DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4972

Application
- [ ] Denied
- [x] Withdrawn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
- [x] 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
- [ ] 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

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

March 27, 1958

DMEA
RECEIVED MAR 31 1958
CODE

Memorandum

To: Operating Committee, DMEA - Washington

From: Acting Executive Officer, DMEA - Region V

Subject: Application - Lewie Aldridge, et al. Plumtree, N.C.
Harden Mine, Ashe County, North Carolina (mica)

Transmitted are three copies of the subject application, one copy of the map, 5 copies of the Consent to Lien (old form) and one copy of the mining lease.

V. F. Lynch

Form MF-103
Revised Feb. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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)

The Harden Mine
c/o Lewie Aldridge
Spruce Pine, N. C.

APPLICANT NOT TO USE THIS BLOCK

Docket Number

Date Received

Government Participation %

Region

Division Code

BUSINESS ORGANIZATION (Check one)

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

State in which firm is organized

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
Lewie Aldridge	Spruce Pine, N.C.	Partner
Claude W. Greene	Spruce Pine, N. C.	Partner
Ira Goins	Plumtree, N. C.	Partner

(Lewie Aldridge home address, Plumtree, N. C.)

Mineral(s) for which you wish to explore: MICA

Estimated Cost of Project: $ 11,350.00

LOCATION OF PROPERTY

Name	County	State
Harden Mine	Ashe	N. C.

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order-I, Amended, "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.

March 25, 1958
Dated

Lewie Aldridge
BY (Signature)

Partner
Title

RECEIVED MAR 27 1958 U.S. Geological Survey

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, Amended.

(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. 15539

Attached to Form MF-103

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 31 1958
DATE | INITIALS | CODE

APPLICATION FOR AID IN AN EXPLORATION PROJECT PURSUANT TO DMEA ORDER 1.

1- (a) A lease on three tracks of land. Tracks designated as "A", "B" & "C". Tract "C" is the property to be covered by this contract. Tract "C" described as follows:
Beginning on two black gums near the branch in what was formerly Byron Harden's line, running north 23 degrees east 40 poles to a small sUGAR tree; thence north 50 degrees west about 506 feet to stake inwhat is now or was formerly Mrs. T. M. Duncan's line; thence south 33 degrees 30 minutes west 684 feet with said Duncan's line to a big maple in what was formerly Mrs. Roda Holman's line; thence southe 64 degrees 00 minutes east 348 feet with said line to a stake in branch; formerly Byron Harden's line; thence south 47 degrees east 290 feet with said line to the point of beginning, containing 8.8 acres more or less. Known on lease as Tract "C".

Tracts "A" & "B" are not to be subject to Government lien as we are now operating a mine known as the Duncan Mine on Tract "A".

(b) Harden' Property, now known as the "Harden Mine".

(c) Lessee. Copy of lease attached. Recorded the 19th. day of March 1958 at 8:50 AM in the office of the Register of Deeds in Book T-3 of Deeds on pages 502 & 503. In Ashe County, North Carolina.

(d) None.

2- (a) See sketch attached. There has been a 75 foot shaft cut on the southwest side and an open cut 20 feet deep on the southeast side of the tract. This mine was worked during World War II in the shaft and it has been worked some since the DMEA program started.

(b) We worked some in the open cut described above and have bulldozed the surface off and down to the pegamite at the proposed exploration point.

(c) During World War II around $6000.00 worth of mica was sold to Colonial, and since 1950 there has been over $25,000.00 worth of mica sold from the old working ~~adjoining~~ near the new proposed project. No sales sheets are available at this time.

(d) There is plenty of pegmatite showing at the proposed prospect that we have exposed by bulldozing. The mica is a good grade Ruby Mica and we believe that there is a large deposit. We have no maps nor assay reports. The samples are taken from previous production and we also have samples from the new prospect.

(e) Small sketch attached. The tract is situated on the side of the mountain and is composed of vien or pegmatite in feldspar and flint rock laying between slate rock.

(f) We expect to find mica because there has been mica produced on both sides of the prospect and we have exposed a rich pegmatite at the actual proposed prospect.

(g) No Geologic reports or maps available.

3- (a) Lewie Aldridge and Ira Goins will both meet the DMEA representatives to examine the mine. It is located between Boone, N. C. and West Jefferson, N. C., just three miles from West Jefferson. There is a good road to the Duncan Mine and from there to the Harden Mine is a good truck road, which leads into the proposed works.

(b

(b) Spruce Pine, N. C. is both the shipping and supply point. The employees would reside at or near the mines on the property during the working weeks or some might drive back and forth in cars. We will arrange t is to suit them.

4- (a) We would like to cut a 150 foot shaft nearly in the middle of the Harden tract approximately 350 feet from either of the old workings. We would like to start the shaft on the exposed pegmatite and follow it in the mountain, then in the shaft we would like to run a cross section north 75 feet and another south 75 feet, these cross cuts to be started at the points in the shaft where the field team and we determine later, after the shaft is cut.

(b) There is already a road built.

(c) We could begin work within 10 days and complete the work within six months or less.

5- 1 Lewie Aldridge has had several years experience. Has mined since 1942 andis now operating several mines which are now in production.

2 Claude W. Greene has been mining for the last eight years as partner in several mines.

3 Ira Goins has mined since 1930. He has been mine superintendent of several mines. He is now partner and "on the job" supervisor of the Duncan Mica Co. Ira Goins will also be on the job supervisor of this proposed exploration.

6- (a) We would like for the proposed contract to be written on a Cost per Unit Basis estimated as follows:

1st. unit to be 10 hours preperation by bulldozer @ $10.00 per hour...	$ 100.00
2nd. unitper foot. 1 shaft 100 feet @ $45.00 per foot.....	4500.00
3rd. unit per foot 1 crosscut 75 feet @ 45.00 per foot	3375.00
4th. unit per foot 1 crosscut 75 feet @ 45.00 per foot.....	3375.00
Total cost of proposed exploration contract.....	$11350.00

(b) No cost for this.

(d) This cost will be covered by us or furnished by us, and is figured in on the cost units.

(e) We will furnish the equipment.

(f) Shop or tool house, exploder magazine and exploder magazine already built at the mine.

(g) All these items to be covered by the cost per unit amount.

7- (a) Yes, we are prepared to pay our share with money.

(b) With money.

Consent to lien by lessor attached.

Cert Certification signed on attached Form-103.

Copy

NORTH CAROLINA

ASHE COUNTY MINING LEASE

THIS MINING LEASE made and entered into this the 26th. day of February, 1958, by and between E. L. Briggs and wife Eloise Briggs, of Yancey County, N. C. hereinafter known as the Lessors, and Lewie Aldridge, Ira Goins of Avery County, N. C. and Claude Greene of Mitchell County, N. C. hereinafter known as the Lessees.

W I T N E S S E T H

That the lessors for and in consideration of the performance of all the conditions, terms, payments of royalties and agreements as hereinafter set forth and out, have bargained, leased and granted unto the lessees their heirs and assigns, for a period of FIVE YEARS from the date of this lease, Three certain tracts of land located in Ashe County, N. C. and on which is located the Duncan and Hardin Mica Mines, and more fully described as follows:

Tract (a)

BEGINNING on a small chestnut stump in T.M. Duncan's old line, and running north 3 degrees 00 minutes east 1253 feet, more or less with said line to a maple stump; Duncan's corner; thence south 15 degrees east 725 feet with Duncan's line to a maple on top of a ridge; thence south 54 degrees 00 minutes east 348 feet to a stake in a branch; thence south 55 degrees west 688 feet to the point of beginning, containing 5.7 acres more or less.

Tract (b)

Beginning on a hickory in said Duncan's old line near J. W. Duncan's house on the waters of Beaver Creek, and running north 3 degrees 30 minutes east 638 feet with said line to a chestnut stump near the blacksmiths shop; thence north 3 degrees east 575 feet to a stake; thence north 74 degrees 30 minutes west 106 feet to a stake in the edge of the branch; thence north 21 feet to a stake in the old road; thence south 84 degrees west 248 feet with the road to a stake near Duncan's fence; thence south 423 feet to a stake in the road near branch; thence south 2 degrees 30 minutes west 251 feet to a stake in edge of road; thence south 28 degrees 30 minutes east 626 feet to the point of beginning, containing 7.4 acres more or less.

Tract (c)

Beginning on two black gums near the branch in what was formerly Byron Harden's line, running north 23 degrees east 40 poles to a small sugar tree; thence north 50 degrees west about 506 feet to a stake in what is now or was formerly Mrs.

