DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4959

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17963

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

DMEA
RECEIVED MAR 17 1958

DATE	INITIALS	CODE

March 13, 1958

Memorandum

To: Operating Committee, DMEA, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region V

Subject: Application from Mica Investment Corporation, Laurens, S.C.
Mill Knob mine, Macon County, North Carolina (Mica)

Enclosed are the original and two copies of the subject application, with one copy of the lease, which was received at this office. The Applicant has been requested to submit an executed Consent to Lien in quintuplicate.

We are keeping the fourth copy of the application.

Robert A. Laurence

Robert A. Laurence

Enclosures 4

Form MF–103
Revised Oct. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR

Budget Bureau No. 42–R1035.3
Approval expires June 30, 1958

DEFENSE MINERALS EXPLORATION ADMINISTRATION

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

Mica Investment Corporation,
P. O. Box 214
Laurens, South Carolina

RECEIVED MAR 17 1958 D.M.E.A.

APPLICANT NOT TO USE THIS BLOCK

Docket Number	4959
Date Received	3-17-58
Government Participation %	45
Region	V
Division Code	600

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [x]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized S. C.

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
King Dixon	P. O. Box 214, Laurens, S. C.	President
K. S. Dixon	P. O. Box 214, Laurens, S. C.	Secretary

Mineral(s) for which you wish to explore
Mica

Estimated Cost of Project
$ 7,000.00

LOCATION OF PROPERTY

Name	County	State
Mill Knob	Macon County	North Carolina

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order–I, Revised, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals,* of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

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.

MICA INVESTMENT CORPORATION

March 11, 1958.
Dated

RECEIVED MAR 13 1958

BY (Signature)

President
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the lands, including existing mine workings. Describe all production facilities.

(b) State your interest, if any, in operations stated in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves on the property giving quantities and grades and sampling methods used, supporting your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you may have, indicating on each whether you require its return to you.

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

(a) Independent contracts. State the cost of any proposed independent contract for the performance of all or any part of the work, expressed in units of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

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)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Revised.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 25960

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 17 1958

DATE	INITIALS	CODE

1. (a) See last page.

   (b) Mill Knob Mine.

   (c) Mica Investment Corporation is lessee, the period of the lease extending for five years.

   (d) None.

2. (a) The Mill Knob Mine has been operated profitably over a number of years. We have driven an exploratory tunnel approximately 200 feet equipped with mine track and car, and propose to go an additional 200 feet with this exploration, driving into the main vein of the mine.

   (b) Our interest is that of lessee of the mine.

   (c) Mill Knob is 3.2 miles N 20 degrees E of Franklin and 0.75 of a mile N 15 degrees W of Dean on U. S. Highway 23. This deposit reported to have been opened by Dr. Jim Lyle about 75 years ago, has been an important producer of sheet mica.

   The deposit is an extremely irregular pegmatite which strikes slightly northeast, dips toward the east, and plunges northeast. It is roughly lens-shaped, has a maximum width of nearly 80 feet, and has been worked for over 275 feet along the strike. The present workings consist of an open cut 250 feet long, about 60 feet deep, and from 60 to 100 feet wide. A series of shafts and tunnels extend to nearly 150 feet below the surface. Most of the underground workings are in the soft upper portions of the deposit and are inaccessible. However, soft ore is reported to extend at least 30 feet below the present cut.

   (d) Not available.

   (e) This mine was originally operated by a shaft from the top of the knob, but the formation of the ground prohibits its being profitably mined in this manner. We are driving a tunnel from the side to reach a point underneath the old shaft.

3. (a) The president of this corporation will meet the DMEA representative in the Town of Franklin at any time and place designated by their representative. Contact him at P. O. Box 214, Laurens, South Carolina, telephone 446 or 202882.

   (b) Franklin, North Carolina. Employees live within a short distance of the mine. These employees are experienced mica miners.

4. (a) Proposed work is to continue driving old adit from a point at the head of its present location to bisect the vein, which is about 200 feet.

(b) Access all-weather road is constructed to highway.

(c) Exploration is now progressing, but corporation will need funds with which to complete exploration.

5. (a) The profession of the superintendent, Mr. A. W. Reid, is that of a mica miner. He has spent his entire life in this sort of work. He is now approximately 66 years of age.

6. (a) See attached sheet.

(b) Power line is built to the mine. All machinery is operated by electric power with the exception of the one diesel air compressor. Diesel fuel costs approximately 15 cents per gallon. Cost of current is from one to four cents per KW, dependent upon the amount used.

(c) See attached sheet.

(d) The property which we have leased has necessary buildings, etc.

(e) No new buildings to be built.

(f) No repairs required.

7. (a) Yes.

(b) The corporation's share will be furnished in the form of money and by use of equipment.

ESTIMATE OF COST

200 feet of adit @35¢ per foot:			$7,000.00
Labor:			
Foreman	$15.00		
Driller	10.00		
Helper	10.00		
Labor	8.00		
	$43.00		
$43.00 a shift for 100 shifts:		$4,300.00	
Exploders:		225.00	
Dynamite:		475.00	
Drill Steel: 40 x $8.00		320.00	
Gas and Oil:		95.50	
Supplies and Repairs:		84.50	
Rental on Equipment:		1,500.00	
Total:		$7,000.00	$7,000.00

That part of the three following described tracts of land:

FIRST TRACT: All the land and mineral rights described in a deed from Laura Belle Buchanan to A. W. Reid, dated December 22, 1945, and recorded in the office of the Register of Deeds for Macon County, North Carolina, in Deed Book N-5, page 355.

SECOND TRACT: All the land and mineral rights described in a deed from Rose Ella Hill, et al, to A. W. Reid, dated January 14, 1946, and recorded in the office of the Register of Deeds for Macon County, North Carolina, in Deed Book N-5, page 357.

