MF-200 (A)
(February 1952)

DOCKET NO. DM 2811

COMMODITY Mica

/Draft/

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this ..... day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Sylvania Mining and Chemical Company - a corporation duly organized and existing under and by virtue of the laws of the State of Delaware
135 South 2nd Street
Philadelphia 6, Pennsylvania

hereinafter called the "Operator," as follows:

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

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of North Carolina, County of Mitchell, described as follows:[3] known as the Cloudland Mine and described in Annex I attached hereto and made a part hereof.

the Operator represents and undertakes:[4]

(a) ~~That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens or encumbrances, except of which the undersigned agreement of the Owner is attached:~~

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

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

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

in or upon the described land; and shall bring the project to completion within a period of eight (8) months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay ninety (90) percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $9,990.00, which is 90 percent of $11,100.00 the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 9. *Changes and added provisions* _____

_____

_____

_____

_____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

SYLVANIA MINING AND CHEMICAL COMPANY
(Operator)

By _____

By Administrator, Defense Minerals Exploration Administration

---

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

_____ [CORPORATE SEAL]

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

SYLVANIA MINING AND CHEMICAL COMPANY
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-2811

EXHIBIT "A"

Description of the Work

The project shall be worked in two stages, as indicated on the map attached hereto and made a part hereof, entitled "Longitudinal Section of Main Workings, Cloudland Mica Mine."

Stage I

To reach the main level of the mine in Stage I, there is to be sunk 50 to 90 feet of 5' x 7' shaft from a new location on the surface which is tentatively indicated on the attached map. The location and inclination of the shaft shall be determined and approved by the Executive Officer, DMEA Field Team, Region VII.

Subject to the approval of the aforesaid executive officer, there is also to be driven on the main level 80 feet of 5' x 7' drift, and 300 linear feet of 15' jackhammer holes for the purpose of testing wall formations.

Stage II

This Stage is to be undertaken only after the completion of Stage I and is to be dependent upon its results, and to be undertaken only upon the expressed approval of the Executive Officer, DMEA Field Team, Region VII, and at locations indicated by him. The work is to consist of driving and/or crosscutting 100 feet to further explore any pegmatites found by the aforesaid jackhammer holes

Draft AEKane/ema/3-12-53

SYLVANIA MINING AND CHEMICAL COMPANY
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-2811

ANNEX I

The Cloudland (sometimes called Old Pizzle) Mica Mine is about 3.75 miles S71°E of Bakerville, North Carolina.

The operator's right to operate the mine is pursuant to (1) Mining Lease and Option to Buy, and (2) a Mining Lease, both documents, dated November 25, 1952, to the operator from Ruth C. Rannells, Administratix of Ella Clapp Thompson, deceased, as owner and lessor.

The property, is described in both the above-mentioned documents, as follows:-

A certain 100 acre (more or less) tract of land, on the waters of Cane Creek and Gouge's Creek in Mitchell County, North Carolina, known as the Cloudland property and particularly described by metes and bounds in a deed dated 10 February 1871 by Thomas C. Buchanan and wife, Nancy Buchanan, to Heap and Clapp, which deed is recorded in Mitchell County Deed Book 7A, page 169. EXCEPT any part or parts thereof that may have been heretofore conveyed by the predecessors in title of the above-~~mem~~ named owner

AGREED UNIT COSTS

Stage I

90 feet of 5' x 7' access shaft @ $50/ft.	$4,500.00	
80 feet of 5' x 7' drift @ $35/ft.	2,800.00	
300 linear feet of 15-foot jack-hammer holes @ $1/ft.	300.00	$7,600.00

Stage II

100 feet of crosscuts & drifts @ $35/ft.	3,500.00

* * * * * * * * * *

Agreed Unit Cost of Project	$11,100.00
Government Participation @ 90%	$ 9,990.00

MF-103
(Revised April 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 15 1952

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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. 10 MEa-2811
Metal or Mineral
Date Received 12/15/52
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:

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue,
Narberth, Penna.

(*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. Delaware Corporation

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

(*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 Cloudland Mine, located on the waters of Cane Creek and Gouges Creek in Mitchell County, N. C. (approx. 100 acres). Property is leased for 10 year period. (Leases attached to original)

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

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

(*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. (See attached to original)

(*e*) If you own the land, describe any liens or encumbrances on it Not owned

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. None

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*) S[redacted] the mineral or minerals for which you wish[redacted] explore Ruby Mica

(*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 7 days and be completed within 4 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.). none

(*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. See #6

(*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. None

(*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)? yes

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

[x] 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 December 5, 1952

SYLVANIA MINING & CHEMICAL CO.
(Applicant)

By James O. Whitall

Secretary & Treasurer

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

SYLVANIA MINING & CHEMICAL CO.

323 N. Narberth Avenue

Narberth, Pa.

#1
C

Michael P. Hopkins, President
111 Powell Lane,
Upper Darby, Pa.

Joseph T. Hopkins, Vice President
2607 North23rd Street,
Philadelphia, Pa.

Walter J. Martin, Vice President
Latches Lane Apartments,
Merion, Pa.

Marion L. Worthington, Vice President
467 Argyle Road,
Drexel Park, Pa.

James O. Whitall, Secretary & Treasurer
323 N. Narberth Avenue,
Narberth, Pa.

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

4
a This mine has been mined at intervals, off and on, for a period of sixty years and has produced a good grade of Ruby Mica. The past operations have consisted of one shaft (5 x 7), approximately 60' deep, with two (5 x 7) headings; one at the 60' level (60' from the shaft), and the other at the 45' level (50' from shaft). At an outside higher level, a tunnel (5 x 7) has been cut at a 45^0 downward angle.

The only production records available for our inspection of past operations were for the years 1943 and 1944 (see attached monthly production).

You will also find a description of this mine in a book, written in 1941, entitled "North Carolina, The Old North State AND The New" in Volume 5, Page 570.

The Indian, Chowdry, in his book mentions this mine among the 16 best in North Carolina.

The property is also included in geological Ruby Mica Maps of North Carolina.

There have been no exploration operations as yet.

At present, there is on the site, the following equipment (all on a rental basis):

1 Compressor #160 CFM (Gasoline Driven)
1 Hoist Double drum (Gasoline Driven)
1 Suction Pump 2" (Gasoline Driven)
1 Jack Hammer 50 Lb.
1 Willys Jeep Pickup 4 Wheel Drive

This mine is located about 4 miles outside of Bakersville, N. C., which is 12 miles from Spruce Pine, N. C. At the time of inspection by your field team, our representatives will meet your team in Bakersville. A road from the highway to the mine has been dozed out by the applicant.

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

#4
b

Cloudland Mine Production Figures

1943		
Jan. 15 - Feb. 15		$ 627.10
Feb. 15 - Mar. 15		888.52
Mar. 15 - Apr. 15		567.87
Apr. 15 - May 15		-0-
May 15 - June 15		873.44
June 15 - July 15		993.96
July 15 - Aug. 15		3,336.33
Aug. 15 - Sept. 15		822.74
Sept. 15 - Oct. 15		2,217.24
Oct. 15 - Nov. 15		2,662.97
Nov. 15 - Dec. 15		2,143.77
		$15,133.94

1944		
Dec. 15 - Jan. 15		$ 2,382.83
Jan. 15 - Feb. 15		1,457.53
Feb. 15 - Mar. 15		2,518.27
Mar. 15 - Apr. 15		1,913.10
Apr. 15 - May 15		2,103.96
May 15 - June 15		1,052.32
June 15 - July 15		797.64
July 15 - Aug. 15		1,308.01
Aug. 15 - Sept. 15		-0-
Sept. 15 - Oct. 15		420.42
Oct. 15 - Nov. 15		-0-
Nov. 15 - Dec. 15		-0-
		$13,554.08

SYLVANIA MINING & CHEMICAL CO.

323 N. Narberth Avenue

Narberth, Pa.

4
c

This property is in the Gneiss and Schists section of North Carolina. Pre Cambrian in formation, containing the usual country rock and soft granite walls. The schists are the usual that contain Pegmatite lenses in which Mica, Quartz and Feldspar occur.

The mine, we believe from examination and past record, has not been fully worked and that there are very large Pegmatites still to be recovered. (See map and other material attached, which are to be returned).

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Narberth, Pa.

4
d

This project is located 17 miles from Spruce Pine, N. C., four miles out side of Bakersville, N. C., on Cane Creek and Gouges Creek in Mitchell County, North Carolina. It is known as the CLOUDLAND MINE or Old Pizzle Mine.

The Base of the operation will be in Bakersville, N. C., Box 65.

SYLVANIA MINING & CHEMICAL CO.

323 N. Narberth Avenue

Narberth, Pa.

4
e

Local labor is available in any amount that may be required. Labor is experienced, hard working, mostly of Scotch-Irish decent, and command the usual prevailing labor rates of $1.00 per hour minimum.

Materials and supplies are fully obtainable in Bakersville and Spruce Pine.

Equipment is presently available at mine site.