T. M. Duncan's line; thence south 33 degrees 30 minutes west 684 feet with said Duncan's line to a big maple in what was formerly Mrs. Roda Holman's line; thence south 64 degrees 00 minutes east 348 feet with said line to a stake in branch; formerly Byron Harden's line; thence south 47 degrees east 290 feet with said line to the point of beginning, containing 8.8 acres more or less.

TO HAVE AND TO HOLD the above described tracts and parcels of land for mining purposes only unto the lessees their heirs and assigns for the foresaid period of years upon the full compliance of all the following terms, conditions, payments of royalties and agreements.

1- Mining Rights.

The lessees shall have the right to go upon said lands and search for, obtain, mine and prospect for mica, feldspar and other minerals. They are to have the right to use of roads over said property and all other mining privileges necessary to carry out their mining operations. Work in said mines shall commence within 15 days from this date, (February 26th., 1958) and shall not cease for more than 30 days, (unavoidable accidents and acts of God excepted) and when work shall cease by them they are to leave all mines in a good clean workable condition with all muck and mine waste removed, all timbers, cribbing and supports are to be left in said mines and no legs of rock are to shot out and the mines are not to be (what is commonly known as robbing) done. They shall use sufficient machinery at all times to carry on their mining operations in a good workman like manner.

2- Royalties.

The lessees are to pay the lessors their heirs or assigns the sum of one-eight of the sale price of all mica mined from said mines, the sum of 50 cents per ton for all feldspar mined and sold, the usual and customary royalty being paid in this state for any other minerals mined. All royalties are to be paid immediately after each and every sale made of any minerals and a duplicate bill of sale furnished the lessors each time the royalty is paid on any minerals sold.

All mica mined from said premises is to be kept in a safe place under lock and key and kept separate and apart from any other mica mined from other mines by the lessees. The lessors their agents or assigns shall have the right to visit and inspect the mines at any time they so desire, also the right to visit and inspect the mica wherever same is stored or being prepared for the market. All mica is to be prepared for the market by capable workers who know how to work mica and shall be prepared so as to bring the highest possible price. The lessors are to have the right to inspect the books of the lessees in so far as they pertain to any mining operations they have carried on upon the properties of the lessors.

The lessors their agents, heirs or assigns are to be in no way liable for any of the operations of said mines by the lessees and shall be in no way liable for and wages, debts, injuries or leins due by the lessees. In case any of the above named terms, conditions, agreements are not fully complied with including the following ones then the lessors their heirs, agents or assigns shall have the right of immediate reentry upon said properties without any further notice to the lessees, their heirs and assigns, with the full right of possession without any legal notice or action upon the lessors part.

3- Assignment.

This lease cannot be sold, sub-let or assigned in whole or part without the lessees first obtaining the written consent thereto of the lessors, their agents, heirs or assigns.

The lessors agree with the lessees that they will sign any papers necessary for the Lessees to secure a Gov't. Loan on said property from the DMEA.

5- Covenants.

IN WITNESS WHEREOF, the lessors E. L. Briggs and wife Eloise Briggs his wife have each hereunto set their hands and seals the day and year first above written.

E. L. Briggs (Seal)

Eloise Briggs (Seal)

Lessors

NORTH CAROLINA

YANCEY COUNTY

Personally came before me this day E. L. Briggs and wife Eloise Briggs, the lessors who signed and acknowledged the due execution of the Annexed Mining lease for the purposes therein expressed.

Witness my hand and seal this the 26th. day of February 1958.

Seal

H M Angel
Notary Public

My Commission expires ** 4/5/59

NORTH CAROLINA

MITCHELL COUNTY

Personally came before me this day Lewie Aldridge, Claude Greene, and Ira Goins, the lessees who each signed and acknowledged the due execution of the annexed mining lease for the purposes therein expressed.

Witness my hand and seal this the 28 day of February 1958.

Seal

Buena Vance
Notary Public

My Commission expires 1-25-58

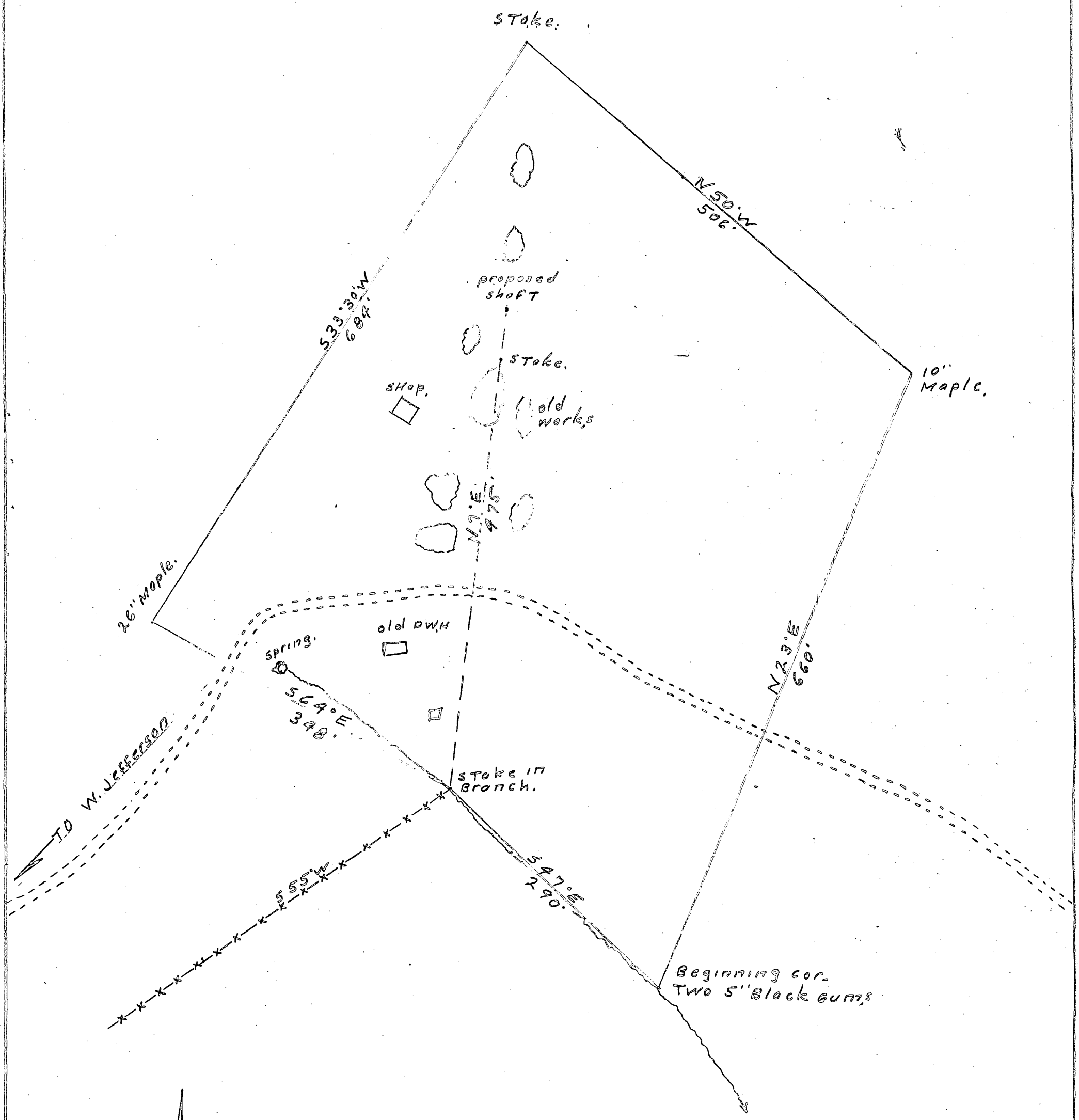
COPY

IN WITNESS WHEREOF, the lessees, Lewie Aldridge, Claude W. Gree
and Ira Gains have each hereunto set their hands and seals the day and y
first written above.

LEWIE ALDRIDGE (Seal)

CLAUDE W. GREENE (Seal)

IRA GAINS (Seal)



HARDIN MINE LOCATED APPR-
5 MILES S:W OF WEST JEFFERSON
ASHE CO. N.C.
BOUNDRY CONTAINS 8.8 ACRES
RECORDED IN BOOK # T-3 PAIGES 502-
503 ASHE CO. N.C.
SCALE. 1" = 100'
DATE. APRIL. 14. 1958

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/6	Houk	600
3/6	Selfridge	220
		110
3/6	c	220
		600

MAR 6 1959 600

Mr. Lewie Aldridge

Spruce Pine, North Carolina

Re: Docket No. DMEA-4972-Mica
Lewie Aldridge, et al.
Harden Mine
Ashe County, North Carolina

Dear Mr. Aldridge:

Reference is made to our letter of January 29, 1959, regarding action required to make your DMEA application eligible for consideration under the OME regulations.