THIRD TRACT: All the land and mineral rights described in a deed from the Executrices of the Estate of Christine Nolop to Cora Reid, dated May 23, 1934, and recorded in the office of the Register of Deeds for Macon County, North Carolina, in Deed Book H-5, page 159,

which lies within the following boundary:

BEGINNING at a point at the head of the present tunnel, which is situated North 5 East 180 feet from the present portal, running from said point North 250 feet; thence West 250 feet; then South 500 feet; then East 500 feet; thence North 500 feet; then West 250 feet; thence South 250 feet to the BEGINNING.

NORTH CAROLINA
MACON COUNTY

THIS LEASE AGREEMENT, Made and entered into this the 5th day of August, 1957, by and between A. W. REID and wife CORA REID, of Macon County, North Carolina, hereinafter designated as lessors, and MICA INVESTMENT CORPORATION, a corporation organized and existing under the laws of the State of South Carolina, with a place of business in Laurens, South Carolina, party of the second part, hereinafter designated as lessee,

WITNESSETH:

That the said parties of the first part do hereby lease unto the party of the second part, its successors and assigns, the mica and mica mining privileges upon the following described property in Macon County, North Carolina, towit:

> FIRST TRACT: All the land and mineral rights described in a deed from Laura Belle Buchanan to A. W. Reid, dated December 22, 1945, and recorded in the office of Register of Deeds for Macon County, North Carolina, in Deed Book N-5, page 355.
>
> SECOND TRACT: All the land and mineral rights described in a deed from Rose Ella Hill, et al, to A. W. Reid, dated January 14, 1946, and recorded in the office of Register of Deeds for Macon County, North Carolina, in Deed Book N-5, page 357.
>
> THIRD TRACT: All the land and mineral rights described in a deed from the Executrices of the Estate of Christine Nolop to Cora Reid, dated May 23, 1934, and recorded in the office of Register of Deeds for Macon County, North Carolina, in Deed Book H-5, page 159.

This lease is made upon the following terms and conditions:

1. Lessee agrees to pay to lessors a royalty of

twelve and one-half (12½%) percent of the gross selling price of all mica recovered from said property and the customary royalty on all other minerals recovered from said property. The said royalty payments shall be due and payable within ten days from the date of sale of said minerals.

2. The lessee has paid to lessors at the date of the signing of this lease the sum of Two Hundred Fifty ($250.00) Dollars, the receipt of which is hereby acknowledged, the same to be an advance payment on royalties and to be credited against the first royalties due under this lease for minerals sold.

3. Lessee agrees to keep a record of all sales which shall be open for inspection of lessors at all times, and to furnish lessors with a copy of each invoice for sale of the minerals removed from said property.

4. The duration of this lease shall be five years from the date hereof, but it is expressly understood and agreed between the parties hereto that lessee will begin mining operations within thirty days from the date hereof and continue such operations for as long as the same may be profitable; and should the lessee discontinue operations for as long as thirty consecutive days, the lessors at their option may declare this lease to be terminated and of no further force and effect.

5. As a part of this lease the lessors give the lessee the necessary rights of way to built such trails or roads upon said property as may be necessary for the installation of machinery and the proper operation of mines. Lessee shall have the further right to use such timber and water upon said property as may be necessary in its mining operations,

and the lessee shall have the right at the termination of this lease to remove any machinery placed upon said property by it.

6. Lessee agrees to operate the mines upon the property above described in a workmanlike manner and to leave the mine holes in a clean condition at the termination of this lease.

7. The lessors agree that the lessee shall have the right and option to purchase all the property above described at any time within two years from this date for the sum of Twenty-five Thousand ($25,000.00) Dollars, and agree that at any time within two years from this date, upon tender to them of the purchase price of Twenty-five Thousand ($25,000.00) Dollars, to execute and deliver a good and sufficient deed for said property.

IN TESTIMONY WHEREOF, the parties of the first part have set their hands and seals and party of the second part has caused these presents to be signed in its name by its president, attested by its secretary, and its corporate seal to be affixed, all by order of its Board of Directors, the day and year first above written.

/s/ G. W. Reid (SEAL)

/s/ Cora Reid (SEAL)

MICA INVESTMENT CORPORATION

By [signature]
President

ATTEST:
K. S. Dixon
Secretary

NORTH CAROLINA
MACON COUNTY

Personally appeared before me this day A. W. REID and wife CORA REID, who acknowledged the due execution of the foregoing lease agreement for the purposes therein expressed.

WITNESS my hand and Notarial seal, this 15th day of August, 1957.

Cecile Gibson
Notary Public, Macon County, N. C.
My Commission Expires December 22, 1957

SOUTH CAROLINA
LAURENS COUNTY

This 6th day of August, 1957, personally appeared before me Joyce B. Campbell, a Notary Public, King Dixon, who being by me duly sworn, says that he is President of Mica Investment Corporation, and that the seal affixed to the foregoing instrument in writing is the corporate seal of the said company and that said writing was signed and sealed by him in behalf of said corporation by its authority duly given. And the said King Dixon acknowledged the said writing to be the act and deed of said corporation.

WITNESS my hand and Notarial seal, this 6th day of August, 1957.

Joyce B. Campbell
Notary Public, Laurens County, S. C.

Mica Investment Corporation agrees that all mica mined on the property described in the attached lease shall not be removed from Macon County, North Carolina, until sheeted and prepared for sale, and that no mica removed from said mines shall be used as samples unless parties of the first part are paid for the same or agree otherwise.

This the _____ day of August, 1957.

MICA INVESTMENT CORPORATION

By _____
President

ATTEST:

_____
Secretary

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/3	Houk	

June 3, 1958

Memorandum

To: Mr. C. O. Mittendorf, Administrator

From: Lawrence G. Houk, Director, Division of Nonmetallic Minerals

Subject: Evaluation of application and field examination report
Docket No. DMEA-4959-Mica
Mica Investment Corporation
Mill Knob Mine
Macon County, North Carolina

Denial of application is recommended.