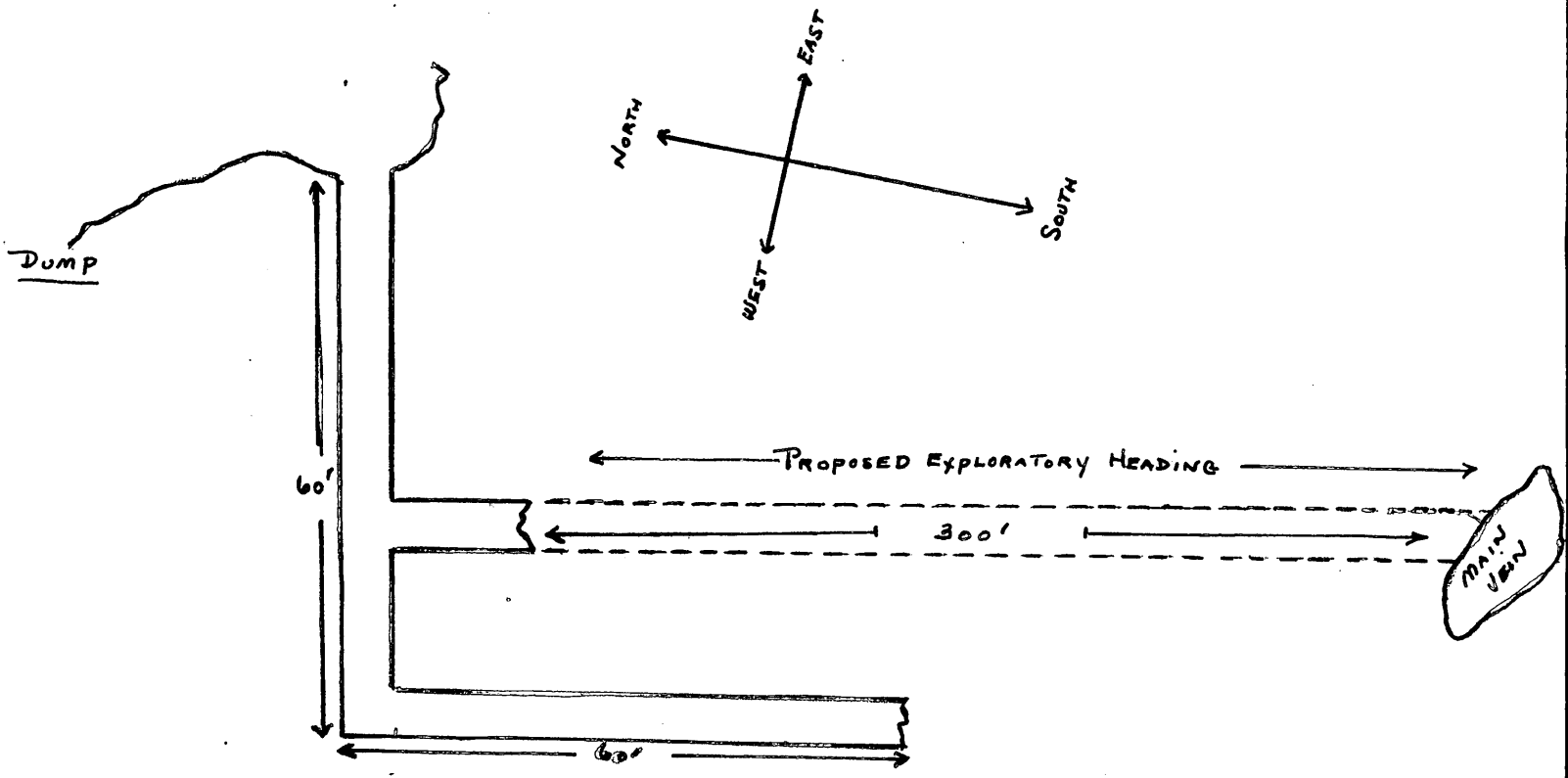
Water in mine is sufficient to operation Jack Hammers and 2" Pump is available in case of excess.

Power will be in gasoline engine form convertable to electric motor when and if available. (Application has been made to the N. C. Power & Light Co. for a three phase line to the mine).

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

5
b

We expect to continue the heading at the 45' level off the lower shaft for a distance of 300', which, we believe, will put us on the main vein.



SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

5
d

The applicant has had no practical mining experience in the Ruby Mica field. We are employing a Mr. David L. Pendley of Spruce Pine, who was highly recommended to us as a qualified Ruby Mica miner by:

Mr. L. L. McMurray
c/o Fedlspar Flotation Company
Spruce Pine, N. C.

and

Mr. Mason K. Ranks
c/o North Carolina State College
Minerals Research Laboratories
180 Coxe Avenue
Asheville, N. C.

SYLVANIA MINING & CHEMICAL CO.

323 N. Narberth Avenue

Narberth, Pa.

6

Supervision		$140.00 per Wk	15 Wks	$2,100.00	
Drill Operator	$1.25 per hr	50.00 per Wk	15 Wks	750.00	
Helper	1.00 per hr	40.00 per Wk	15 Wks	600.00	
Labor - 4 men	1.00 per hr	160.00 per Wk	15 Wks	2,400.00	
Hoist Man	1.25 per hr	50.00 per Wk	15 Wks	750.00	
Bookkeeping & Clerical (2)		75.00 per Wk	15 Wks	1,125.00	
					$ 7,725.00
Compressor		$50.00 per Wk	15 Wks	$ 750.00	
Hoist		25.00 per Wk	15 Wks	375.00	
Supplies		100.00 per Wk	15 Wks	1,500.00	
Jeep		34.00 per Wk	15 Wks	510.00	
Pump		10.00 per Wk	15 Wks	150.00	
Elec. Light Plant Rental		10.00 per Wk	15 Wks	150.00	
Jackhammer - Steel				450.00	
					3,885.00
Bunkhouse				$ 250.00	
Toolshed				250.00	
Liability Insurance $25,000 - $50,000			15 Wks	200.00	
Comp. Insurance			15 Wks	668.00	
Social Security (1½% of 15 Wk Payroll)				116.00	
					1,484.00
Contingencies					1,289.00
					$14,383.00

SYLVANIA MINING & CHEMICAL CO.

323 N. Narberth Avenue

Narberth, Pa.

6

c

1	Axe
1	Two man saw
2	Saws: 1-Rip, 1-Crosscut
1	Hammer
1	First Aid Kit
1	Muck Bucket
8	Different size chissels (6 rock, 2 wood)
4	Sledge Hammers (2-8 lb) (2-12 lb)
3	Water buckets
200	Ft hose
15	Ft Suction hose
60	Ft Rails
100	Ft 1" steel cable
1	100 gal. Gasoline Drum
1	50 gal. Oil drum
2	1½" steel explosive magazines
2	Mine cars 1" steel swivel dump type
	Dynamite & caps necessary for operation
2	Electrical blasting boxes

SYLVANIA MINING & CHEMICAL CO.

323 N. Narberth Avenue

Narberth, Pa.

6
d

1 Compressor #160 CFM (Gasoline Driven)

1 Hoist Double Drum (Gasoline Driven)

1 Suction Pump 2" (Gasoline Driven)

1 Jack Hammer 50 lb.

1 Willys Jeep Pickup 4 wheel drive

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

6
F

We wish to build two buildings:

1 - Bunk House	$250.00
1 - Supply & Mica House	250.00

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

6
g

No cost for repairs or rehabilitation expense.

Analytical work	-	none
Accounting & Clerical	-	$ 75.00 per week
Workmen's Compensation and Employers Liab. Ins.		$668.00 for 15 weeks

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

6
h

Contingencies are figured at 10% of cost of entire project which could include:

Machinery repairs and parts

present unforeseen increase in labor, supervision or clerical help

increase in Insurance rates, supplies, etc.

SYLVANIA MINING & CHEMICAL CO.
323 N. Narberth Avenue
Narberth, Pa.

7
b

The Sylvania Mining & Chemical Company, and Delaware Corporation, is capitalized for $50,000.00 - $7,500.00 paid in cash. The cash, we believe, will be ample to cover our share of the proposed loan.

THE GREAT STATE OF NORTH CAROLINA

COUNTY OF MITCHELL

THIS MINING LEASE AND OPTION TO BUY made and entered into this the 25th day of November 1952 by and between RUTH C. RANNELLS, Administratrix of Ella Clapp Thompson, Deceased, of Bakersville, North Carolina, party of the first part, hereinafter referred to as OWNER, and SYLVANIA MINING AND CHEMCAL COMPANY of 323 North Narberth Avenue, Narberth, Pennsylvania, a Delaware corporation, party of the second part, hereinafter referred to as LESSEE,

W I T N E S S E T H:

That the OWNER, for and in consideration of the performance of the conditions and agreements and the payment of the royalties as hereinafter set forth, has bargained and leased and by these presents does bargain, lease and grant unto the LESSEE, its successors and assigns, for the period of time fixed in paragraph 1 below, a certain 100 acre (more or less) tract of land, for mining purposes, on the waters of Cane Creek and Gouge's Creek in Mitchell County, North Carolina, known as the Cloudland property and particularly described by metes and bounds in a deed dated 10 February 1871 by Thomas C. Buchanan and wife, Nancy Buchanan, to Heap and Clapp, which deed is recorded in Mitchell County Deed Book 7A, page 169, and reference is hereby made to said public record for the definite description of said lands. EXCEPT from the above-described 100-acre tract of land any part or parts thereof that may have been heretofore conveyed by the predecessors in title of the above-named OWNER.

TO HAVE AND TO HOLD said premises for mining purposes unto the LESSEE, its successors and assigns, for the period of time fixed in paragraph 1 below, upon full compliance with each and all of the following stipulations and agreements:

1. PERIOD OF TIME. This lease shall begin as of the date hereof and be in full force and effect to and including the 25th day of May 1953, unless sooner terminated as hereinafter provided.

The LESSEE is granted an option to purchase as stated in paragraph 10 below and upon the exercise of such option and the payment of the purchase price, then and in that event this lease shall automatically terminate.

If the LESSEE should fail to pay any royalty when due and payable, the OWNER may, at her option, declare this lease terminated and of no further force and effect, after first giving the LESSEE ten (10) days notice of such termination by registered mail addressed to the Sylvania Mining and Chemical Company at 323 North Narberth Avenue, Narberth, Pennsylvania, it being understood and agreed that payment during said ten-day notice period of all royalty due and payable under this lease shall prevent the termination thereof. Upon the termination for the failure to pay royalty in the manner above-stated, the OWNER shall have the immediate right to re-enter and take possession of the premises without further notice to the LESSEE.

2. MINING RIGHTS. The LESSEE shall have a right to enter upon said premises and search for, dig, quarry and obtain mica and any and all other minerals, and, in so doing, may use bulldozer and any other machinery, equipment, tools, appliances and labor as the LESSEE may elect.

The LESSEE shall have a right of ingress and egress so as to conduct mining operations on said premises and operate under this lease, and shall

have a right to use any existing roads and ways and shall have a right to construct and maintain other roads, power lines and ways on said lands for the purposes herein granted.

Also granted hereby to the LESSEE, its successors and assigns, is the right to use the road from the Cane Creek Public Road to the Cloudland Mine as presently located and shown by a map made by J. C. Greer, Surveyor, and recorded in the Mitchell County land records.

The LESSEE shall have a right to dump waste from said mines onto said premises as may be reasonably necessary in mining operations.

3. MANNER OF WORK. The LESSEE shall conduct its mining operations in a business-like and workman-like manner, with due regard to the OWNER'S rights in the mica and other mineral deposits on said premises, and to that end the LESSEE agrees to keep and maintain the mines and all parts thereof in good and sufficient repair, and to work and operate said mines in a good and skillful manner and, as work progresses, to keep the mines as clean as reasonably practicable, and to keep the mines and all parts thereof securely and properly timbered and supported and, in case of open work, to properly slope the walls and banks so as to reasonably prevent the same from slipping or falling in; that no waste, rubbish or refuse, excepting only necessary left waste, will be dumped, thrown or placed in any mine, mine tunnel, cut, shaft or other improper place, and that no waste will be committed or permitted upon said premises nor avoidable damage done to mines or premises.

4. ROYALTY. The LESSEE shall and hereby expressly agrees to pay to the OWNER a royalty or royalties for all minerals mined and removed from said premises as follows:

(a) One-eighth (1/8) of the highest reasonable market selling price for mica;

(b) One-eighth (1/8) of the highest market selling price for all other ores and minerals mined upon said premises, except feldspar; and

(c) Seventy-five (75¢) Cents per ton (2240 lbs.) for all feldspar.