We wish to cooperate with you in allowing ample time to complete such action, but, if we do not hear from you within 30 days from the date of this letter, we will assume that you are no longer interested in proceeding with your application, and we will consider it as having been withdrawn.

Sincerely yours,

(signed) FRANK E. JOHNSON (pt)

Acting Director

LGHouk:gad 3/5/59
Copy to: Dir. R. File
Region V
Mr. Kiilsgaard
Mr. Dietrich

no response received to date 4-13-59 gad

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Washington 25, D. C.

January 31, 1959

Memorandum for Docket

Subject: Withdrawal of Pending DMEA Applications

Effective this date, this pending DMEA application is considered withdrawn for statistical purposes.

If, at a later date, the applicant requests reconsideration under the OME program, all pertinent material in the DMEA file should be transferred to the new OME docket.

Frank E. Johnson
Frank E. Johnson
Acting Director

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1/19	Houk	600
1/22	Selfridge	120
		~~110~~
1/24	C	220
		600

JAN 29 1959

600

Mr. Lewie Aldridge

Spruce Pine, North Carolina

Re: Docket No. DMEA-4972-Mica
Lewie Aldridge, et al.
Harden Mine
Ashe County, North Carolina

Dear Mr. Aldridge:

Enclosed is a copy of the regulations for obtaining Federal assistance in financing mineral exploration under which the new Office of Minerals Exploration will operate.

If you wish that your partly processed DMEA application be considered under the OME regulations, please complete and return four of the copies of the attached application, OME Form 40.

Your attention is called especially to the certification which when signed declares that you would not ordinarily undertake the proposed exploration under current conditions and circumstances at your sole expense, and to Item 1(a) -- and 1(c) if applicable -- which relates to information used to determine your financial eligibility under the new exploration program. Information that is included in your DMEA application need not be repeated in the OME application, but you can add new information if you so desire. Please supply this office with the results of the bulldozing work completed after the application was submitted, and the results of the work completed to get beneath the old workings. Please supply a lease on the tract to the northeast, and a map showing boundaries of the new tract. We are returning five copies of the Consent to Lien, dated March 1, 1958, and signed by E. L. Briggs and Eloise Briggs.

Also enclosed are six copies of the Lien and Subordination Agreements, OME Form 52, referred to in Item 2(c) of the application, for each tract. Early submittal of five completed copies for each tract will save time in case you apply for exploration assistance under the OME program and a contract is granted.

If you do not wish to participate in the OME program, we shall appreciate being so informed.

Sincerely yours,

Frank E. Johnson

Acting Director

LGHouk:gad 1/16/59

Copy to: Dir. R. File
Region V
Messrs. Kiilsgaard
Dietrich
Houk

Enclosures

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9/19	Anderson	600
"	Cole	100
		220

600

SEP 19 1958

Mr. Lewie Aldridge

Spruce Pine, North Carolina

Re: DMEA-5055-Mica
DMEA-4960-Mica
DMEA-4972-Mica

Dear Mr. Aldridge:

As you have applications for exploration aid pending in our office, perhaps you may wish to study the proposed OME regulations and comment on them before October 17 as provided in the first paragraph of the enclosed notice reprinted from the Federal Register of September 17, 1958.

Some time after October 17 when the final regulations become effective, we will send you the new application forms so you may furnish any additional information necessary to process your applications for aid under the new program.

Sincerely yours,

C. S. Mitzendorf

ACTING Director

Enclosure

LGHouk:gad 9/19/58
Copy to: Dir. R. File
Mr. Houk

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7/18	Houk	600
7/18	Martin	130
7/18	Lamb	130
7/18	Nelson	130
"	Johnson	110
"	Mittendorf	100
		220

600

JUL 18 1958

The Harden Mine
c/o Mr. Lewie Aldridge
Spruce Pine, North Carolina

Re: Docket No. DMEA-4972-Mica
Lewie Aldridge, et al.
Harden Mine
Ashe County, North Carolina

Gentlemen:

Early in June we sent you the Department of the Interior Information Service Release dated June 6th which announced that no new Defense Minerals Exploration Administration contracts could be executed after June 30th because of the ending of the present program for exploration assistance.

We regret to inform you that your application, identified above, could not be completely processed before June 30th because necessary information was not supplied.

However, we will be glad to hold your application until the Congress acts on pending legislation to continue exploration aid. If the aid is continued, we will then ask you to state whether you wish us to consider your application under regulations extablished for the new program.

Sincerely yours,

C. O. Mittendorf

Administrator

LGHouk:rsi 7/18/58
Copy to: Admr. R. File
Operating Committee
Field Team, Region V
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Mr. Houk

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

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June 11, 1958

Memorandum

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

From: Field Team, DMEA, Region V, Knoxville, Tennessee

Subject: Docket No. DMEA-4972 (Mica)
Lewie Aldridge, et al., Spruce Pine, North Carolina
Harden Mine, Ashe County, North Carolina

Reference is made to your letter of May 26:

The enclosed letter from Mr. Aldridge was received today.

Robert A. Laurence
Robert A. Laurence
Executive Officer

V. J. Lynch
V. J. Lynch, Member
Bureau of Mines

Enclosures 3

Aldridge Motor Company, Inc.

Sales - - Service

TELEPHONE PO 5-4246-4247-4248

Spruce Pine, N. C.

CENTRAL FILE COPY
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June 9, 1958

Mr. Robert A. Laurence
Executive Officer
DMEA
Room 13 - P. O. Building
Knoxville, Tennessee

Dear Mr. Laurence:

In regard to the exploration loan on the Hardin Mine, we are setting up the equipment and dozing as far as possible. I have worked the mine off and on since 1952 and know every hole and corner in the mine. I believe that we can prove to your field team that it hasn't been worked out below or under the point we want to explore.

We will notify you when we have drifted or sunk the shaft far enough to prove to the field team that it hasn't been worked out below us at this point.

Yours very truly,

Lewie Aldridge

Lewie Aldridge

LA:mh

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MAY 26 1958

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4/21	Knouse	600
5/21	Houk	600
5/23	GCS	130
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"	Butterworth	100
5/26		220
		600

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

Re: Docket No. DMEA-1972-Mica
Lewis Aldridge, et al.
Harden Mine
Ashe County, North Carolina

Dear Mr. Laurence:

All our information indicates that a substantial part of the shaft recommended by the Field Team will pass through old workings before it reaches the target area. Therefore, the Applicant should be advised that DMEA could not participate in this part of a project. If he should complete the shaft through the old workings and expose the pegmatite (at his expense) we could better evaluate the merits of the proposed program. If this work is completed, another examination should be made of the property and a supplementary report furnished for consideration.

Since we are not sure that the DMEA authority will be extended beyond June 30, 1958, the Applicant should be advised that the completion of this work does not imply that a contract will be approved.

In case the Applicant is willing to proceed on this basis, he should be advised also to obtain a lease on the adjoining land along the northeast projection of the pegmatite which is not less than 200 feet by 200 feet with about 100 feet being on each side of the pegmatite. The following would also be requested: (1) copy of the lease covering the additional land, (2) map showing the property boundaries in relation to the above property, and (3) the original and four copies of a Consent to Lien and Subordination Agreement, including a description of the land by metes and bounds, executed by the land owner.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

Approved:

Frank D. Lamb (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

FEJohnson/FLKnouse:rsi 5/21/58

Copy to: Admr. R. File
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Johnson
Mr. Dietrich, 3061
Mr. Houk
Mr. Knouse

8623

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Void

The Harden Mine
c/o Mr. Lewie Aldridge
Spruce Pine, North Carolina

Re: Docket No. DMEA-4972-Mica
Lewie Aldridge, et al.
Harden Mine
Ashe County, North Carolina

Gentlemen:

Before we can continue processing your application to explore the above property, we require the following information:

1. The exploration program under consideration consists of sinking a two-compartment 90 foot shaft along the pegmatite from a site about 50 feet northeast along the old open cut from the Williams shaft, followed by drifting from the shaft along the pegmatite, chiefly in a northeast direction, not more than 125 feet.

All of our information indicates that a substantial part of the proposed shaft will pass through old workings.

Before we can evaluate the merits of this program, you should complete the shaft through the old workings (at your expense) and expose the pegmatite. When this work is completed you should advise Mr. Lawrence of our Knoxville Office who will schedule another examination of the property.

2. Since the proposed work (drifting) will end a short distance from the northeast property boundary, you should obtain a lease on the adjoining land along the projected strike of the pegmatite which is not less than 200 feet by 200 feet and about 100 feet on each side of the pegmatite.

In this connection, please forward (a) copy of the lease, (b) map showing the property boundaries in relation to the above property, and (c) the original and four copies of a Consent to Lien and Subordination Agreement executed by the land owner.