Mica: Muscovite is ruby and books up to 3" x 4", mostly bent, wavy, lightly specked and locky. No mica of strategic quality was observed.

Pegmatite: The pegmatite bodies exposed by drift appear to be en echelon lenticular dikes, in general discordant to the foliation of the mica gneiss country rock. One pegmatite is medium- to coarse-grained consisting of plagioclase, quartz, and muscovite with accessory fine-grained garnet.

Workings: The recent open cut work has removed some of the old underground workings and has exposed mostly weathered gneiss country rock along the walls. Underground work from a shaft along the west wall of the cut was flooded and not accessible.

Past production: Since the study in 1944 the open cut has been deepened 35 feet and the northern adit driven to the south 210 feet, and as yet has not produced any strategic mica. The amount produced since wartime mapping is not known.

Applicant's proposal: 200 feet of adit @ $35/ft. $7,000.00

Recommendations: Because of the lack of a definite geologic target, and the pegmatite bodies exposed by the recently driven adit do not contain strategic muscovite, the Field Team recommends denial and the Division of Nonmetallic Minerals and the Commodity Members of the Bureau of Mines and the Geological Survey concur in the Field Team's recommendation.

8623

LGHouk:gad 6/3/58 Copy to: Admr. R. File Mr. Houk

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/3	Houk	600
6/4	Martin	130
6/4	Lamb	130
6/4	Kiilsgaard	130
6/4	James	110
6/4	Mittendorf	100
		220

600 6/4

JUN 4 1958

Mica Investment Corporation
P. O. Box 214
Laurens, South Carolina

Re: Docket No. DMEA-4959-Mica
Mica Investment Corporation
Mill Knob Mine
Macon County, North Carolina

Gentlemen:

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

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

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

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

Sincerely yours,

C. O. Mittendorf

Administrator

LGHouk:gad 6/3/58
Copy to: Admr. R. File
Field Team, Region V
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Mr. Houk

8623

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RECEIVED JUN 2 1958
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680

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

May 29, 1958

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Branch of Ceramic and Fertilizer Materials

Subject: DMEA-4959 (mica)

Applicant: Mica Investment Corp. (King Dixon)

Name and Location of Property: Mill Knob Mine, Macon County, N. C.

Date of Field Team Report: 5/20/58

Date Rec'd. by Br. of Ceramic & Fertilizer Materials: 5/27/58

Field Team Recommendation: Recommend denial of application.

Comments:

1. There is an old mine on this property but there appears never to have been extensive production of strategic mica.
2. A recent 210 foot adit by applicant cuts several small pegmatite bodies, none of which contain strategic mica.
3. The recent adit is still 280 feet from old workings.
4. Pegmatite bodies in old workings are small and irregular and no good geologic target for exploration exists.

Recommendation:

I concur with the recommendation of the field team for denial of the application.

W. F. Dietrich

W. F. Dietrich

IN REPLY REFER TO:

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

May 26, 1958

Re: DMEA 4959
Mica Investment Corporation
Mill Knob Mine
Macon County, North Carolina
$7,000.00 - Mica

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Report

The applicant requested assistance in continuing a crosscut 280 feet to the assumed downward extension of a large pegmatite.

The examiners found the present adit had cut no less than 6 pegmatites, none of which contains strategic mica. From information obtainable, the pegmatite the crosscut is headed for does not constitute a suitable target for the 280 feet of proposed crosscut, and the examiners recommend that the application be denied.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED MAY 22 1958

DATE	INIT.	NO.
5/22	H.g.	220
	es	130
5/26	CJ	220
5/27	Hoch	600

May 20, 1958

Memorandum

To: Operating Committee, DMEA, Washington

From: DMEA Field Team, Region V, Knoxville

Subject: DMEA-4959 (Mica), Mill Knob Mine, Macon County, North Carolina

Enclosed are the original and two copies of the examination report on the Mill Knob Mine, with map attached to each.

The Field Team agrees with the examiners' recommendation for denial of the application.

Robert A. Laurence
Robert A. Laurence
Executive Officer

V. J. Lynch
V. J. Lynch
Member

Attachment

Reviewed by
DMEA OPERATING COMMITTEE
5/26/58
(date)

Ex. - Site Exam Rpt

UNITED STATES

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FIELD EXAMINATION REPORT, REGION V

DMEA-4959 (Mica), Mill Knob Mine
Macon County, North Carolina

F. G. Lesure, Geologist
U. S. Geological Survey

S. A. Feitler, Mining Engineer
U. S. Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
5/26/58
(date)

May 16, 1958

FIELD EXAMINATION REPORT

DMEA-4959 (Mica), MILL KNOB MINE
Macon County, North Carolina

Applicant: Mica Investment Corporation
P. O. Box 214
Laurens, South Carolina

SUMMARY

The face of a recent adit driven south 210 feet from the northern side of Mill Knob is still 280 feet north of the Mill Knob mine workings. The pegmatite bodies exposed by this adit do not contain strategic muscovite and exposures in the large open cut of the Mill Knob mine do not suggest a good geologic target. We recommend that exploration assistance be denied.

INTRODUCTION

Location:

The Mill Knob mine is at the top of a small hill 3 miles N. 15° E. of Franklin, Macon County, North Carolina. The prospect site in the present Application is 0.2 mile east of Berry Mill on the north slope of Mill Knob (Corbin Knob, N. C., quad., TVA 1:24,000). The new adit can be reached by a dirt road 0.3 mile long from the gravel road at Berry Mill.

Examination:

The examination of the Mill Knob mine was made on April 4, 1958, and lasted about 3 hours. Mr. King Dixon accompanied the examiners.