All actual royalties accruing under this lease shall be due and payable on the 10th day of each calendar month for minerals mined and removed during the preceding calendar month from said premises.

5. RECORDS AND STATEMENTS. The LESSEE shall keep an accurate DAILY record of the kinds and weights of all mica mined from said premises and shall keep an accorate record of all weights and amounts of other minerals mined and removed from said premises and, at the time of payment of any royalty, the LESSEE shall furnish to the OWNER a duplicate statement from the purchaser showing the amounts, weights and prices of such minerals mined and removed from said premises.

The LESSEE shall also, at any reasonable time, exhibit to the OWNER, or her agent, the daily record of mica hereinabove required to be kept by the LESSEE.

The OWNER, or her agent, shall have a right to inspect all books and records of the LESSEE as to all minerals mined from said premises.

6. PREPARING MICA. The LESSEE shall properly sheet or otherwise prepare all mica mined from said premises for market, using experienced and qualified workers, so that such mica will bring the highest market price.

7. TIMBER. The LESSEE shall have a right to use timber from said premises as may be reasonably necessary for mining purposes under this lease, but no timber of the OWNER shall be used for any other purposes.

8. BUILDINGS AND STRUCTURES. The LESSEE shall have a right to erect such buildings on said premises as it may deem necessary and shall have a right to remove such buildings, machinery and equipment within ninety (90) days after the termination of this lease, but the LESSEE shall have no right to remove any buildings erected by it on said premises unless all royalties due under this lease are fully paid.

9. MINIMUM ROYALTY. The LESSEE shall and hereby expressly agrees to pay to the OWNER a minimum royalty of Fifty Dollars ($50.00) per month during the entire life of this lease and shall pay said minimum royalty on or before the 10th day of each calendar month for the preceding month. Said minimum royalty of $50.00 per month shall apply to each month separately and the minimum royalty for one month shall not be carried over as a credit to another month.

10. OPTION TO BUY. The OWNER hereby grants to the LESSEE, its successors or assigns, the exclusive right, at any time on or before the 25th day of May 1953, to purchase the above-described Cloudland tract of land in fee simple, free and clear from all liens and encumbrances on said property for the purchase price of FIFTEEN THOUSAND DOLLARS ($15,000.00) to be paid to the OWNER one-fourth (1/4) at the time the option is exercised: one-fourth (1/4) within thirty (30) days from the date said option is exercised; one-fourth (1/4) within sixty (60) days from the date said option is exercised, and the balance of one-fourth (1/4) within ninety (90) days from the date said option is exercised, the deferred payments to be secured by a purchase money deed of trust, due and payable as aforesaid, with interest after maturity at the rate of 6% annually.

The initial payment of $1000.00 paid upon the execution of this mining lease and option shall not be considered as part of the purchase price in the event the option to buy is exercised.

It is expressly understood and agreed that time is the essence of this contract.

11. ASSIGNMENT. It is expressly understood and agreed that this lease and also this option shall not be transferred or assigned without the written consent of the OWNER.

12. COVENANTS. The OWNER covenants to and with the LESSEE, its successors and assigns, that she has a right to execute this lease and option upon the terms herein contained; that the premises are free and clear from all encumbrances, and that she will forever warrant and defend the title thereto against the claims of all persons whomsoever.

IN WITNESS WHEREOF, the said OWNER has hereunto signed her signature and affixed her seal and the said LESSEE has caused these presents to be signed in its name by its Vice-President and its corporate seal to be hereto affixed and attested by its Secretary, all by authority of its Board of Directors duly given, the day and year first above written.

_____ (SEAL)
OWNER

SYLVANIA MINING AND CHEMICAL COMPANY

By: _____
Vice-President

ATTEST:

_____
Secretary

NORTH CAROLINA

YANCEY COUNTY

I, Gladys Young, Notary Public, do hereby certify that RUTH C. RANNELLS, Administratrix of Ella Clapp Thompson, Deceased, personally appeared before me this day and acknowledged the due execution of the foregoing MINING LEASE AND OPTION TO BUY for all the purposes therein expressed.

WITNESS my signature and official seal this 25th day of November 1952.

_____
Notary Public

My commission expires 24 January 1954.

NORTH CAROLINA

YANCEY COUNTY

I, Gladys Young, Notary Public, do hereby certify that on the 25th day of November 1952 before me personally came Joseph T. Hopkins, with whom I am personally acquainted, who, being by me duly sworn, says that he is the Vice-President and that James O. Whitall is the Secretary of the Sylvania Mining and Chemical Company, the corporation described in and which executed the foregoing MINING LEASE AND OPTION TO BUY; that he knows the common seal of the said corporation; that the seal affixed to the foregoing lease and option is said comon seal, and the name of the corporation was subscribed thereto by the said Vice-President and that the said Vice-President and the said Secretary subscribed their names thereto, and said common seal was affixed, all by order of the Board of Directors of said corporation, and that the said lease and option is the act and deed of the said corporation.

WITNESS my signature and official seal this 25th day of November 1952.

_____
Notary Public

My commission expires 24 January 1954.

THE GREAT STATE OF NORTH CAROLINA

COUNTY OF MITCHELL

THIS MINING LEASE made and entered into this the 25th day of November 1952 by and between RUTH C. DANNELLS, Administratrix of Ella Clapp Thompson, Deceased, of Bakersville, North Carolina, party of the first part, hereinafter referred to as LESSOR, and SYLVANIA MINING AND CHEMICAL COMPANY of 323 North Narberth Avenue, Narberth, Pennsylvania, a Delaware corporation, party of the second part, hereinafter referred to as LESSEE,

WITNESSETH:

THAT WHEREAS the parties to this lease have this day entered into a Mining Lease and Option to Buy the hereinafter-described lands, which lease and option terminates on 25 May 1953, and WHEREAS it has been agreed that if the LESSEE does not exercise its option within the aforesaid time fixed, the said LESSEE shall have a mining lease upon the hereinafter described lands upon the terms hereinafter stated:

NOW, THEREFORE, in consideration of the premises and in consideration of the performance of the conditions and agreements and the payment of the royalties as hereinafter stated, the LESSOR does hereby lease and grant unto the LESSEE, its successors and assigns, for the term hereinafter fixed, a certain 100-acre (more or less) tract of land, for mining purposes, on the waters of Cane Creek and Gouge's Creek in Mitchell County, North Carolina, known as the Cloudland property and particularly described by metes and bounds in a deed dated 10 February 1871 by Thomas C. Buchanan and wife, Nancy Buchanan to Heap and Clapp, which deed is recorded in Mitchell County Deed Book 7A, page 169, and reference is hereby made to said public records for the definite description of said lands. EXCEPT from the above-described 100-acre tract of land any part or parts thereof that may have been heretofore conveyed by the predecessors in title of the above-named LESSOR.

ALSO GRANTED and LEASED hereby to the LESSEE, its successors and assigns, is the right to use the road from the Cane Creek Public Road to the Cloudland Mine as presently located and shown by a map made by J. C. Greer, surveyor, and recorded in the Mitchell County land records.

TO HAVE AND TO HOLD said premises for mining purposes unto the Lessee, its successors and assigns, for the term hereinafter fixed, upon full compliance with each and all of the following stipulations and agreements:

IT IS AGREED that this lease is executed for the sole purpose of mining the aforesaid minerals within the boundary above set forth, and that the Lessor shall and does retain the right to use the premise for all purposes other than mining, provided such use by Lessor shall in no way interfere with the mining operations of the Lessee~~s~~.

~~IT IS AGREED that the Lessees will, within a period of thirty (30) days from the date hereof, begin active work in prosecuting mining operations for the said mineral deposits on said premises, and that Lessees will continue the proper prosecution of said mining operations in good faith and with due diligence and activity in order to produce, as nearly as practicable, a maximum output from said mines.~~

THE ~~PARTIES~~ PARTY OF THE SECOND PART AGREE~~S~~ to commence developing and mining upon said property within thirty (30) days from ~~the date of this instrument~~ the 26th day of May 1953; and if, after commencing said operations, said ~~parties~~ party of the second part, or ~~their heirs~~ its successors or assigns, shall cease to carry on mining operations on said property as contemplated by this agreement, in good faith, for a period of thirty (30) consecutive days, unless prevented by causes beyond the control of the ~~parties~~ party of the second part, or ~~their~~ its successors ~~heirs~~ or assigns, then the party of the first part may give written notice to the ~~parties~~ party of the second part that the thirty (30) day period has expired. If the ~~parties~~ party of the second part fail~~s~~ to resume mining operations within a period of ten (10) days after receiving such notice, then the party of the first part may, at her option, declare this lease null and void and at an end, and may re-enter and retake possession of said premise.

IT IS FURTHER AGREED that adequate, accurate and complete records, books and accounts of all mica and other minerals mined within the boundaries of the premise above described shall be kept by Lessee~~s~~, separate and apart from the books, records and accounts of mica and other minerals mined upon premises other than the premise herein described.

THE LESSEE~~S~~ AGREE~~S~~ TO PAY TO THE LESSOR, as royalty on all mica and other minerals mined upon said premise, one-eighth (1/8) of the highest

reasonable market selling price for mica; and one-eighth (1/8) of the highest market selling price for all other ores and minerals mined upon said premise, except feldspar, and for feldspar the sum of ~~Forty (50¢) Cents~~ Seventy-five (75¢) Cents per ton of 2,240 pounds.

IT IS FURTHER AGREED that the Lessees will pay to the Lessor a minimum royalty of not less than Fifty ($50.00) Dollars per month during the entire life of this lease; and that said minimum royalty shall be paid on or before the tenth day of each month. It is further understood that the said minimum royalty of $50.00 a month shall apply to each month separately under this contract, and the minimum royalty for one month shall not be carried over as a credit to another month.

IT IS FURTHER AGREED that with each remittance of royalty payments herein specified, whether the minimum or normal, there shall be transmitted a correct statement of invoice, showing the amount, grade and classification of the mica or other products upon which said payments are based, together with the values thereof as herein specified.

IT IS FURTHER AGREED that on or before the tenth (10) day of each month during the life of this lease, the Lessees will make complete settlement and pay all royalties due the Lessor, including the minimum royalties hereinafter provided for, for minerals mined and removed during the preceding month from said premise, and that with each settlement Lessees will furnish Lessor duplicate bills of lading and other invoice information, as may be incident to the mining, sale and shipment of said mica or other minerals.

IT IS FURTHER AGREED that no claim of failure of the mica or other mineral deposits upon said premises shall be allowed in reduction or avoidance of Lessees' obligations hereunder; provided, however, that the Lessees shall have the right of surrendering the premise and terminating this lease upon giving at least thirty (30) days prior written notice to Lessor of such intention, and upon the termination becoming effective pursuant to such notice, the said Lessees shall be relieved of all obligations

to pay any rent or royalties for the unexpired portion of the 9 1/2 year term of this lease subject to the sooner termination of this lease as herein provided.