Sincerely yours,

Lawrence G. Houk, Director
Division of Nonmetallic Minerals

Knouse:rsi 5/20/58
y to: Admr. R. File
Field Team, Region V
Mr. Kiilsgaard, 5222

Mr. Knouse
Mr. Dietrich, 3061
Mr. Houk

8623

DMEA 4972

May 21, 1958

Memo to the Files:

Mr. Houk discussed this with Mr. Johnson and we concluded that it would be better to advise Laurence - we would not go for the sinking thru the old stopes. We will caution Laurence not to imply a contract would be given if the work is done.

Since it is doubtful that the Operator could complete the rehabilitation work and the Field Team could examine and report before June 30, 1958, Laurence should advise the Operator that the authority and funds may not be available after June 30th.

LGH

DMEA-4272

Memo to the Files 5/21/58

Mr. Houk:

Letter puts us in a bad position of telling Applicant to do certain things which probably couldn't be done in time to execute a contract before 6/30/58. Tone of letter implies a contract will be given after another field examination is made. We should discuss.

FEJ

May 20, 1958

Telephone conversation between Mr. L. G. Houk and Mr. R. A. Laurence in Knoxville, Tennessee.

Re: Docket No. DMEA-4972-Mica
Lewie Aldridge, et al.
Harden Mine

I stated that we would probably require Mr. Aldridge to complete the work to the bottom of the old workings at which time we would examine the property and then decide on ~~to go for~~ a project of sinking and cross-cutting. I mentioned that we would probably tell Lewie Aldridge in our letter that in view of his not completing the Murphy Mining Company contract we would require completion of the contract work if the Government felt it was justified, and that we would require repayment of the entire amount if he did not complete the contract work.

DEFENSE MINERALS ADMINISTRATION

97023

PRODUCTION EXPANSION DIVISION

PROCUREMENT APPLICATIONS

Name of Company and Address _____

Name of Mine and Location _____

Docket No. DMA - _____ Date received by P.E.D. _____

Metals or Minerals involved _____

Length of Contract (preproduction plus production) _____

Amount of Metals or Minerals in tons, units or pounds _____

Floor price or Guaranteed price and whether or not escalated _____

Maximum Government Commitment _____

Comments on Contract: _____

_____

_____

_____

_____

_____

Date sent to Legal Division _____

Date of Recommendation to D.P.A. for Certification _____

Date Certification sent to G.S.A. by D.P.A. _____

Date signed into Contract by G.S.A. _____

Additional Remarks: _____

_____

_____

_____

_____

NOTE: If application is denied, or if it is recommended for change into exploration, etc., please state under additional remarks.

Signed _____

Interior—Duplicating Section, Washington, D. C.

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

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IN REPLY REFER TO:
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Memorandum May 16, 1958

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Field Examination Report, DMEA 4972 (Mica), Lewie Aldridge, et al., Harden Mine, Ashe County, North Carolina.

The examining team report that geologic conditions on the applicants' property are good for the presence of undiscovered strategic-grade mica deposits. The following favorable features are cited in their examination report: 1) the mica is generally of excellent quality, 1952-1957 production averaged $14.77 per pound, 2) two pegmatite veins exist on the property. One vein has been relatively unexplored. It is to be expected that the favorable conditions which existed on the explored vein are present on the unexplored one.

Somewhat adverse reports were made of the production and value of the mica at the Harden mine by earlier investigators. These reports, however, date back to 1948 or earlier. Since then, further work in the mine has disclosed the existence of, for instance, the mica that was mined during the period July 25, 1952, through September 26, 1957. That mica amounted to 3,137 pounds that had a total value of $46,332, or an average value of $14.77 per pound.

The examiners recommend approval of a DMEA contract that would provide for a 90-foot, vertical or inclined, shaft and a maximum of 125 feet of drift and/or crosscut. The estimated cost of the work is $8,915. The examiners point out that the site of the proposed work lies within 200 feet of the northeast boundary of the property. A DMEA contract should therefore be contingent on the inclusion of property adjacent to the property already controlled by the applicant.

I agree with the recommendations of the examining team for approval of the application on the grounds that a significant discovery of strategic-grade mica would be likely to result from the proposed work.

W. P. Williams

W. P. Williams

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

May 16, 1958

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Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Branch of Ceramic and Fertilizer Materials

Subject: DMEA-4972 (mica)

Applicant: Lewie Aldridge, et al.

Name and Location of Property: Harden Mine, Ashe County, N. C.

Date of Field Team Report: 5/9/58

Date Rec'd. by Br. of Ceramic & Fertilizer Materials: 5/15/58

Field Team Recommendation: Recommend that exploration assistance be granted.

Comments:

1. This is an old mine which has been operated intermittently with production of a large quantity of high quality strategic mica.
2. Most of the past production has come from comparatively shallow depths, but the last production (1952-57) came largely from deeper workings on one of the main pegmatite lenses.
3. A second postulated lens or shoot predicted at depth is the exploration target.
4. Proposed exploration outlined by the field team is consistent with good engineering practices and estimated costs are in line with other DMEA projects.

Recommendation:

I concur with the recommendation of the field team that exploration assistance be granted.

W. F. Dietrich

W. F. Dietrich

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

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May 9, 1958

Memorandum

To: Operating Committee, DMEA - Washington

From: DMEA Field Team, Region V - Knoxville, Tennessee

Subject: Field Examination Report - DMEA-4972 (mica)
Lewie Aldridge, et al. Harden Mine, Ashe County, N.C.

Transmitted are three copies of the subject report with 8 extra copies of the map.

The Field Team concurs with the Field Examiners in their recommendation for exploration on the subject property.

V. J. Lynch

V. J. Lynch, Acting
Executive Officer, DMEA
Region V

S. C. Bergman

S. C. Bergman, Geologist
Geological Survey

z

On-Site Exam Rpt

Reviewed by
DMEA OPERATING COMMITTEE
5-16-58
(date)

UNITED STATES

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OFFICIAL FILE COPY
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RECEIVED MAY 12 1958

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FIELD EXAMINATION REPORT, REGION V

DMEA-4972 (Mica), HARDEN MINE
Ashe County, North Carolina

Helmuth Wedow, Jr., Geologist
U. S. Geological Survey

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

May 9, 1958

Reviewed by
DMEA OPERATING COMMITTEE
5-16-58
(date)

FIELD EXAMINATION REPORT

DMEA-4972 (Mica), HARDEN MINE
Ashe County, North Carolina

Applicants: A partnership consisting of Lewie Aldridge and Claude W. Greene, Spruce Pine, N. C., and Ira Goins, Plumtree, N. C.

SUMMARY

The Harden (Hardin or North Hardin) Mine near West Jefferson in Ashe County, North Carolina was discovered prior to 1880 and has long been worked intermittently on a large, systematic scale. The pegmatite mined appears to be in a series of generally interconnected lenses in one sheet conformable to the foliation of the gneissic country rock. The strike of the sheet and foliation is N. 20°-40° E. and the dip is 60°-70° SE. The thickness ranges from 2 to 10 feet with an average of about 5 feet, although local abrupt upward pinch-out has been noted. The positions of the more prominent underground workings and available production records suggest that the chief production has been won from two main lenses or shoots which plunge either vertically or at high angles in the plane of the dip.

The mica is generally of excellent quality, ruby in color with some mottling, and fairly flat and free-splitting with few or minor defects. Sheet sizes range from 1 by 2 inches to 3 by 4 inches, although some larger are also reported. An average of a 6-month production period during World War II shows that over 85 percent of the sheet and punch mica sold graded "good stained" or better according to the classification then in use. In 1952-1957 over 3,100 pounds were produced and averaged $14.77 per pound. Early production (that is, through World War II) was obtained mostly from open cuts and from underground workings to a depth of about 50 feet on the vein. The more recent sales came chiefly from mica mined in deeper workings at the southwest end of the pegmatite structure. It is believed that a favorable target is present at a similar but unworked depth in the more northeasterly of the two postulated lenses or shoots and that with exploration a significant reserve of high quality strategic mica may be discovered.

In order to explore the target postulated above the examiners propose a 90-foot vertical and/or inclined shaft with a maximum of 125 feet of appropriate level work (drift and/or crosscut). Consequently, approval of the application on the Harden Mine, as modified,

is recommended. However, as most of the proposed work is within 200 feet of the northeast property boundary, the approval should be contingent to the inclusion of the property next adjacent to the northeast.