Past Operations:

The Mill Knob mine was first opened about 1880 (Larrabee, D. M., 1944, Mill Knob Mica Mine, unpublished U. S. Geol. Survey manuscript, copy attached). The Reid family has owned and operated the mine for

many years and has leased it to the Applicant. Since the mine was studied by Larrabee during the war the open cut has been deepened by 30-35 feet and the northern adit driven to the south for a total of 210 feet. Mr. Dixon reported that he started the northern adit in September 1957 and as yet has not produced any strategic mica. The amount of mica produced from the surface and underground work in the Mill Knob mine since the wartime mapping is not known.

At the time of the examination there was a tool house, track, mine car and other equipment on the property.

GEOLOGY

The general geology of the Mill Knob mine is described by Larrabee (1944, Mill Knob Mica Mine, unpublished U. S. Geol. Survey manuscript, copy attached). The recent open cut work has removed some of the old underground workings and has exposed mostly weathered gneiss country rock along the walls. Underground work from a shaft along the west wall of the cut was flooded and not accessible.

The northern adit has intersected 6 or more pegmatite bodies. Two of these are deeply weathered pegmatite bodies of unknown size and shape seen along the walls of the drift between the side timber 30 and 80 feet in from the portal. A thin pegmatite dike ranging in width from 1 to 2 feet was intersected 100 feet in from the portal and followed for 40 feet. It is fine- to medium-grained and contains no strategic mica. Between 140 and 170 feet in from the portal two pegmatite lenses 0.3 to 1 foot thick and 10 to 15 feet long are exposed in the back. The last 30 feet of the drift followed a larger dike ranging from 1 to 7

feet thick, trending N. 30° E. and dipping steeply northwest at the northeast end and southeast at the southwest end. This pegmatite is medium- to coarse-grained and consists of plagioclase, quartz, and muscovite with accessory fine-grained garnet. The muscovite is ruby and in books up to 3" x 4". It is mostly bent, wavy, lightly specked and locky. No mica of strategic quality was observed.

The pegmatite bodies exposed by this drift appear to be en echelon lenticular dikes striking generally northeast and dipping southeast. They are in general discordant to the foliation of the mica gneiss country rock.

RECOMMENDATIONS

We recommend that exploration assistance be denied because of the lack of a definite geologic target. The present heading of the northern adit is still about 280 feet north of the old workings. Larrabee describes the pegmatite bodies in the old workings as small irregular bodies which lack continuity. These do not give much hope for a definite geologic target at depth. Present surface exposures in the large open cut also do not indicate a target, and the pegmatite bodies exposed by the northern adit do not contain strategic mica.

F. G. Lesure, Geologist
U. S. Geological Survey

S. A. Feitler, Mining Engineer
U. S. Bureau of Mines

U. S. GEOL. SURV.
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BUREAU OF
U. S. DEPARTMENT
ARMY

MILL BROOK MICA MINE

Macon County, N. C.

E. A. Larrabee

January 14, 1944

The Mill Brook mine is at the top of the hill bearing that name in Macon County, 2 miles N 10° W of Franklin, N. C. It is accessible by 0.7 mile dirt road leading northwest from route 23 at a point 0.4 mile southeast of Dean. It is approximately 2300' above sea level, in the northwestern part of the Corbin Knob planimetric quadrangle.

The mine was studied and mapped by plane table and chain-compass methods, with the assistance of J. Wm. Leinrich, of the Geological Survey, and R. A. Swanson, of Colonial Mica Corporation. The work was done January 11 and 12, 1944.

The mine is reported to have been opened originally 65 years ago by a Mr. Kyle. Since then it has not lain idle longer than three years at any one period, according to J. S. Reid, owner and present operator. The Reid family has owned and operated the property since 1907, except for a 6-month period prior to July 1, 1943, when it was leased to Weiss and Preston. Since July 1, 1943, it has been in constant operation.

Development consists of an open cut, many shafts, long-since caved and of which there is no surface indication, a number of shafts which are accessible to shallow depths, and many drifts and adits. All accessible workings have been mapped. Since July 1, 1943, Reid has put down Shaft No. 1 and all workings therefrom. He also built the shop and improved the road to the mine. Present development is the stoping southeast from the bottom of Shaft No. 1 at a depth of 125' below the collar.

The property contains many highly irregular bodies of pegmatite. Most of these are small and contain numerous inclusions of quartz-biotite gneiss wallrock. Contacts are irregular, and it is commonly impossible to determine if an occurrence of gneiss encountered in mining pegmatite is a true wall or simply an inclusion. Workings are consequently of an irregular nature. Sections A-A' through D-D' indicate the irregularity and lack of continuity of pegmatites.

Gneiss and pegmatite have been heavily sheared, damaging the mica. Most pegmatites examined are relatively free from muscovite in blocks larger than 1" x 1"; they are comprised of white plagioclase, green oligoclase, and quartz. Muscovite is of ruby color. Biotite is present in sheared pegmatite, where elongated masses of "burr-rock" are occasionally present.

Mica has been removed chiefly from pockets rather than sheets, and the operator reports this to have always been the case at this mine. Some books occur at contacts with wallrock; this mica is generally warped and broken. The best quality mica is present in small concentrations or pockets along the margins of large quartz masses. Quality of mica recovered lately is poor. In the main it is badly warped, light spotted, light-clay stained, tangled, and often contains parallel lines of minute black inclusions which break down to form brown spots and lines. Some "A" mica was noted, in addition to the tanglesheet.

[illegible] CONCLUSIONS

As the pegmatites appear to have been rather thoroughly exploited between the surface and the 135' level, future development will not well be confined to the region below the present bottom of the shaft No. 1. No recommendations can be made by this writer as to the specific location of mica sheets on the property, if any sheets actually occur. None has ever been reported, and remnants of pegmatite in old workings give no clue. Shape of old workings suggests that former operators simply mined out pegmatite wherever they found it, handling large tonnages of waste material. Irregularity of shape of pegmatite seems to control the position of the pockets, and the quantity of mica appears to vary with the rapidly changing contacts.