IT IS AGREED that the acceptance of royalty by the Lessor under the provisions of this lease is to be a credit in behalf of the Lessees, but is not to be taken or considered as a waiver for any damages Lessor may be entitled to recover from Lessees for any breach or breaches that Lessees may make of any duty or covenant expressed or reasonably implied in this lease or as estoppel against Lessor in this respect; provided, however, that any claim for any damages by Lessor for any breach of the terms and provisions of this contract by Lessees shall be limited to such as may have occurred within six (6) months prior to the assertion of said claim.

IT IS FURTHER AGREED that all books, records and accounts pertaining to the mining operations upon the premise described and the removal, sale and disposition of the mica and other minerals are to be open to the inspection of the Lessor or her authorized representatives at all reasonable times.

IT IS AGREED that the Lessor shall have a first and valid lien on all minerals mined under the terms of this lease and upon all plants and equipment of the Lessees until Lessor's royalties have been paid in full and all other provisions of this lease complied with; provided, however, that all materials actually removed and sold from the premise shall be free of said lien as against a bona fide purchaser for value.

IT IS AGREED that Lessees will conduct their mining operations in a business-like and workmanlike manner, with due regard to the Lessor's rights in the mica and other mineral deposits on said premise, and to that end the Lessees agree to keep and maintain the mines and all parts thereof in good and sufficient repair, and to work and operate said mine in a good and skillful manner, and, as work progresses, to keep the mine as clean as reasonably practicable, and to keep the mine and all parts thereof securely

and properly timbered and supported, and, in case of open work, to properly slope the walls and banks so as to reasonably prevent the same from slipping or falling in; that no waste, rubbish or refuse, excepting only necessary loft waste, will be dumped, thrown or placed in any mine, mine tunnel, cut, shaft, or other improper place, and that no waste will be committed or permitted upon said premise nor avoidable damage done to mine or premise.

IT IS FURTHER AGREED that Lessee will, at all times during the life of this lease or any extension hereof, maintain in proper condition, suitable for hauling, all roads upon said premise constructed or used by Lessees.

IT IS FURTHER AGREED that Lessor, her agents and representatives, shall at all times have the right to enter into the mine and premise for the purpose of inspection and for the purposes of ascertaining if the terms and covenants of this lease are being in good faith complied with, and in the event Lessor should desire to exhibit or show said mine to prospective purchasers, it is agreed that Lessor shall have this right.

IT IS FURTHER AGREED that should the Lessees be adjudged bankrupt or insolvent by any court, then in such case this lease shall, at the option of the Lessor, immediately terminate and come to an end, and the Lessor shall have the right to recover and resume possession of the premise, together with all the royalties and minimum royalties herein provided for.

IT IS FURTHER AGREED that upon the expiration or other termination of this lease the Lessees shall have the right to enter upon said premise and remove their mining machinery and equipment, but in no event shall the time limit for the removal of said property extend beyond a period of sixty (60) days from the expiration or termination of this lease, nor shall said property or any part thereof be removed until all of the indebtedness and obligations which may arise hereunder shall have been fully paid.

IT IS FURTHER UNDERSTOOD AND AGREED that Lessees shall have the right to establish upon said premise such telephone lines, power lines and

roadways as may be reasonably necessary for the proper operation of the same, and shall have also the right to erect such shanties and other buildings as may be reasonably necessary to the operation of the property, and, upon the expiration of this lease or the sooner termination thereof, shall have the right to remove the same; provided, however, that Lessees shall not have the right to remove any magazine, mica house or block house now upon or which may hereafter be constructed upon said property, and any such described buildings shall remain upon and become the property of the Lessor.

IT IS FURTHER UNDERSTOOD AND AGREED that the Lessee shall have the privilege of cutting and using only such timber trees upon said premise as may be reasonably necessary for shoring, cribbing and supporting purposes in carrying on the mining operations contemplated in this contract, and Lessee agrees that in cutting and removing such timber he will be careful not to permit any unnecessary waste and will use, wherever reasonably practicable, non-merchantable trees.

IT IS FURTHER UNDERSTOOD AND AGREED that the Lessor is in no sense or in any way to be considered or held liable for any operations under this lease, and in no event and under no circumstances is Lessor to be liable in any way for any debt, tort or other liability of Lessee, its agents, workmen or employees.

IT IS FURTHER UNDERSTOOD AND AGREED that in the event the Lessee fail well and truly to keep and respect the covenants, agreements, duties and conditions of this lease, or any of them, such breach or default shall immediately, at the option of the Lessor, operate as a forfeiture and termination of this lease, and all of the rights and privileges of the said Lessee shall at once cease and terminate, and all operations under this lease shall end at once, and the Lessor shall be at once privileged and is hereby authorized to enter upon and take full and complete possession of the premise, together with the minerals that may have been severed and all privileges given the Lessee; provided however, that there shall be no forfeiture of this lease on the part of the Lessee until the expiration of a period of ten (10) days from date of notice from the Lessor of any alleged

violation of any of the terms and conditions hereof, and the Lessee shall, within said ten days period, have the right to make good any alleged breach.

IT IS FURTHER AGREED that this lease shall not be transferred or assigned by Lessee or its successors and assigns without the prior written consent of the Lessor, and that no right or privilege of the Lessee hereunder can be assigned, transferred or sublet by Lessee without such written consent of Lessor.

IT IS AGREED BETWEEN THE PARTIES that the term of this lease shall be 9 1/2 years, and that said term shall begin on the 26th day of May 1953 and shall end the 26th day of November 1962, subject to all of the conditions, promises, covenants, agreements and provisions herein contained.

It is further expressly understood and agreed that at any time during the life of this lease the LESSEE, its successors or assigns, shall have the right, at its option, to purchase the above-described premises at a purchase price to be agreed upon by the Lessor and the Lessee.

It is further expressly understood and agreed that the LESSOR may give to the LESSEE ten days notice in writing of their desire to sell and convey the above-described property and at the same time inform the LESSEE of any offer that the LESSOR has, then if the LESSEE fails to purchase said property at the same price and same terms as the LESSOR may be offered in good faith, then and in that event the LESSOR shall have a right to immediately terminate this lease and sell and convey said property to the same extent as if this lease had never been made.

It is understood and agreed that notice by the LESSOR to any two of the partners above-named shall be and constitute notice to each and all of the LESSEES.

It is understood and agreed that registered mail addressed to Sylvania Mining and Chemical Company of 323 North Narberth Avenue, Narberth, Pa., shall be and constitute notice under this lease.

IN WITNESS WHEREOF, the said Lessor has hereunto signed her signature and affixed her seal and the said Lessee has caused these presents to be signed in its name by its Vice-President and its corporate seal to be hereto affixed and attested by its Secretary, all by authority of its Board of Directors duly given, the day and year first above written.

(S) Ruth C. Rannells, Admr.
of Ella Clapp Thompson (SEAL)
Lessor

SYLVANIA MINING AND CHEMICAL COMPANY

(Seal Impressed) BY: (S) Joseph V. Hopkins
Vice-President

ATTEST:

(S) James O. Whitall
Secretary

NORTH CAROLINA

YANCEY COUNTY

I, Gladys Young, Notary Public, do hereby certify that RUTH C. RANNELLS, Administratrix of Ella Clapp Thompson, Deceased, personally appeared before me this day and acknowledged the due execution of the foregoing MINING LEASE for all the purposes therein expressed.

WITNESS my signature and official seal this 25th day of November 1952.

(Seal) Gladys Young
Notary Public

My commission expires 24 January 1954.

NORTH CAROLINA

YANCEY COUNTY

I, Gladys Young, Notary Public, do hereby certify that on the 25th day of November 1952 before me personally came Joseph T. Hopkins, with whom I am personally acquainted, who, being by me duly sworn, says that he is the Vice-President and that James O Whitall is the Secretary of the Sylvania Mining and Chemical Company, the corporation described in and which executed the foregoing MINING LEASE; that he knows the common seal of the said corporation; that the seal affixed to the foregoing lease is said common seal, and the name of the corporation was subscribed thereto by the said Vice-President and that the said Vice-President and the said Secretary subscribed their names thereto, and said common seal was affixed, all by order of the Board of Directors of said corporation, and that the said lease is the act and deed of the said corporation.

WITNESS my signature and official seal this 25th day of November 1952.

(Seal) Gladys Young
Notary Public

My commission expires: 24 January 1954.

DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. DMEA-2811

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.

Routing Slip

CYS TO USGS, USBM AND REGION VII

To:	Code 600 Rm 4637	Date	12/15/52
To:	Hearne	Date	12/16/52
To:	Open Com	Date	2-4-53
To:		Date	
To:	MEF	Date	7/3/58
To:	130	Date	1-23-58
To:	110	Date	1-24-58
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

Box 41

April 9, 1957

Re: Docket No. DMEA-2811-Mica
Sylvania Mining & Chemical Co.
Cloudland Mine
Mitchell County, North Carolina

Mr. Sam Phillips telephoned Mr. Houk to inquire as to the amount of work, the name of the applicant and the nature of the program that had been recommended by the Field Team on the Cloudland Mine. Mr. Houk told him to go to the owners of the property for information on the applicant and that the nature of the program and the amount of money was not public information and since no contract was written was not available to him.

May 16, 1955

Sylvania Mining & Chemical Company
Docket No. DMEA-2811 - Mica
Cloudland Property
Mitchell County, North Carolina

Mrs. Ruth Rannels telephoned Mr. L. G. Houk from Bakersville, North Carolina, saying she could sell the property if the Government gave assurance that a loan would be granted. Mr. Houk stated that we could not determine whether a loan would be granted until the application was received. She was under the impression that Sylvania Mining & Chemical Company had been granted a loan. It was explained to her that no loan had been granted on the Cloudland as the applicants were unable to secure an Owner's Consent to Lien and it has never been determined whether the Administratrix of an estate has the power and authority to sign an Owner's Consent to Lien in the State of North Carolina.

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

July 3, 1953

Memorandum

To: Mr. Robert E. Adams, Chief, Operations Control and Statistics Division

From: Nonmetallic Minerals Division

Subject: Docket No. DMEA-2811 - Mica
Sylvania Mining & Chemical Co.
Cloudland Property
Mitchell County, North Carolina

Re: Withdrawal of application.

Transmitted herewith is Docket File for subject application. This case is to be withdrawn according to the Administrator's letter, dated May 28, 1953, to Mr. Michael P. Hopkins, President, Sylvania Mining & Chemical Co.

Withdraw application after June 30, 1953.

Jasper T. Robertson
Jasper T. Robertson
Nonmetallic Minerals Division

Attachment

FILE COPY
SURNAME:

Robertson
Houk

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

July 3, 1953

Memorandum

To: Mr. Robert E. Adams, Chief, Operations Control and Statistics Division

From: Nonmetallic Minerals Division

Subject: Docket No. DMEA-2811 - Mica
Sylvania Mining & Chemical Co.
Cloudland Property
Mitchell County, North Carolina

Re: Withdrawal of application.