INTRODUCTION

Location

The Harden Mine, also known as the Hardin or North Hardin Mine, is located 2.1 miles airline distance S. 47° W. of West Jefferson, Ashe County, North Carolina. It lies at an elevation of about 3,600 to 3,800 feet. (See Winston-Salem, N. C.; Va.; Tenn. quadrangle, scale 1:250,000, Army Map Service 1955 edition.) It is reached by about 3.6 miles of U. S. Highway 221 south from West Jefferson through Beaver Creek, thence by about a mile of dirt road to the Duncan (Harris) Mine, and lastly by about 300 yards of truck road or "farm lane" northeast from the Duncan Mine.

Field examination

The field examination of the Harden Mine was made on the afternoon of April 8, 1958. The actual on-site time amounted to about 3 hours with an additional 3 hours of travel-time required for the round trip from the Spruce Pine district. The examiners were accompanied by Messrs. Lewie Aldridge and Ira Coins of the applying partnership.

Applicant

The Applicant is a partnership consisting of Lewie Aldridge and Claude W. Greene of Spruce Pine, N. C., and Ira Coins of Plumtree, N. C. Messrs. Aldridge and Greene have both operated contracts under

the DMEA program. Mr. Coins has mined mica for about 30 years, having been mine superintendent on several operations. He is currently partner with Mr. Aldridge and "mine-super" in the operation of the nearby Duncan Mine and will be the actual operator for the Harden project, if a contract is drawn.

Mine history, workings, and production

The information in this section is drawn chiefly from reports by D. B. Sterrett (USGS Bull. 740, pp. 174-175, fig. 45, 1923); R. H. Jahns (unpublished USGS report, probably written in 1945); and J. C. Olson (unpublished USGS report, dated June 12, 1948). Some data are also from the files of the Colonial Mica Corporation and the G. S. A. Purchasing Depot at Spruce Pine.

The Harden Mine was discovered prior to 1880 and was worked intermittently but on a large, systematic scale for many years. Sterrett reports in 1923 that the mine consisted of " . . . two open cuts and other pits, three crosscut tunnels to the 'vein', two shafts, and considerable drifting and stoping on the vein". He illustrates the relative positions of the three tunnels and related accessible stopes, and three open cuts, but not the shafts, in the figure with his account of the mine. He states that he shows only the workings open at the time of his visit and that most of the vein above the tunnels had been removed.

Jahns and Olson record that the mine was operated during World War I by J. E. Burleson and by F. R. Shaffer, and, in 1931, by Frank Fortner and J. R. McKinney. The workings reported by

Sterrett probably include the operations during World War I. There is no record of the location of the mining done in 1931.

According to Jahns: "The mine was reopened during World War II by the Excelsior Mining Company, which was headed by L. L. Williams and E. F. Watson in 1943, and by Dr. Williams and a Mr. Painter in 1944". Olson then states: "It was also operated by Dr. Williams and Homer Hise late in 1944 and until January 10, 1945". Olson continues: "Wartime work was done from a shaft 74 feet deep, about 200 feet from the southwest end of the workings". This was an old shaft that was first deepened " . . . to 54 feet and a 24-foot drift was run (northeast) from it. This drift was later lengthened to 68 feet and the shaft deepened to 74 feet".

The Harden Mine, presumably shut down after 1945, was operated intermittently in the period 1952-1957. The various operators during this period included: Bruce Keller, Ira Ward, C. J. Keller, Lewie Aldridge, Mack Buchanan, and the P. and W. Mining Company (Frank Phillips and J. E. Wilson). Although the bulk of the 1952-1957 mica was won by stoping from the P. and W. shaft (see map and sections), some was produced in the bulldozer trenching along the line of the old open cuts. The "Ledford" shaft was also sunk during this period by a Mr. Ledford. The approximate positions of the more recent workings as well as those reported by Sterrett, Jahns, and Olson are shown on the accompanying map and sections.

Sterrett reports that the Hardin Mine produced a large quantity of small block mica (sheets 1 by 2 inches to 3 by 4 inches) with some larger blocks (sheets 6 by 8 inches or more square). Colonial Mica Corporation data recorded by Olson show that in 1917 J. E. Burleson

realized $6,000 from a large quantity of punch mica recovered from the dumps. Production during the period December 25, 1943 through January 25, 1945, according to Jahns, by the Excelsior Mining Company and others was 536.06 pounds of trimmed sheet and punch mica valued at $3,167.04 (or $5.91 per pound). Olson adds that the total World War II production amounted to 1,131.25 pounds of strategic sheet mica with a value of $4,686.11 (or $4.14 per pound). Data received from J. P. McKinney at the G. S. A. Purchasing Depot in Spruce Pine show that sales to the depot from the Harding (Harden) Mine during the period July 25, 1952 through September 26, 1957 amounted to 3,137.26 pounds for a total of $46,331.70 for an average value of $14.77 per pound. Of the above total the Applicant reports that about $14,000-worth was produced by the P. and W. Mining Company in 1956-1957.

Property

The Harden Mine is located on a tract stated in the lease to contain 8.8 acres more or less. This property is the northeasternmost of three properties (Tracts A, B, and C) leased jointly by the Applicant, said lease stated to have been recorded on March 19, 1958 (Office of Register of Deeds, Book T-3 of Deeds, pages 502, 503, Ashe County, N. C.). The Applicant requests that Tracts A and B be excluded specifically from any contract as he is now operating the Duncan Mine on adjacent Tract A.

When the data shown on the Applicant's property map (submitted after the field examination) were adjusted to the survey of

old surface workings made by the examiners, it was shown that some of the older surface openings lie northeast of Tract C. The adjusted surveys also show that the proposed DMEA work will lie within less than 200 feet of the northeast boundary of the property. It is, therefore, specifically recommended that a contract, if any is granted, on the Harden Mine be contingent to the inclusion of the property next adjacent on the northeast.

GEOLOGY

The country rock at the Harden Mine is chiefly hornblende gneiss. The immediate wall rock of the pegmatite body, however, is generally a mica gneiss, locally schistose and in part granitized. The foliation of the gneiss varies in strike from N. 20° E. to N. 40° E., probably averaging about N. 30°- 35° E. The dip appears to be persistent to the southeast at an angle varying between 60 and 70 degrees. According to Jahns and Olson the pegmatite bodies are conformable layers or lenses lying in one sheet with thicknesses ranging from 2 to 10 feet and averaging about 5 feet. Abrupt upward pinch-out was reportedly noted in at least two places. When operations were abandoned in January 1945, pinching out of the pegmatite was also reported. This pinch-out is presumed to have been in the Williams or "Colonial" shaft, but whether it was downward, upward, or lateral is not known. Most conceivably it was upward, as the other recorded pinch-outs were upward and the known underground operations at this mine were in overhead stopes. Sterrett notes that in a shallow shaft or open cut northeastward the vein has thinned to about 18 inches.

The pegmatite has been prospected for but not found for a distance of at least 150 feet southwest of the main workings. Most contacts with the wall rock are sharp but are locally gradational with the injection of pegmatite into the adjacent gneiss.

No data are available to show the plunge direction of the pegmatite lenses except that the positions of the various underground workings (see Section A-A', figure 2) suggest that the plunge may be close to vertical or at high angles either north or south. On the basis of these very limited, highly conjectural data there is the suggestion that at least two main lenses of pegmatite have been mined on this property. One of these lenses lies at the southwest end of the workings and was tapped in early operations by Tunnels 1 and 2 and at greater depth by the highly profitable 1952-1957 operations through the P. and W. shaft. The second main lens, if such lenses exist, was that opened by Tunnel 3 and by the Williams shaft. This latter shaft and accompanying stope work, however, may have been on the edge of the second lens or in thinner, less productive pegmatite connecting the two lenses. If the assumed second, or more northeasterly lens has the same downward continuity as that of the first, then it is reasonable to expect a block of ground containing a significant amount of mica to lie below the area stoped through Tunnel 3. This area below Tunnel 3 is the target of the exploration proposed by the field examiners.

Jahns reports on the petrology and mineralogy of the pegmatite as follows:

"The pegmatite, which is poorly exposed, is medium- to fine-grained. It consists mainly of plagioclase, quartz, microcline, and muscovite. The microcline tends to be coarser than the other minerals, and some masses contain graphic intergrowths of quartz. Accessory minerals include apatite, biotite, small, brownish red garnets, and rare golden beryl. Green apatite is unusually abundant as irregular, fractured masses, and fine flakes of yellowish green mica also are plentiful.

"The mica is ruby in color, and some books are mottled. Structural defects are ruling, haircracks, reeves, and waviness. Most of the mica appears to have been small, though some 6 by 8 inch books are said to have been obtained. In general the quality is good."