Colonial Mica Corporation reports the following purchases of mica from this mine during the month of November, 1943:

332.31 lbs valued at $1,664.05

Colonial further reports the following total purchases during the period 8-19-43 to 12-23-43:

trimmed punch	677.25 /	$5,516.20
sheet	425.99	
	1,103.24 lbs	

The above included light spotted and light clay-stained mica. A test lot of mica purchased in December yielded 91% Grade 1 and 2 strategic material, as tested by Colonial.

The operator reports the following total recovery to date:

sheet and trimmed punch	1,108 lbs	$5,842
scrap	30,000	300
	31,108	5,842

This indicates an average recovery of 3.5%, sheet and trimmed punch, having an average gross value (inc. scrap) of $370 per ton. The highest value per ton was $660, according to Reid.

10 tons of muck are reported handled daily by the 7-man crew, of which 5 are underground and two on the surface. Mica is recovered in ratio of 1:86, mica to muck, on the average. Reid estimated his cost to average:

mining	$100
rifting	94
per ton	$274

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He stated the cost of all development to date has totaled $2565, since July 1, 1943, indicating a profit for the period as a whole. However, the deposit has not been paying its own way during the past three weeks. The operator plans to go down along the southeast wall, hoping to encounter mica either along the wall or the quartz mass nearby.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/24	Houk	600
3/24	Lefforge	130
3/24	Lloyd	130
3/24	Kiilsgaard	130
"	Johnson	110
	Rutledge	100
3/25		220
		600

600

MAR 24 1958

Mica Investment Corporation
P. O. Box 214
Laurens, South Carolina

Re: Docket No. DMEA-4959-Mica
Mica Investment Corporation
Mill Knob Mine
Macon County, North Carolina

Gentlemen:

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

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

Sincerely yours,

(for)

Administrator

LGHouk:gad 3/24/58
Copy to: Admr. R. File
Field Team, Region V
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Mr. Houk

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/24	Houk	600
3/24	[illegible]	130
"	[illegible]	110
"	[illegible]	100
		220

MAR 24 1958

600

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

Re: Docket No. DMEA-4959-Mica
Mica Investment Corporation
Mill Knob Mine
Macon County, North Carolina

Dear Mr. Laurence:

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

Copies of memoranda dated March 19 and 20, 1958, by Mr. W. F. Dietrich, USBM, and Mr. N. E. Nelson, USGS, respectively, relating to the project are enclosed. There is also enclosed a copy of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

Approved:

P. F. Yopes (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

Enclosures 5

LGHouk:gad 3/24/58
Copy to: Admr. R. File
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Mr. Houk

8623

IN REPLY REFER TO:

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1958
3/21 C 220 600

March 20, 1958
Re: DMEA 4959
Mica Investment Corp.
Mill Knob Mine
Macon County, N. C.
$7,000 - Mica

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

The applicant requests assistance in continuing a crosscut to the assumed downward extension of a large pegmatite. The top of the pegmatite has been mined out by open cut workings and a shaft.

The proposed work, the extension of an old adit for 200 feet, will be below the bottom of the shaft but the distance 'gained' is not stated. Work is presently being done, but the Corporation lacks the funds required to complete the crosscut.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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

March 19, 1958

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Branch of Ceramic and Fertilizer Materials

Subject: DMEA- 4959 (mica)

Applicant: King Dixon and K. S. Dixon

Name and Location of Property: Mill Knob,
Macon County, North Carolina

Date Application Rec'd. by Br. of Ceramic & Fertilizer Materials: Mar. 19, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED 20 1958
DATE CODE
220 C 220
600

Comments:

1. This is an old mine with a history dating back 75 years.

2. Indications are that past workings are extensive; however, this office has no records of recent sales.

3. Applicants wish to tunnel under lowest workings from side of hill in which the mine is located. Two hundred feet of this exploration tunnel have already been completed at operators expense, and they require funds for an additional 200 feet.

4. Exploration proposed by applicants is consistent with local practices and in line with unit-cost estimates for other DMEA projects.

Recommendation:

It is recommended that the field team visit this mine when in that vicinity to ascertain if an exploration project is justified. If so, the field team and the applicants should agree on a definite plan of exploration on a unit-cost basis.

W. F. Dietrich

W. F. Dietrich

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

March 19, 1958

Mica Investment Corporation
P. O. Box 214
Laurens, South Carolina

Subject: DMEA-4959

Gentlemen:

Your application for exploration assistance, dated March 11, 1958 submitted to our office at Knoxville, Tennessee has been assigned Docket Number DMEA-4959 and referred to the Non Metallics Minerals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to: Region V

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 17 1958
DATE | INITIAL | CODE

March 13, 1958

Jones and Jones
Attorneys at Law
Franklin, North Carolina

Dear Sirs:

The application of Mica Investment Corporation for aid in exploration for strategic mica at the Mill Knob mine in Macon County, North Carolina, has been forwarded to our Washington office, in accordance with established procedure. We will notify Mr. King Dixon in advance if a field examination is to be made.