Transmitted herewith is Docket File for subject application. This case is to be withdrawn according to the Administrator's letter, dated May 28, 1953, to Mr. Michael P. Hopkins, President, Sylvania Mining & Chemical Co.

Withdraw application after June 30, 1953.

Jasper T. Robertson
Nonmetallic Minerals Division

Attachment

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

FILE COPY
SURNAME:

Robertson
Houk

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

MAY 28 1953

Mr. Michael P. Hopkins, President
Sylvania Mining and Chemical Co.
135 South 2nd Street
Philadelphia 6, Pennsylvania

Re: Docket No. DMEA-2811 - Mica
Cloudland Property
Mitchell County, North Carolina

Dear Mr. Hopkins:

Please refer to the subject application for exploration assistance and your telephone conversation with Mr. Lawrence G. Houk indicating your desire to withdraw your application. It is our desire to allow you ample time to reach a decision. However, if we do not hear from you to the contrary by June 30, 1953, we will then withdraw the application and close our files.

This office appreciates your interest in our exploration assistance program.

Sincerely yours,

C. O. Mittendorf

Administrator

JTRobertson:gad 5/27/53

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

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

140

Mr. Michael F. Hopkins, President
Sylvania Mining & Chemical Co.
~~923 N. Narberth Avenue~~ 135 S. 2nd Street
Narberth, Pennsylvania Phila. 6, Pa.

MAR 17 1958

Re: Docket No. DMEA-2011-Nice
Cloudland Property
Mitchell County, North Carolina

Dear Mr. Hopkins:

Reference is made to your application for exploration assistance dated December 5, 1952, which enclosed mining lease and option and mining lease from Ruth G. Rannells, Administratrix of Ella Clapp Thompson, both documents dated November 25, 1952.

Before your application can be further processed, it will be necessary for you to furnish proof that the Administratrix above referred to had authority to enter into the above-mentioned lease, and the Guarantee enclosed herewith will have to be signed by the officers of your Company. There are enclosed an original and five copies of this Guarantee, all of which should be signed and returned to this office.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosures 6

AEKane/em

Copy to: Mails and Files
Adm. R. File
Operating Committee
Mr. Dietrich, 3526
Mr. Norton, G-232 GSA Bldg.
Mr. Houk
A.E.Kane
J.L.Hofflund
chron
pending

FILE COPY
SURNAME:

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

140

McKane
Hoffman

March 16, 1953

Memorandum

To: Administrator

N.S. in R.R.

From: Chief Counsel

Subject: Sylvania Mining and Chemical Co. - Docket No. DMEA-2811

Reference is made to Mr. Houk's memorandum to you dated March 10, 1953, which came to me under routing slip of that date in which he recommends waiver of the Owner's Consent to Lien in this case. I have no objection, provided a guaranty of royalty payments in the form attached hereto is signed by the five officers of the Operator Corporation as individuals. This is necessary because I am informed that the Corporation was formed solely for the purpose of carrying on this exploration project, and not much is known about its financial stability.

However, I will not be able to approve the contract anyhow unless:

(1) the lessor who is the Administratrix of the Estate of Ella Clapp Thompson, indicates her authority to enter into this lease. (Usually when a person dies intestate, title to that person's real property descends to his heirs by operation of law, and an Administratrix has no authority to sell or lease it except under a court order, for the purpose of paying the debts of the estate.) and

(2) the lease of the mining rights in the premises is altered to indicate accurately to what property it refers, or the guaranty, hereinafter referred to, is furnished. (The lease refers to mining rights in a "100 acre (more or less) tract of land" <u>except for</u> "any part or parts thereof that may have been heretofore conveyed by the predecessors in title of the above-named lessor." Thus we do not know for certain how much of the 100 acres the lessor actually has. In lieu of an alteration of the lease, we might accept the guaranty by the above individuals to pay any damages sustained by the Government if it turns out that the operator did not have the right

to mine all the 100 acres, and we have included such a guaranty in the guaranty of royalty payments attached hereto.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachments

AEKane/em

cc: Mails & Files
Mr. Houk
J. L. Hofflund
A. E. Kane
Chron.

GUARANTY

In consideration of the waiver by the United States of America of the requirement of the Owner's Consent to Lien, as set forth in paragraph 2(b) of the attached Exploration Project Contract:

(1) The undersigned hereby guarantee the payment to the United States of America of any royalties, as specified in said Contract and any present or future amendment thereof, upon any and all ore which is mined within 10 years from the date of said Contract from the land described in Article 2 thereof, regardless of whether the undersigned have any interest in the property, covered by the said Contract, or any part in the mining operations at the time said ore is mined. If for any reason the net smelter returns or other net amounts, from operations that would be subject, under said Contract and any amendment thereof, to such payments to the United States of America, are not available as a means of measuring the amount of such payment, then the undersigned agree and undertake to make such payment according to the best estimates of the amount that can reasonably be made, and in the event of dispute as to such estimate, the undersigned agree that the determination thereof by either the Administrator of Defense Minerals Exploration Administration, or his designee, shall be final and binding upon the undersigned.

(2) The undersigned further hereby agree to compensate the United States of America for any damage sustained by it by reason of the Sylvania Mining and Chemical Company not having the mining rights in any part of the 100-acre (more or less) tract of land referred to in the Mining Lease and Option and the Mining Lease from Ruth G. Ramnells, Administratrix of Ella Clapp Thompson, Deceased, of Bakersville, North Carolina, both dated November 25, 1952.

Dated _____, 1953.

SYLVANIA MINING & CHEMICAL CO.

_____
Michael F. Hopkins

_____
Joseph T. Hopkins

_____
Walter J. Martin

_____
Marion L. Worthington

_____
James O. Whitall

NEW ADDRESS March 5, 1953

Sylvania Mining & Chemical Co.

135 So. 2nd St.,

Phil (6) Penn

(Pres. Michael P. Hopkins)

DMEA-2811 - Mica
Cloudland Property
Mitchell Co., N. C.

Mr. Houk calling Mr. Hopkins, President, Sylvania Mining & Chemical Co. Collect
137 S. 2nd St., Phila. Pa.
TELEPHONE NO.: MARKET 7-2463

Mr. Houk asked Mr. Hopkins if he had rec'd our letter of Mar. 17th requesting proof that the Administratrix (Ruth G. Rannells) has authority to enter into the lease and transmitting a Guaranty to be signed by officers of the Sylvania Mining & Chemical Co.?

Mr. Hopkins replied that they would get those signatures today. They would have to get an affidavit or a court order from the estate.

Mr. Houk said yes to show that the Administratrix has authority to sign and make leases.

Mr. Hopkins asked how long it will take for the contract to be drawn up.

Mr. Houk said the contract is ready, we are waiting for the signatures. He also asked if they had someone in North Carolina to get the court order so that it will not be necessary to make the trip himself.

Mr. Hopkins said no but they were going to have a meeting today to make arrangements. He asked if they could start right away.

Mr. Houk said no that he would get it/the contract to the Operating Committee and see what their reaction will be.

Mr. Hopkins said after we get this affidavit back to you it will be only a short period of time before we can sign the contract. He said he would come down to Washington to sign the contract. He also asked when the Operating Committee meets.

Mr. Houk advised him Monday, Wednesday and Friday. And that it will probably take a week before he can sign the contract.

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

March 6, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-2811, Mica, Cloudland (Old Pizzle) Mine
Mitchell County, North Carolina

I concur in the field team's recommendation for a two stage exploration program in the amount of Stage I, $7,600 and Stage II, $11,100.

W. F. Dietrich

W. F. Dietrich

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 9 1953

IN REPLY REFER TO:

G-MD-CNM

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 1953

March 2, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-2811 (Mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: R. E. Van Alstine, U.S. Geological Survey
Applicant: Sylvania Mining and Chemical Co., Narberth, Pennsylvania.
Name of property: Cloudland (Old Pizzle) Mine.
Location of property:

At an elevation of 3,800 feet on the northwest slope of Pisgah Mountain in Cane Creek Township, Mitchell County, North Carolina, and about 3.75 miles S. 71° E. of Bakersville, N. C.

Date of field team report: February 16, 1953.
Authorship of field team report: K. H. Teague and L. E. Shirley.
Field team's recommendation:

Stage 1:

a) Drive an incline (-33°) down the pegmatite to intersect the Main Level as shown on the attached Longitudinal Section of the Cloudland Mine. This incline will be between 85 and 90 feet in length and will serve two purposes: (1) explore that block of rock north of the main openings and (2) provide easy access to the Main Level.

b) Extend the south-heading on the Main Level 80 feet to intersect the possible down-plunge extension of the mica shoot worked by an incline from the head of the Big Tunnel. Concurrently long drill holes (15 feet) should be drilled at approximately 30-foot intervals in both the hanging and foot walls to determine the possibility of parallel pegmatites from the Main Level.

Stage 2:

Drive not more than 100 feet of cross-cuts and drifts to explore further any pegmatites found by the long drill holes.

Comments:

1) U.S.G.S. files here show that the northeast heading on the Main Level, at which the proposed incline is directed, was about 30 feet farther northeast in April 1945 than that shown on the longitudinal section that the field team attached to their report. How much farther, if any, it was extended to the northeast is not known. The extension may affect the field team's proposed location of the incline.

2) Presumably the field team will review stage 1 results and approve or deny start of stage 2, although this is not stated.

ACTION SUGGESTED:

Follow field team's recommendation, with any modifications that may be warranted in light of comments above.

R. E. Van Alstine

R. E. Van Alstine

FILE COPY
SURNAME:

140

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

ack'ne
Hofflund
Houk

Mr. Michael P. Hopkins, President
Sylvania Mining & Chemical Co.
~~323 N. Narberth Avenue~~ 135 So. 2nd Street MAR 17 1953
~~Narberth, Pennsylvania~~ Phila. 6, Pa.

Re: Docket No. DMEA-2811-Mica
Cloudland Property
Mitchell County, North Carolina

Dear Mr. Hopkins:

Reference is made to your application for exploration assistance dated December 5, 1952, which enclosed mining lease and option and mining lease from Ruth G. Rannells, Administratrix of Ella Clapp Thompson, both documents dated November 25, 1952.

Before your application can be further processed, it will be necessary for you to furnish proof that the Administratrix above referred to had authority to enter into the above-mentioned lease, and the Guarantee enclosed herewith will have to be signed by the officers of your Company. There are enclosed an original and five copies of this Guarantee, all of which should be signed and returned to this office.