Olson also states that the mica was ruby and of excellent quality. Such mica as was seen by the examiners on the mine dumps also appeared to be of fair quality. It was ruby, slightly mottled, generally flat and free-splitting, and appeared to have a minimum of defects and inclusions. Production of trimmed punch and sheet during a 6-month period during World War II averaged 11 percent No. 1 (clear to fair stained), 76 percent No. 2 (good stained), and 13 percent No. 2 inferior (stained to heavy stained). The average value of $14.77 per pound of the 1952-1957 production also attests to the good to excellent quality of the mica.

In addition to the main pegmatite sheet a thin (1 foot thick) discordant pegmatite, referred to as the "Flat A" vein, was observed in a short inclined adit from the northwest wall of the trench (see map). Its strike is about the same as the main pegmatite but the dip is at a low angle to the northwest. It is assumed that this discordant body is but one of the injections into the wall rock from the main body.

PROPOSED EXPLORATION PROGRAM

Applicant's proposal

The Applicant has proposed a 150-foot deep shaft " . . . approximately 350 feet from either of the old workings" with 75-foot crosscuts (drifts) to the north and south, the positions of which would be determined later by agreement. The shaft location as stated in the application is rather hazy, but as indicated at the time of the examination was to have been at the site of or close by the World War II Williams or "Colonial" shaft, now caved and filled with debris. The costs submitted in the application (but based on only 100 feet of shaft) totalled $11,350.00.

Field examiners' proposal

As the Applicant's proposed exploration is rather vaguely stated and does not take into consideration such factors as location of older workings and such geologic data as are available, as well as interpretations therefrom, the examiners are recommending an alternate proposal. Thus, it is proposed that a 90-foot vertical and/or inclined shaft be sunk to follow the pegmatite structure at the site, shown on the accompanying map, about 50 feet northeast along the old open cut from the Williams shaft site. This shaft may cut through old stopes from Tunnel 3 and the Williams drift, but this is only surmised as their plotted locations are at best only very sketchy. To explore the lateral or strike extent of the possible pegmatite lens from the 90-foot shaft, a maximum of 125 feet of drift and/or crosscut is suggested. This amount of level work should

be largely to the northeast, although a short heading should also be pushed southwest to explore the structural relations of this edge of the possible lens.

Estimated costs of the project recommended by the field examiners total $8,915.00. The breakdown of these costs follows:

ESTIMATED COSTS

Shaft Site Preparation

Excavate by bulldozer on hangingwall side of existing trench, an area 40' x 20' x 15' -
444 cu. yds. @ 30¢/cu.yd..... $133.00

Construct

Toolhouse (7' x 8' x 10')	$75.00	
Powder Magazine (4x3x2½)	25.00	
Exploder Magazine(2'x1½'x1')	15.00	115.00

Shaft Sinking: From the bottom of the prepared excavation sink 90' of inclined and/or vertical shaft, 5' x 7' in cross-section, two-compartment with separate manway, ladders and landings at specified intervals. (60 shifts)

Labor:

1 - Foreman-Miner @ $1.75/hr.	$840.00
1 - Hoistman @ $1.50/hr	720.00
1 - Laborer @ $1.00/hr.	480.00

Equipment (rental)

Air Compressor @ $150/Mo.	450.00
Hoist, single drum-air @ $50/Mo	150.00
Rock drill w/air hose @ $40/Mo.	120.00
Electric Pump @ $50/Mo.	150.00

Supplies:

Gasoline and oil	180.00
Explosives	270.00
Drill steel	158.00
Timber - 4500 b.f @ $65/M	292.00
Small tools, pipe, etc.	180.00
Sales tax	32.00
Social Sec. & Ins.	245.00

Estimated cost of shaft sinking.... $4,267.00

($47.41/ft)

Drift: From 90 ft shaft bottom, drive not more than 125 feet of drift, 5' x 7' in cross-section, and timbered where necessary (62.5 shifts)

Labor:

1 - Foreman-Miner @ $1.75/hr.	$875.00
1 - Hoistman @ $1.50/hr.	750.00
1 - Laborer @ $1.00/hr.	500.00

Equipment (rental)

1 - Air Compressor (105 c.f.m.) @ $150/Mo.	$469.00
1 - Hoist, gas powered @ $50/Mo	156.00
1 - Rock drill w/hose @ $40/Mo.	125.00
1 - Jackleg @ $25/Mo.	78.00
1 - Ventilation fan w/airline, 2 months @ $60/Mo.	120.00

Supplies:

Gasoline and oil	235.00	
Explosives	344.00	
Drill steel	188.00	
Timber -2000 b.f. @ $65/M	130.00	
Miscellaneous	144.00	
Sales tax	31.00	
Social Sec. & Insurance	255.00	
Estimated cost of drifting.....		$4,400.00

($35.20/ft)

Total estimated oost of project.....	$8,915.00
Government participation @ 75%	6,686.25

CONCLUSIONS AND RECOMMENDATIONS

Exploration of selected ground at the Harden Mine with 90 feet of vertical and/or inclined shaft and 125 feet of level work is recommended. It is also recommended that the Applicant be required to obtain the property adjacent to the northeast. Reasons for these recommendations follow:

1) The mica obtained from past operations appears to have been of high quality. Although the size of the sheet mica is reported as small (1 by 2 inches to 3 by 4 inches), some as large as 6 by 8 inches has been produced. The mica is ruby in color with a minor amount of mottling. Some ruling, haircracks, reeving, and waviness have been noted. Over 85 percent of the production of sheet mica during a 6-month period during World War II was classified at that time as "good stained" or better. The mica produced in the period 1952-1957 and sold under the present program averaged $14.77 per pound.

2) Although incomplete records show only a small to moderate production through World War II, deeper operations (1952-1957) in an area probably no more than 50 by 150 feet on the vein produced over 3,000 pounds of mica valued in excess of $46,000.

3) The pegmatite vein, although apparently persistent along a specific zone, is lenticular and is reported to pinch out abruptly upward, locally. Interpretation of production data and positions of previous workings suggests that most production has come from two main lenses or shoots that plunge at angle close to 90 degrees down the plane of foliation in the gneiss. As the bulk

of the excellent 1952-1957 production largely came from deeper workings in one lens, a similar but unworked depth on the assumed second main lens is a reasonable exploration target.

4) If the postulated lens or shoot (as in item 3 above) exists, a significant reserve of high quality strategic mica may be discovered.

5) As the site of the proposed shaft and the bulk of the level work therefrom will probably be within 200 feet of the northeast boundary of the property, the contract, if granted, should be contingent upon the inclusion of the property next adjacent on the northeast along the strike of the pegmatite structure.

Helmuth Wedow, Jr., Geologist
U. S. Geological Survey

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

5-15-58

Mr Kilsgaard
sent for his report
on the Hardin Mine

gad

HARDIN MICA MINE, ASHE COU[illegible], N. [illegible]

The 2 Hardin tracts plus the Duncan tract [illegible]
Mineral rights only.

Location: 3 miles southwest of West Jef[illegible]
[illegible] over 3.6 miles of U. S. Highway 221 [illegible]
dirt road to the west.

References: U. S. Geol. Survey report, [illegible]
N. H. Jahns.
U. S. Geol. Survey Bull. 740, by D. [illegible]
Field examination reports and other [illegible]
nial Mica Corporation.

Economic data: J. R. McKinney of Bakersville, N. C., Colonial Mica Corporation field man during the war, states that although there may be some more mica to be mined here, the latest and deepest work was in pegmatite containing a lower proportion of mica blocks than that mined in the older workings nearer surface.

When the mine was reopened during the war, 2 advances totaling $1500 were made to the operators, with which a shaft was sunk 54 feet and 60 feet of drifting was done.

The mine was not operated very efficiently during the war, owing to the manpower shortage. It was abandoned Jan. 10, 1945, according to Colonial Mica Corporation field man's reports, because the pegmatite pinched down to a very small size and the mica was not of as good quality as formerly.

The pegmatite pinched out at several places in the old workings, and very likely would widen at depth again, but the fact that the mine-run mica recovered was only about 1 percent of the pegmatite, and the mica blocks were not very large, was probably the principal reason for abandonment of the mine.

