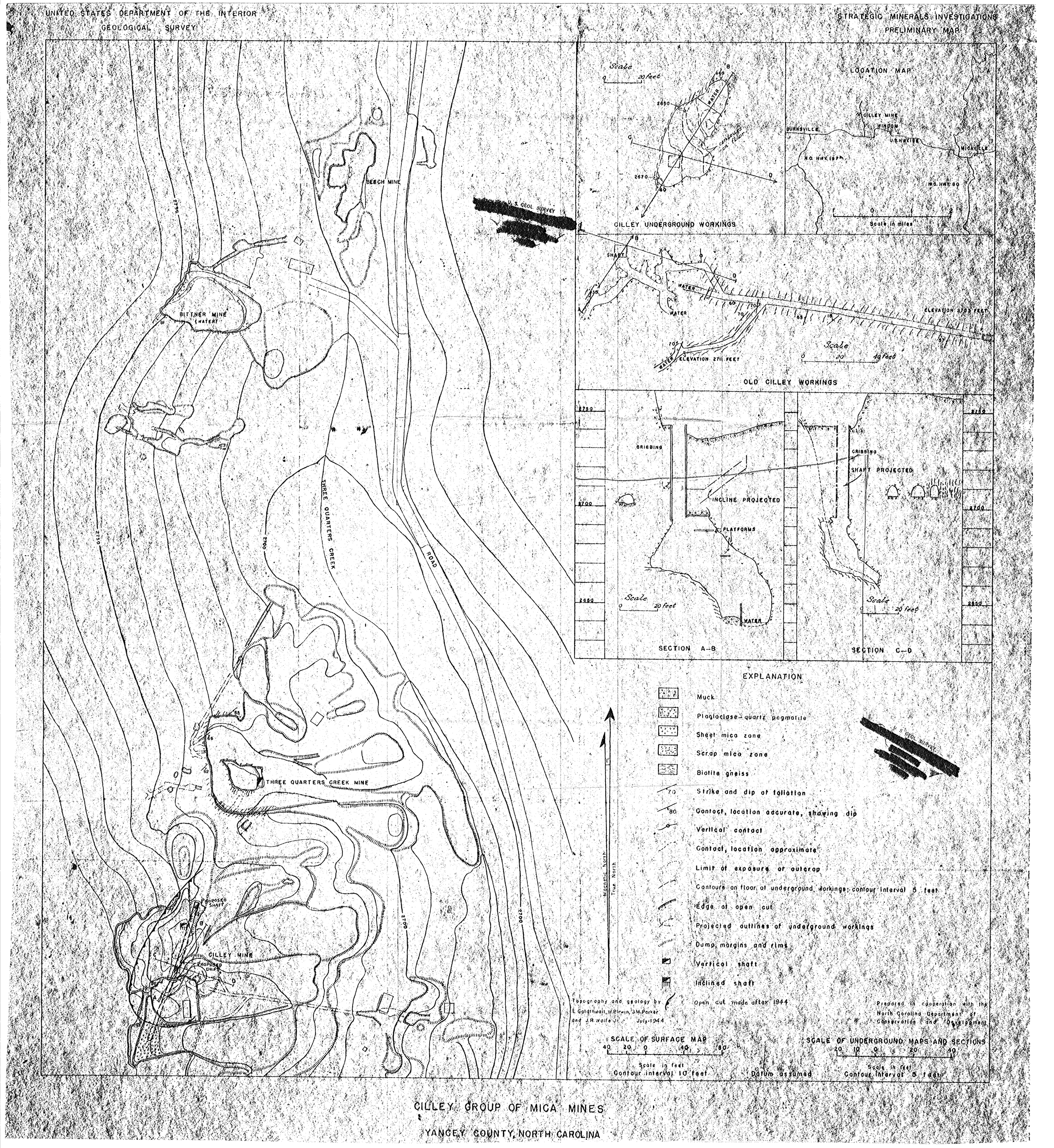
SCALE OF UNDERGROUND MAPS AND SECTIONS
20 10 0 20 40
Scale in feet
Contour interval 5 feet

CILLEY GROUP OF MICA MINES

YANCEY COUNTY, NORTH CAROLINA

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STRATEGIC MINERALS INVESTIGATIONS
PRELIMINARY MAP



CILLEY GROUP OF MICA MINES

YANCEY COUNTY, NORTH CAROLINA