Sincerely yours,

J. C. 3/17/53

C. O. Mittendorf

Administrator

Enclosures 6

AEKane/em

Copy to: Mails and Files
Adm. R. File
Operating Committee
Mr. Dietrich, 3526
Mr. Norton, G-232 GSA Bldg.
Mr. Houk
A.E,Kane
J.L.Hofflund
chron
pending

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

March 16, 1953

Memorandum

To: Administrator

From: Chief Counsel

Subject: Sylvania Mining and Chemical Co. - Docket No. DMEA-2811

Reference is made to Mr. Houk's memorandum to you dated March 10, 1953, which came to me under routing slip of that date in which he recommends waiver of the Owner's Consent to Lien in this case. I have no objection, provided a guaranty of royalty payments in the form attached hereto is signed by the five officers of the Operator Corporation as individuals. This is necessary because I am informed that the Corporation was formed solely for the purpose of carrying on this exploration project, and not much is known about its financial stability.

However, I will not be able to approve the contract anyhow unless:

(1) the lessor who is the Administratrix of the Estate of Ella Clapp Thompson, indicates her authority to enter into this lease. (Usually when a person dies intestate, title to that person's real property descends to his heirs by operation of law, and an Administratrix has no authority to sell or lease it except under a court order, for the purpose of paying the debts of the estate.) and

(2) the lease of the mining rights in the premises is altered to indicate accurately to what property it refers, or the guaranty, hereinafter referred to, is furnished. (The lease refers to mining rights in a "100 acre (more or less) tract of land" except for "any part or parts thereof that may have been heretofore conveyed by the predecessors in title of the above-named lessor." Thus we do not know for certain how much of the 100 acres the lessor actually has. In lieu of an alteration of the lease, we might accept the guaranty by the above individuals to pay any damages sustained by the Government if it turns out that the operator did not have the right

to mine all the 100 acres, and we have included such a guaranty in the guaranty of royalty payments attached hereto.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachments

AEKane/em

cc: Mails & Files
Mr. Houk
J. L. Hofflund
A. E. Kane
Chron.

COPY

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

March 2, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-2811 (Mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: R. E. Van Alstine, U. S. Geological Survey
Applicant: Sylvania Mining and Chemical Co., Narberth, Pennsylvania.
Name of property: Cloudland (Old Pizzle) Mine.
Location of property:
At an elevation of 3,800 feet on the northwest slope of Pisgah Mountain in Cane Creek Township, Mitchell County, North Carolina, and about 3.75 miles S. 71° E. of Bakersville, N. C.
Date of field team report: February 16, 1953.
Authorship of field team report: K. H. Teague and L. E. Shirley.
Field Team's recommendation:

Stage 1:

a) Drive an incline (-33°) down the pegmatite to intersect the Main Level as shown on the attached Longitudinal Section of the Cloudland Mine. This incline will be between 85 and 90 feet in lenght and will serve two purposes: (1) explore that block of rock north of the main openings and (2) provide easy access to the Main Level.

b) Extend the south-heading on the Main Level 80 feet to intersect the possible down-plunge extension of the mica shoot worked by an incline from the head of the Big Tunnel. Concurrently long drill holes (15 feet) should be drilled at approximately 30-feet intervals in both the hanging and foot walls to determine the possibility of parallel pegmatites from the Main Level.

Stage 2:

Drive not more than 100 feet of cross-cuts and drifts to explore further any pegmatites found by the long drill holes.

Comments:

1) U.S.G.S. files here show that the northeast heading on the Main Level, at which the proposed incline is directed, was about 30 feet farther northeast in April 1945 than that shown on the longitudinal section that the field team attached to their report. How much farther, if any, it was extended to the northeast is not known. The extension may affect the field team's proposed location of the incline.

2) Presumably the field team will review stage 1 results and approve or deny start of stage 2, although this is not stated.

ACTION SUGGESTED:

Follow field team's recommendation, with any modifications that may be warranted in light of comments above.

Van Alstine:jeh
G-2/3/53
cc: Dir.Read 4212
Branch read 4212
DMEA
VAN Alstine G-230
Nonmetals files G-228

R. E. Van Alstine

COPY

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

March 2, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-2811 (Mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: R. E. Van Alstine, U. S. Geological Survey
Applicant: Sylvania Mining and Chemical Co., Narberth, Pennsylvania.
Name of property: Cloudland (Old Pizzle) Mine.
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At an elevation of 3,800 feet on the northwest slope of Pisgah Mountain in Cane Creek Township, Mitchell County, North Carolina, and about 3.75 miles S. 71° E. of Bakersville, N. C.
Date of field team report: February 16, 1953.
Authorship of field team report: K. H. Teague and L. E. Shirley.
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b) Extend the south-heading on the Main Level 80 feet to intersect the possible down-plunge extension of the mica shoot worked by an incline from the head of the Big Tunnel. Concurrently long drill holes (15 feet) should be drilled at approximately 30-feet intervals in both the hanging and foot walls to determine the possibility of parallel pegmatites from the Main Level.

Stage 2:

Drive not more than 100 feet of cross-cuts and drifts to explore further any pegmatites found by the long drill holes.

Comments:

1) U.S.G.S. files here show that the northeast heading on the Main Level, at which the proposed incline is directed, was about 30 feet farther northeast in April 1945 than that shown on the longitudinal section that the field team attached to their report. How much farther, if any, it was extended to the northeast is not known. The extension may affect the field team's proposed location of the incline.

2) Presumably the field team will review stage 1 results and approve or deny start of stage 2, although this is not stated.

ACTION SUGGESTED:

Follow field team's recommendation, with any modifications that may be warranted in light of comments above.

Van Alstine:jeh
G-2/3/53
cc: Dir.Read 4212
Branch read 4212
DMEA
VAN Alstine G-230
Nonmetals files G-228

R. E. Van Alstine

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 20 1953

February 18, 1953

Memorandum

To: Operating Committee, D M E A - Washington

From: Field Team, DMEA - Region 7

Subject: Field Examination - DMEA-2811, Cloudland Mine (mica) N. C.

Transmitted herewith are four copies of the examination report by the Field Team and six extra copies of the map. The Field Team concurs in the recommendations on this application.

Robert A. Laurence

Robert A. Laurence, Executive Officer
DMEA Field Team-Reg. 7

Wm. A. Beck

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 20 1953

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM, REGION VII

DMEA-2811, CLOUDLAND (Old Pizzle) MINE (mica)
Mitchell County, North Carolina

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

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

February 16, 1953

On-Site Exam Rpt

Field Examination Report on

CLOUDLAND(Old Pizzle) MINE
DMEA-2811 (mica)

Applicant: Sylvania Mining and Chemical Co. Narberth, Penna.
c/o Mitchael P. Hopkins, Pres. 323 N. Narberth Ave.

This mine appears to warrant exploration. Past mining at this place has been successful and extensive openings have been made. Quality of mica obtained from this deposit is generally good.

The mine was examined on February 10, 1953, three hours were required on the examination. Mr. Joseph T. Hopkins and Mr. David L. Pendley accompanied the field examiners.

The Cloudland (Old Pizzle) mica mine is at an elevation of 3800 feet on the northwest slope of Pisgah Mountain in Cane Creek Township, Mitchell County, North Carolina, and is about 3.75 miles S. 71° E. of Bakersville, N. C. Except for the last 0.75 miles access to the mine is good; however, this portion of the road can be traveled by jeep except during the most severe weather.

The applicants have had no mining experience; however, they have employed experienced miners, and an experienced foreman. Therefore, there should be no trouble in conducting the proposed project.

The attached description of the mine is taken from James J. Page's report, dated January 1943.

The field examiners were not able to examine the mine in detail as it is flooded to about 15 feet above the Main Level. De-watering is now in process. It is our understanding that most of the work during 1943-44 was conducted from the Main Level and consisted of mining the roof and pillers in the south end of the mine. Apparently these has been no work below the Main Level since the report of 1943. Reports indicate that mine track was left on the Main Level.

At the present time there is one tool shed, mine car, track, 105 compressor, drill, hoist, and a gasoline pump on the property. Present work consists of dewatering the workings and removing caved much from the north end of the open cut.

The applicants proposal is somewhat similar to that recommended in this report; however, their approach to the problem is different, than that recommended by the field examiners.

The field examiners believe that the mine warrants exploration. It is recommended that an incline (-33°) be driven down the pegmatite to intersect the Main Level as shown on the attached Longitudinal Section of the Cloudland Mine. This incline will be between 85 and 90

feet in length and will serve two purposes: (1) explore that block of rock north of the main openings and (2) provide easy access to the Main Level. Present access is very difficult and involves much rehandling of muck.

After the incline is completed, it is recommended that the southheading on the Main Level be extended 80 feet to intersect the possible down plunge extension of the mica shoot worked by an incline from the head of the Big Tunnel. Concurrently with driving the drift to the south from the Main Level, long drill holes (15 feet) should be drilled at approximately 30-feet intervals in both the hanging and foot walls to determine the possibility of parallel pegmatites from the Main Level.

Stage 2 should consist of driving not more than 100 feet of crosscuts and drifts to further explore any pegmatites found by the long drill holes.

It is recommended that if a contract is drawn, the short form be used.

Estimated cost for the above proposed work is as follows:

Stage I.

90 feet of 5' x7' incline @ $50/ft.	$4500.00	
80 feet of 5' x 7' drift @ $35/ft.	2800.00	
300' of 15-foot jackhammer holes @ $1.00/ft.	300.00	
Estimated Cost Stage I.....		$7600.00

Stage 2

100 feet of crosscuts and drifts @ $35/ft.	$3500.00	
Estimated Cost of Stage 2		$ 3500.00
Estimated Cost of Stages 1 and 2		$11,100.00

Estimated time required - 125 shifts.

February 16, 1953

K. H. Teague, USGS

L. E. Shirley, USBM

zm

COPY COPY

CLOUDLAND MICA LINE

Mitchell County, N. C.

- James J. Page -
January 1943

THE mine was discovered about 1870 by Thomas Green and is one of the oldest mines in the district. Most of the work was done prior to 1900 by Abernathy and Rorison and by Heap and Clapp. The value of the mica produced during this time is estimated to be in excess of $100,000. Intermittent work on a small scale was carried on until 1939 and consisted largely of reworking the dumps for mica and feldspar.

In 1939, the mine was reopened and work has continued to the present time. This work consisted of a new inclined haulway at the northeast end of the mine to a level 75 feet above the bottom of the old workings. This level was cleaned out and retimbered southwestward to the end of the old workings. Most of the mica produced since 1939 has come from the southwest end of the mine and from waste left behind on the old lofts. Production at the mine has been very irregular and, during the lastfew months, has ranged from 500 to 1200 pounds of sheet mica each week.

Mrs. Ella Clapp Thompson of Bakerville, N. C. is the owner of the mine, and, for the past few years, it has been leased by Julius Henline of that town. Since 1940, work has been done by Lee McKinney of Hawk, N.C. Three or four men have usually been employed.