Calculations to show value of pegmatite:

Past production: During World War II, 1,131.25 pounds valued at $4,686.11, strategic sheet mica.
Rock moved during this period: Approximately 750 tons
Percent mine-run mica in rock: 1.07
Wartime value of rock moved, per ton, after rifting: $6.25
Wartime value of mine-run mica, per ton, after rifting: $658
Reserves: Estimated 1,110 tons pegmatite to a depth of 80 feet below and adjacent to recent workings.
Value per ton of mine-run mica at present, before rifting: $250 assumed.
Value per ton of pegmatite, assuming mine-run value of $250: $2.68

Conclusions: The wartime work at the Hardin mine is reported by several sources to have been unprofitable. The pegmatite is not entirely mined out, and it is always possible that more mica might be found at depth, although to find it might be difficult. The wartime record indicates that the mine could not be operated profitably at present prices. To illustrate this, the production data have been compiled above, making assumptions where necessary because of inadequate data. The reserves for this illustration are assumed to be 1,110 tons of pegmatite, to a depth of 80 feet within a distance of 65 feet northeast of the Williams shaft, the pegmatite assumed to average 5 feet thick. The wartime recovery of mine-run from rock moved, 1.07%, is used in these calculations, and this low recovery is the principal reason why the mine could not be operated profitably. The calculated value per ton of pegmatite, about $2.68, is too low to permit profitable mining, and in addition to the actual mining of pegmatite an additional development cost would have to be added for the rehabilitation of the shaft and deepening from 74 to 80 feet.

Further development of this deposit is unlikely unless conditions in the mica industry become at least as satisfactory for mining as they were during the war, and probably even better conditions would be required. Therefore the selling price of the property will be determined by the amount speculators are willing to gamble on a return to high mica prices.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

April 18, 1958

DMEA
RECEIVED APR 21 19

DATE	INITIALS	CODE
4-21	C	22C
4/21	Hoch	600

Memorandum

To: Operating Committee, DMEA - Washington

From: Acting Executive Officer, DMEA - Region V

Subject: Property Maps on - DMEA-4960, Littles Mine and DMEA-4972, Hardin Mine, applications by Lewie Aldridge, Spruce Pine, North Carolina

Enclosed is a property map of the Littles Mine and a property map of the Harden Mine, both submitted upon request by the Field Examiners.

V. J. Lynch

map in envelope

Aldridge Motor Company, Inc.

Sales - - Service

TELEPHONE PO 5-4246-4247-4248

Spruce Pine, N. C.

DMEA
RECEIVED APR 21 1958
DATE | INITIALS | CODE

Attention: Mr. Robert A.Laurence and Mr. Shirley-

This map to be attached to the Application for Aid
Hardin Mine, Ashe County, North Carolina

Your Docket No. DMEA-4972

Lewie Aldridge
Spruce Pine, N. C.

RECEIVED
APR 17 1958
U. S. Geological Survey
Ceramic Division
Knoxville, Tenn.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
4/8	Houk	600
4/9	Selfridge	130
4/9	Lamb	130
4/9	Kiilsgaard	130
"	Johnson	110
"	Hutchinson	100
		220

APR 10 1958 600

The Harden Mine
c/o Mr. Lewie Aldridge
Spruce Pine, North Carolina

Re: Docket No. DMEA-4972-Mica
Lewie Aldridge, et al.
Harden Mine
Ashe 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,

Administrator

LGHouk:gad 4/8/58
Copy to: Admr. R. File
Operating Committee
Field Team, Region V
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Mr. Houk

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
4/9	Houk	600
4/9	[illegible]	130
"	Johnson	110
"	Wetherday	100
4/10	[illegible]	220

600

APR 10 1958

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

Re: Docket No. DMEA-4972-Mica
Lewis Aldridge, et al.
Harden Mine
Ashe 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 April 1 and 7, 1958, by Mr. E. B. Nelson, USGS, and Mr. W. F. Dietrich, USBM, 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 (GCS)

Approved:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

Enclosures 5

LGHouk:gad 4/8/58
Copy to: Admr. R. File
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Dietrich, 3061
Mr. Houk

8623

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

April 7, 1958

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: W. F. Dietrich, Chief, Branch of Ceramic and Fertilizer Materials

Subject: DMEA-4972 (mica)

Applicant: Lewie Aldridge, et al.

Name and Location of Property: Harden Mine, Ashe County, N. C.

Date Application Rec'd. by Br. of Ceramic & Fertilizer Mtls. 3/31/58

Comments:

1. Mica has been produced from this tract in the past and the applicant states that recent bulldozing work has exposed fresh mica-bearing pegmatite between old workings.

2. Over $25,000 worth of mica has been produced from this property since 1950.

3. Estimated unit cost for proposed exploration is 25 percent higher for crosscut and drift work than similar DMEA projects.

4. This deposit appears to have possibilities for the development of strategic mica.

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 applicant should agree on a definite plan of exploration on a unit-cost basis.

W. F. Dietrich

W. F. Dietrich

IN REPLY REFER TO:

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

April 1, 1958
Re: DMEA 4972
Lewie Aldridge et al
Harden Mine
Ashe County, N. C.
$11,350.00 - Mica

Memorandum

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

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

Subject: Review of application

The applicants request assistance in exploring a part of a 5-foot pegmatite not previously mined out.

No maps of the mine are submitted as part of the application, and only by inference can the application be related to old reports. J. C. Olson, in 1948, said the pegmatite had been traced for 600 feet by a series of shallow open cuts. At least 3 adits lower on the hillside lead to an extensive series of drifts and stopes. All together Olson points a dismal picture.

By inference, the new work will be between old workings, "350 feet from either". Perhaps, although the surface sill appears to be more or less intact, Olson's "extensive series of drifts and stopes" may undercut the sill and the pegmatite may be 'hollowed out'.

Referral of the application to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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

March 31, 1958

Mr. Lewis Aldridge
Plumtree, North Carolina

Subject: DMEA-4972

Dear Mr. Aldridge:

Your application for exploration assistance, dated March 25, 1958 submitted to our office at Knoxville, Tennessee has been assigned Docket Number DMEA-4972 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.

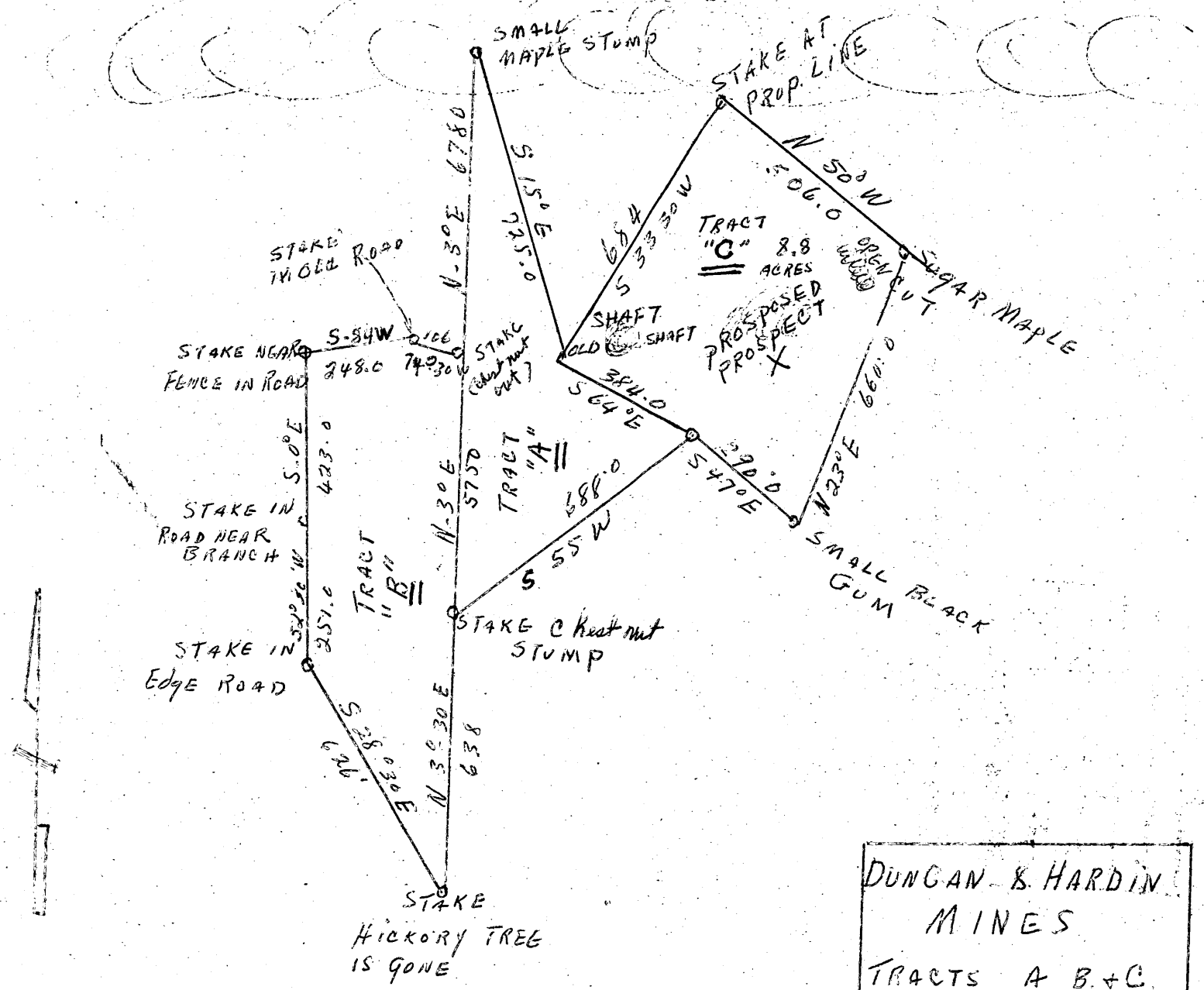
Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to: Region V