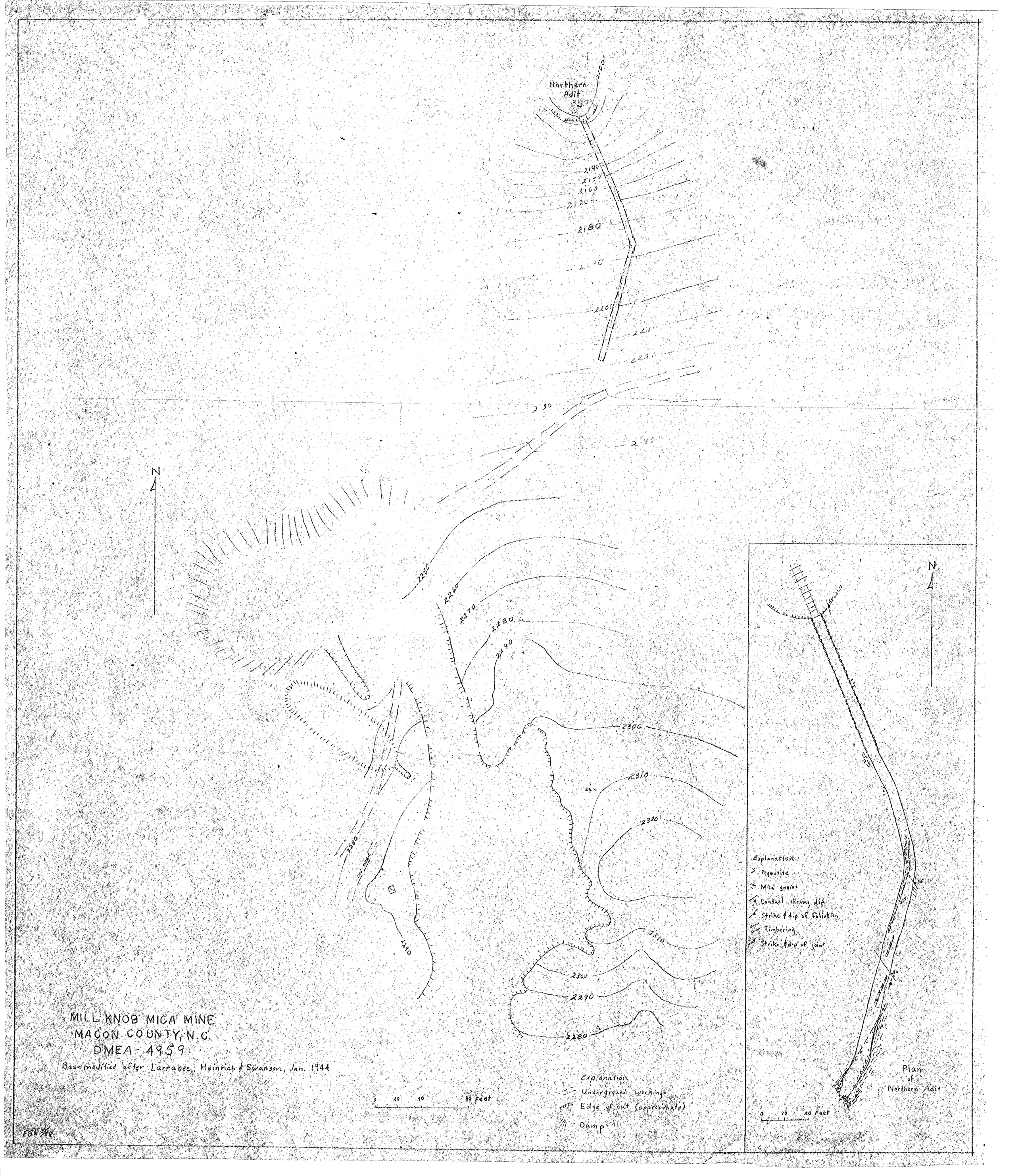
It will be necessary to have the Consent to Lien and Subordination Agreement signed, in quintuplicate, by the land owners, A. W. Reid and Cora Reid. Six copies are enclosed; please return five signed copies to me and give the sixth copy to Mr. Reid.

As you submitted five copies of the application and we require only four, I am returning the extra copy to Mr. Dixon for his records.

Very truly yours,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

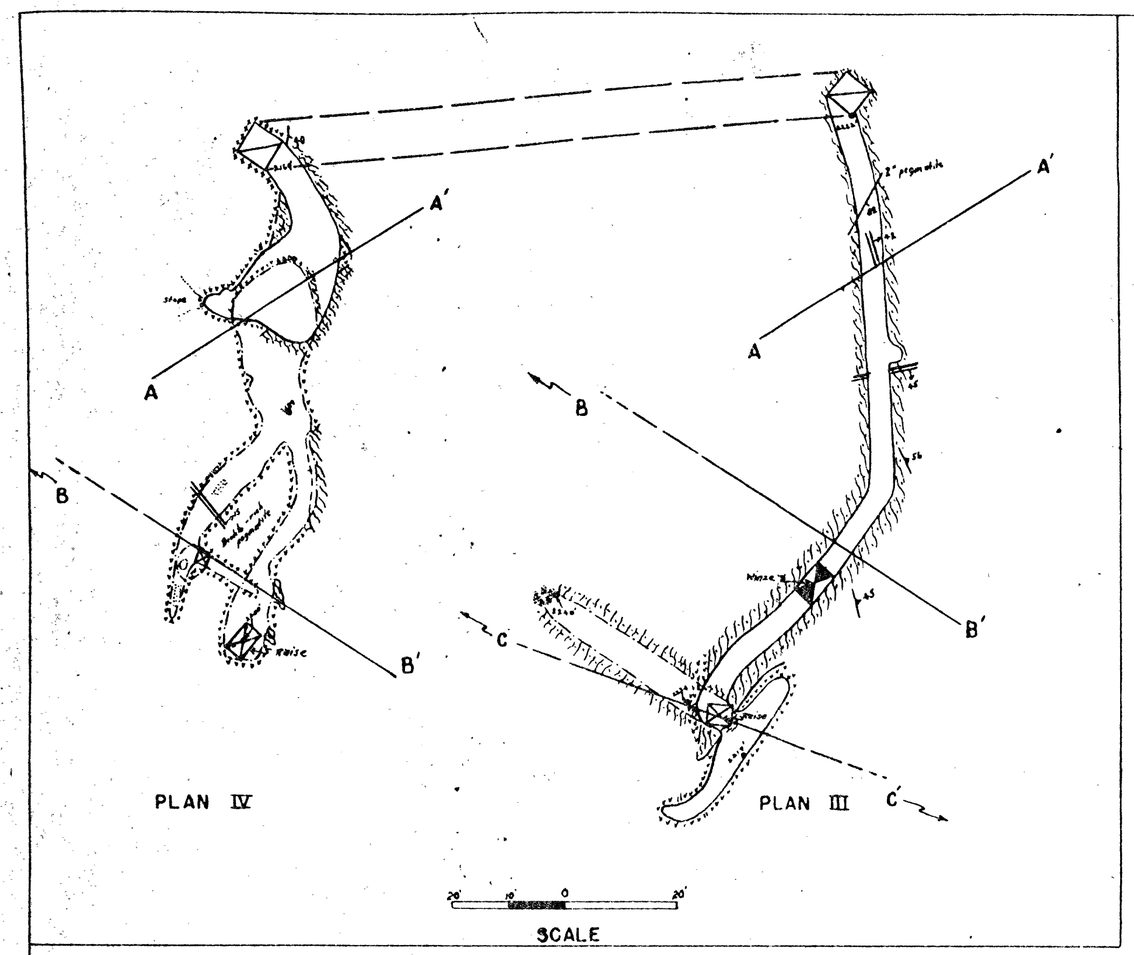
RAL/mg
Enclosures 6
cc - Mica Investment Corp. - Mr. King Dixon
P. O. Box 214
Laurens, S. C.
Operating Committee (3)
Mr. V. J. Lynch
File