The underground workings at the Cloudland Mine extend downward and southwestward into the mountain from a large open cut. This open cut trends S 60° W and is 250 feet long and as much as 50 feet wide; its greatest depth is about 75 feet although much of the southwest portion is now filled with waste and blocks caved from the walls. The earliest work was done in this open cut and from an inclined shaft (Old Shaft) which extended downward from the floor. The Big Tunnell, driven about 160 feet from the southwest end of the open cut, is now filled with waste and is inaccessible. Near the portal of the Big Tunnel, a winze 180 feet deep was sunk from which most of the work below this level was done. This was abandoned about 1896, and the Green Shaft was sunk about 25 feet southwest of the open cut. This inclined shaft was about 75 feet deep. The last of the work prior to 1900 consisted of an incline downward from the end of the Big Tunnell. Since that time, another incline was sunk from the floor of the Big Tunnel between the winze and the earlier incline.

Mica gneiss and schist are the most abundant rock types near the mine. The mica gneiss is medium to fine grained, and consists of biotite, quartz, and feldspar with some muscovite, and small red garnets, and occasional layers rich in kyanite. The mica schist, exposed in the upper workings and on top of the ridge, is composed mostly of coarse muscovite flakes and small amounts of quartz. Mica schist adjacent to pegmatites consists largely of biotite, some of which apparently was derived from the hornblende in the thin layers of hornblende gneiss which commonly occur in the mica gneiss. Mica schist in the upper workings and on top of the ridge usually is iron-stained, indicating the presence of sulphide minerals.

Medium and coarse grained hornblende gneiss occurs both as well defined units north and south of the workings and as thin layers within the mica gneiss. Hornblende needles up to 1/2 inch in length are common. Pyrite, pyrrhotite and chalcopyrite are locally abundant in the gneiss.

A few quartz veins occur within the area mapped. The largest one exposed is about 6 feet thick and strikes N 5° E and dips 55° E. This vein cuts across the strike of the country rock although the others appear to be conformable.

The general strike of the country rock is N 40-60° E with a variable, though usually steep, dip to the southeast. In the southeast portion of the map area, the strike changes to the northwest but, a few hundred feet south of the area mapped, returns to the northeast. The general pitch of minor folds is slightly west of south at 50-60 degrees.

Mica schist on the ridge above the mine and in the upper workings is tightly folded and badly contorted. The hornblende gneiss, particularly south of the mine, is also contorted and badly fractured.

Hornblende gneiss is exposed both north and south of the workings but is not continuous across the map area. The gneiss south of the workings undergoes a change in strike similar to that of the overlying mica schist and gneiss. North of the workings, the hornblende gneiss passes under the dump, but no continuation of this is found in the eastern portion of the area . There is no indication that post-pegmatite faulting has caused the separation of these two areas of hornblende gneiss, for such a fault would have caused the mica near it to be extensively ruled. This is not the case, for the largest mica in the mine was found near the inferred plane of this fault.

Several small faults are exposed on the surface and underground. The largest of these is shown on the geologic map, but the relative movement and amount of displacement is unknown. Small normal faults cut the pegmatite underground at several places, and the mica within 2 or 3 feet of these faults is ruled and cracked.

C O P Y

Several parallel pegmatites are exposed in the workings and on the surface at the Cloudland Mine. These are generally conformable to the country rock. In the northeast end of the open cut, a pegmatite 35 feet or more thick is exposed from which several thin pegmatites, separated by schist and gneiss, extend downward and along the strike. The relationship of the thin pegmatites to the thick one is shown on cross-section A-B.

At least three of these thin pegmatites have been mined for mica. Cross-section C-D, just north of the Old Shaft, shows two of these. The upper, thicker pegmatite appears to be the one along which most of the work above the 3780 foot level was done throughout the mine. At this level, the lower thinner pegmatite was exposed and apparently contained more mica for it was followed to the bottom of the mine.

A six-foot drill-hole into the hanging wall near the northeast end of the mail level encountered pegmatite which appears to be the continuation of the one on which work was done above the 3780 foot level.

The third of these thin pegmatites on which work was done is shown on plan M-N and cross-section G-H. This is also in the hanging wall in relation to the main mica zone.

The thin, mica-rich pegmatites are usually less than 5 feet thick. These are of the "pinch and swell" type in which the individual pegmatite lenses occur in one general plane, forming a zone of pegmatite. The lenses appear to pinch out downward as well as along the strike; and in mining, when the bottom of the lens was reached, holes drilled downward into the footwall generally encountered another lens. These lenses are usually connected by thin streaks of pegmatitic material although, in some cases, no apparent connection was found.

The strike of the workings, and of the pegmatites, swings toward the east with an increase in depth. Plans K-L and M-N show the strike of the pegmatites to be about 35-40° northeast in the upper workings. Plan O-P of the main level, approximately 125 feet lower in elevation, shows that the general strike at that level is N 60° E. The strike along plan Q-R of the bottom of the mine, 70 feet vertically below the main level, is about N. 75° E.

At the southwest end of the mine, the dip is nearly vertical whereas the dip at the northeast end is 45-55 SE. Local steepening and overturning of the pegmatite zones form large "rolls," the axes of which are nearly horizontal.

There are several indications of southerly pitch of the pegmatite zones at an angle of approximately 45°. The general outline of the workings, particularly of the inclines, indicates this pitch. No pegmatite was exposed on top of the ridge, and the pegmatite zone on which work at the

bottom of the mine was done apparently pinches out along the northeast end of the lower workings. The mica "streaks" are reported to have pitched southward. Minor folds on the surface pitch 5-60° south but average about 40°. The footwall of the thick pegmatite exposed in the open cut has a measureable pitch S 5° W at 40°.

Muscovite usually occurs near the footwall of the various pegmatities or in the central portion of the pegmatite lenses. The largest mica in the mine was reported to have been found near the bottom of the Green shaft and was in a fairly well defined "streak" which continued down the incline at the end of the Big Tunnel. The best mica in the main underground workings was reported near the winze and above the main level. Since work began at the southwest end of the mine in 1940, the best mica has been found between the two rock stulls left above the main level. The mica at the northeast end of the mine is more heavily specked than in any other portion. Clear mica is reported to have been found in scattered "pockets" inthe thick pegmatite in the open cut.

Oligoclase is the dominant feldspar in the mine, particularly in the thin mica-bearing pegmatites. Microcline occurs in the thick pegmatite exposed in the open cut and appears to be more abundant on the hanging-wall side of the central quartz-rick zone. Some plagioclase is found in this zone.

There are no large quartz masses in the mine. Where the pegmatite is 35 feet thick, there is a central zone containing many small, irregular masses of gray quartz as much as 1 foot long and 3 inches wide. This zone is about 10 feet thick and is parallel to the walls of the pegmatite.

Granular aggregates of brick-red garnets are occasionally found. These aggregates are not abundant and usually are less than 1 inch in diameter. Light-green apatite in crystals 1 1/2 x 3/4 inches was seen.

The muscovite at the Cloudland Mine is ruby in color. The majority of the mica in the mine is specked with biotite and some magnetite, but most of these specks are concentrated along certain laminae and are easily removed during splitting operations. Mica near the northeast end of the mine is more heavily specked than elsewhere. 65-75% of the sheet mica is of number one grade after removal of the specked laminae by splitting. The mica is of good size and large blocks of excellent quality have been found. Most of the mica is firm and hard, although ruled and cracked mica is found near small normal faults.

The southwest portion of the mine above and below the main level appears to offer the best possibilities for further work. Extension of the

main level southwestward might encounter the mica "streak" mined in the incline at the end of the Big Tunnel. At the present time, work is continuing upward from the main level along the "streak" of good mica found near the present end of the main level. Abundant mica is present in the narrow pegmatite lenses exposed at the southwest end of the mine between the bottom and the main level. Extension of the workings southwestward probably would encounter thicker pegmatites than those now exposed. These lenses are 6 - 18 inches thick.

A cross-cut might be driven into the hanging-wall from the northeast end of the main level, near the drill hole which encountered the continuation of the pegmatite mined above the 3780 foot level. This cross-cut would need to be less than 10 feet in length. This pegmatite was abandoned during the old work but probably would contain enough mica to pay under present market conditions. Core-drilling into the hanging-wall might show other parallel pegmatites, but it is doubtful if this method of prospecting would be as effective as cross-cutting.

C O P I E D.
James J. Page report.
Jan. 1943
(zm) Feb. 16, 1953

FILE COPY
SURNAME:

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

Robertson
Houk
Kedan
Kinkel
Selfridge

FEB 5 1953

Mr. James J. Whitall
Sylvania Mining & Chemical Co.
323 N. Harberth Avenue
Harberth, Pennsylvania

Subject: Docket No. DMEA-2311 - Mica
Cloudland Property
(Old Pisgah)
Mitchell County, North Carolina

Dear Mr. Whitall:

Your application for assistance in exploring the Cloudland Property (Old Pisgah) in Mitchell County, North Carolina, has been reviewed by the Nonmetallic Minerals Division of the Defense Minerals Exploration Administration and has been referred to Mr. Robert A. Lawrence, Executive Officer, DMEA Field Team, Region VII, Room 13, Post Office Building, Knoxville 2, North Carolina, for field examination.

J.C. 2/5/53

The Regional Office will contact you at an early date in regard to the examination of your property. Any assistance that you can give the members of the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JTRobertson:gad 2/3/53

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

FILE COPY
SURNAME:

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

Robertson
Houk
Selfridge

FEB 5 1953

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

Subject: Docket No. DMEA-2811 - Mica
Glendland Property
(Old Pizzle)
Mitchell County, North Carolina

Dear Mr. Lawrence:

A field team examination is requested for the subject exploration assistance application.

The applicant reports that there is some machinery on the property, also, indicating that some of it is rented. In your report please list separately the machinery owned from the machinery rented, particularly if a cost-basis contract is to be prepared.

J. C. 2/5/53

It should be noted that the proposed heading that is indicated in the cross-section accompanying the application may be partly duplicating the work done at the 60-ft. level, only 15 feet below. The location of the proposed heading should, therefore, be checked in its relation to the lower level work already opened.

We are enclosing herewith copies of memoranda from J. J. Norton, USGS, and W. F. Dietrich, USBM, on the subject application for your information and files.

Sincerely yours,

George C. Selfridge (JHB)
Chairman, Operating Committee

Approved:

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

A. R. Kinkel, Jr. (JHB)
Member, Geological Survey

JTRobertson:gad 2/3/53
Copy to: Admr. R. File
Operating Committee
Docket File
Mr. Dietrich, 3526
Mr. Norton, G-232 GSA Bldg.
Mr. Houk

Enclosures 2

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

January 23, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-2811, Mica, Cloudland (Old Pizzle), Mitchell County, North Carolina

The Geological Survey (Professional Paper 225, p. 59) tested 737 pieces of mica from subject mine to be 100 percent of E-1 capacitor quality and color was classified as cinnamon brown, generally acceptable as ruby mica. Bureau of Mines records indicate an average monthly purchase from May to September 1944 of $1,085.29 worth of mica by Colonial Mica. On the basis of these facts and the applicant's description of present exposures, a field team investifation is recommended.

W. F. Dietrich

W. F. Dietrich

IN REPLY REFER TO:
G-MD-CNM

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

December 22, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 23 1952

Memorandum

REVIEW OF APPLICATION DMEA-2811 (ruby mica)

To: L. G. Houk, Defense Minerals Exploration Administration.
From: J. J. Norton, U. S. Geological Survey
Applicant: Sylvania Mining and Chemical Co., Narbeth, Pennsylvania.
Name of property: Cloudland (Old Pizzle) Mine.
Location of property: On Cane Creek and Gouges Creek in Mitchell County, North Carolina.
Estimated cost of project: $14,383.00
Summary of applicant's proposal:
Drive heading on 45-foot level for 300 feet.
Sources of information on applicant's property:
File report, map and sections of Cloudland (Old Pizzle) mine, by J. J. Page and J. J. Norton, 1943.
Comments:

1. This property mined for a year and a half after the time of our work, and the field team will have to bring the geologic information up to date.

2. Exploration is probably warranted to the southwest to find down-plunge extensions of the mine shoots that were mined previously.

RECOMMENDATION:

Field examination.

J. J. Norton

J. J. Norton

December 15, 1952

Mr. James O. Whitall
Sylvania Mining & Chemical Co.
323 N. Narberth Avenue
Narberth, Penna.

Subject: DMEA-2811
Re: Exploration Assistance
Cloudland (Old Pizzle)

My dear Mr. Whitall:

The receipt of your application dated December 5, 1952 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2811 and referred to the Nonmetallic Minerals Division.

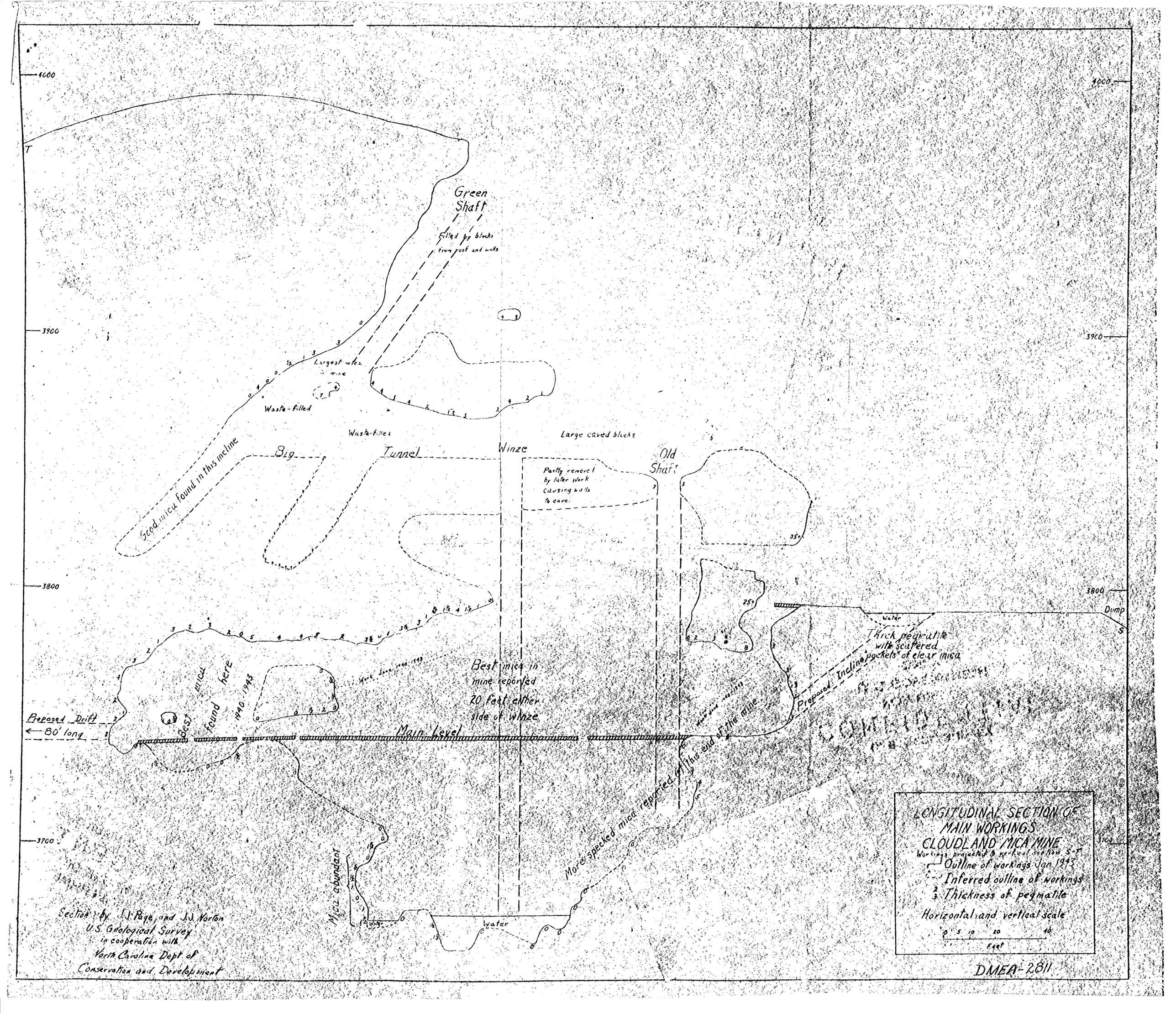
Kindly refer to DMEA-2811 in any future correspondence relating to your application.

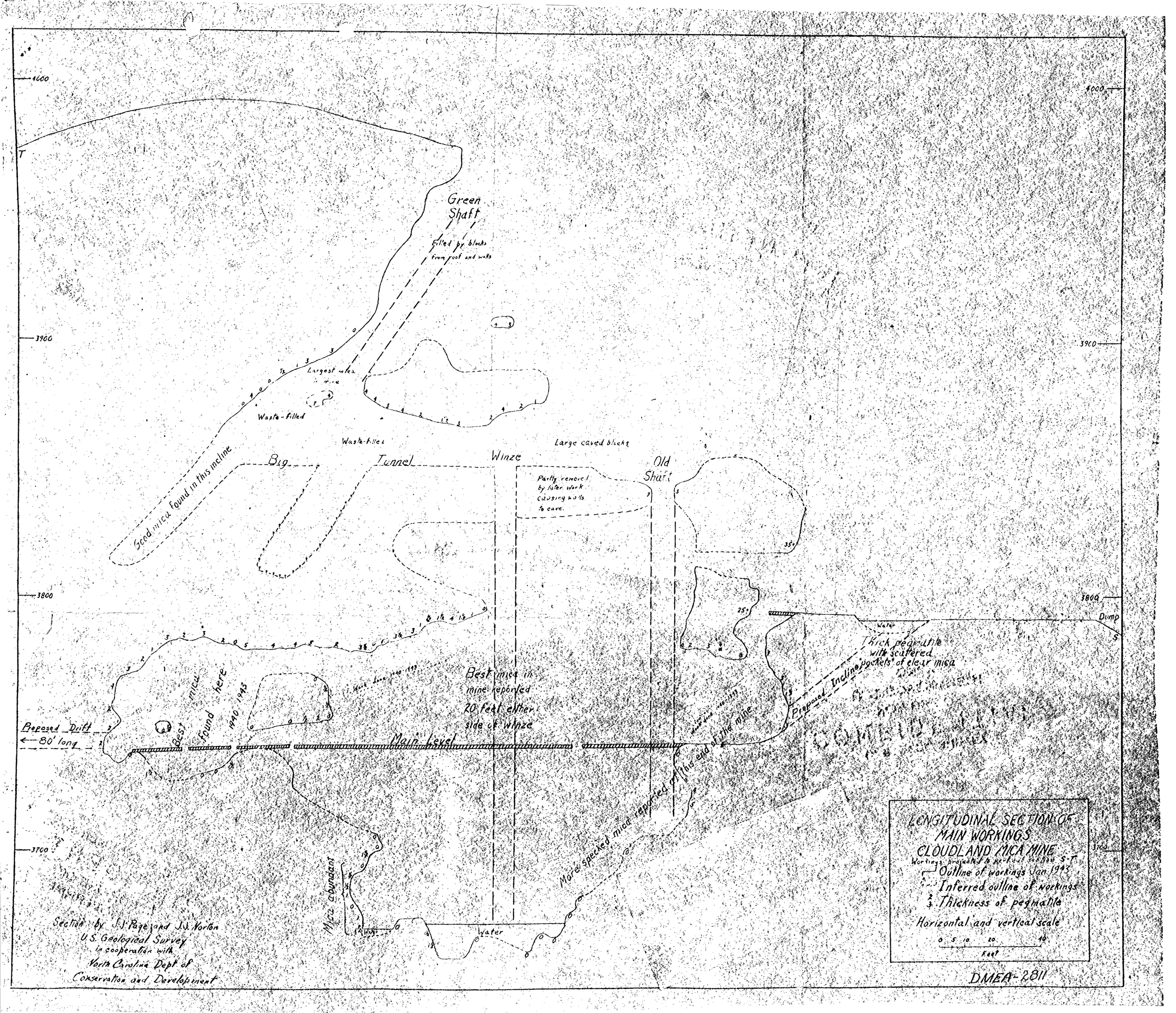
Sincerely yours,

ROBERT E. ADAMS

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

25451


4000
3900
3800
3700
Green Shaft
Filled by blocks from roof and walls
Largest mica in mine
Waste-filled
Waste-filled
Large caved blocks
Big Tunnel
Winze
Old Shaft
Partly removed by later work causing walls to cave.
Good mica found in this incline
Best mica found here 1940-1943
Work done 1940-1943
Best mica in mine reported 20 feet either side of winze
Proposed Drift
80' long
Main Level
Mica abundant
More specked mica reported at this end of the mine
Water
Water
Thick pegmatite with scattered pockets of clear mica
Proposed Incline
Dump
S
LONGITUDINAL SECTION OF MAIN WORKINGS CLOUDLAND MICA MINE
Workings projected to vertical section S-T
Outline of workings Jan. 1943
Inferred outline of workings
Thickness of pegmatite
Horizontal and vertical scale
0 5 10 20 40
Feet
Section by J.J. Page and J.J. Norton
U.S. Geological Survey
in cooperation with
North Carolina Dept. of
Conservation and Development
DMEA-2811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Workings projected to vertical section S-T
Outline of workings Jan 1943
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Horizontal and vertical scale
0 5 10 20 40
Feet
Section by J.J. Page and J.J. Norton
U.S. Geological Survey
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DMEA-2811