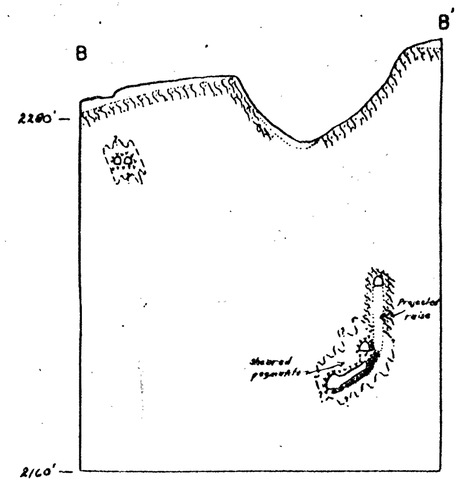


MILL KNOB MICA MINE
MACON COUNTY, N.C.
DMEA-4959

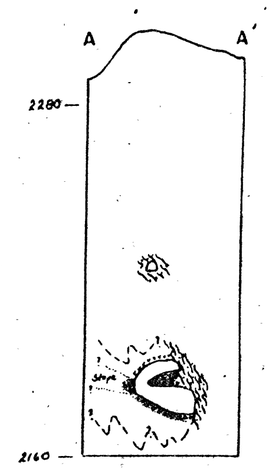
Base modified after Larrabee, Heinrich & Swanson, Jan. 1944

FGL 3/88





SECTION B-B'



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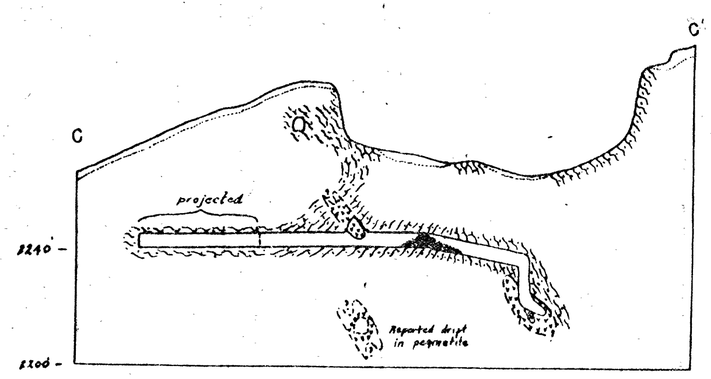
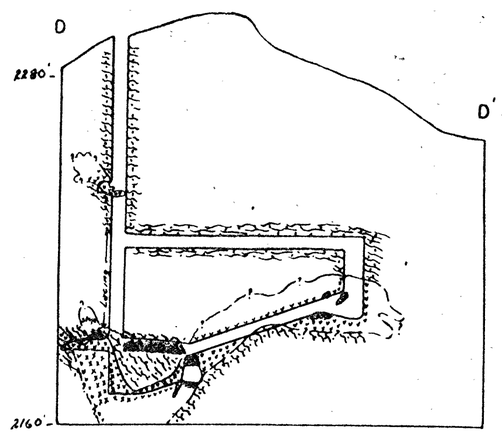


SECTION C-C'



SECTION D-D'
Workings projected

Workings projected to line of section

EXPLANATION

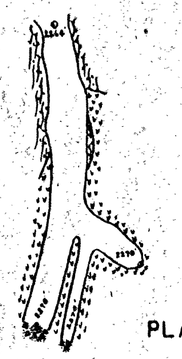
- Burr rock
- Quartz
- Sheet mica
- Barren pegmatite
- Biotite gneiss
- Backfill
- Geologic boundary, observed
- Geologic boundary, inferred
- Shear plane
- Strike and dip of foliation

Mapped by D.M.Larrabee, E.Wm.Heinrich, and R.A.Swanson, Jan. 11-12, 1944

MILL KNOB MICA MINE, MACON COUNTY, N.C.

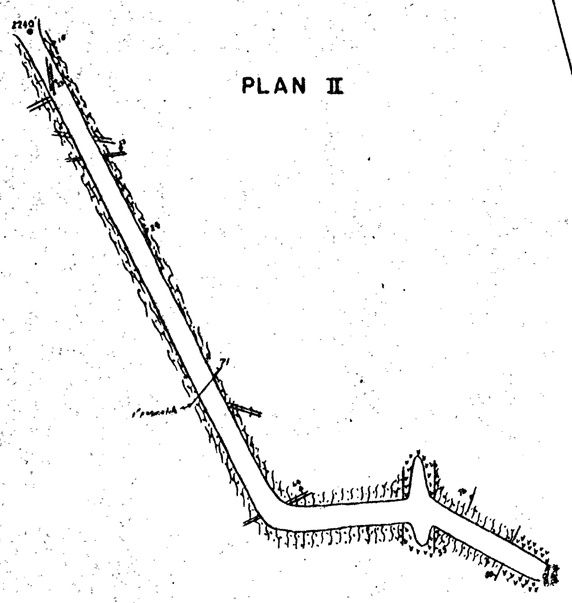
SCALE
40 20' 0 40'

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



PLAN I

Scale



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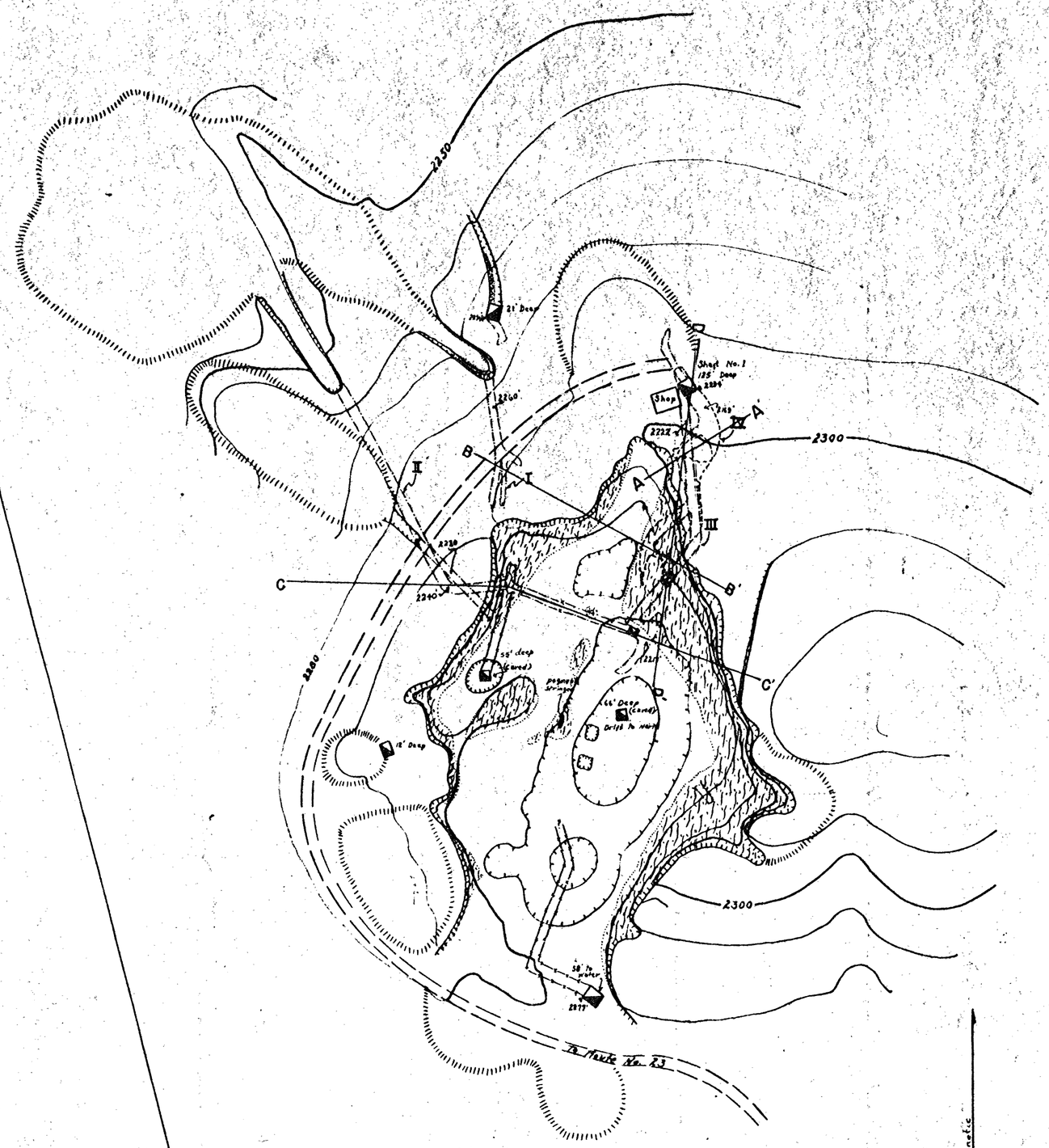

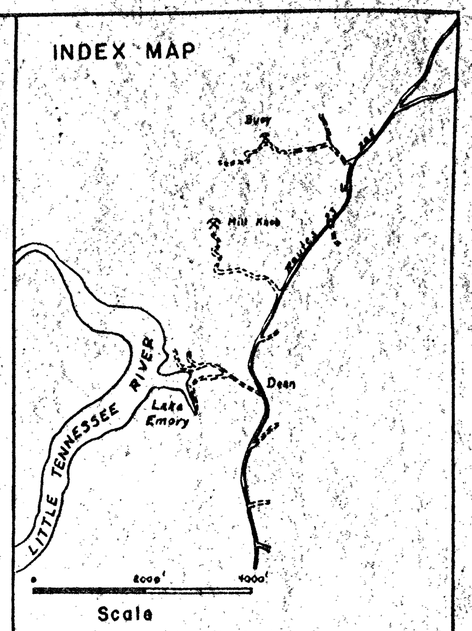

EXPLANATION

- Barren pegmatite
- Biotite gneiss
- Backfill
- Attitude of foliation
- Shear
- Attitude of contact
- Outline of outcrop
- Outline of dump
- Open cut
- Underground
- Underground, 125' level
- Underground, inaccessible
- Shaft
- Winze

Contour interval ten feet
Plane table survey
Datum assumed

Geology and topography by
D.M. Larrabee, E.Wm. Heinrich, and
R.A. Swanson. Jan. 11-12, 1944

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

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MILL KNOB MICA MINE, MACON COUNTY, N.C.

Scale