COPY

TOP OF RIDGE



DUNCAN & HARDIN MINES

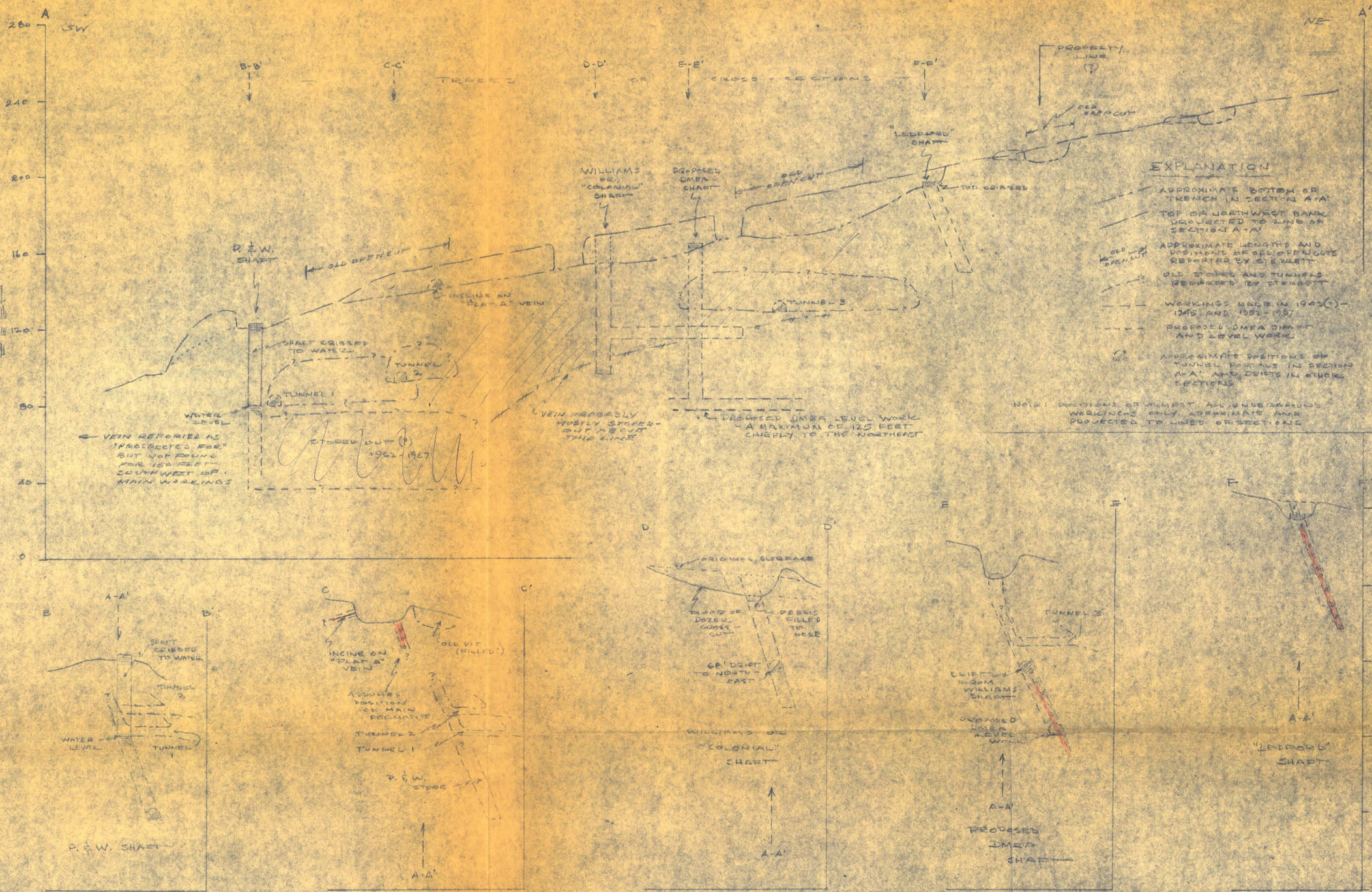
TRACTS A B + C
ASHE COUNTY

JULY 1st

SCALE 100 = 1/2

FILE COPY
DDC
RECEIVED 31 1958
CODE

FIGURE 2



HARDEN MINE

ASHE COUNTY, NORTH CAROLINA

—//—

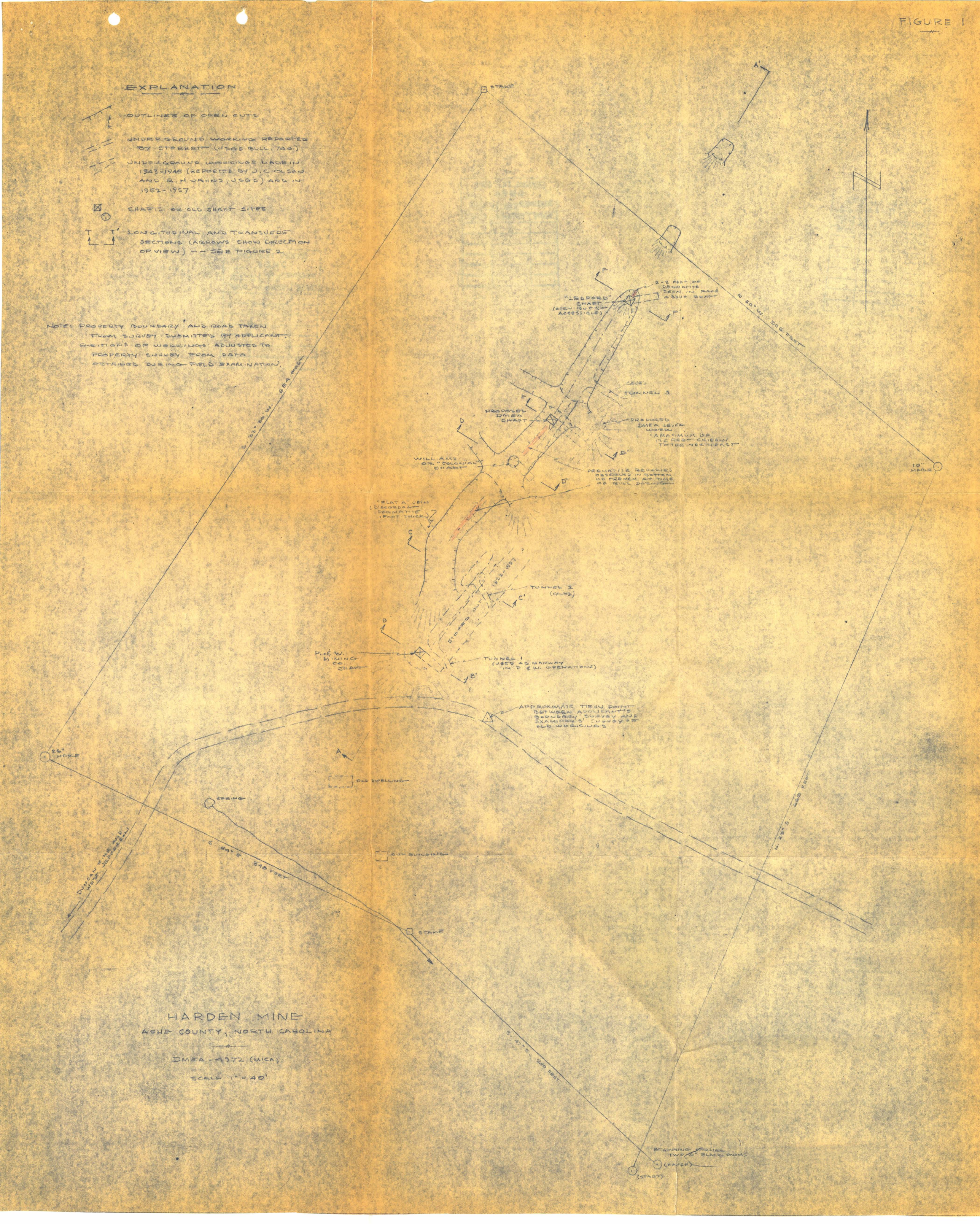
IMEA - 1972 (M.CA)

LONGITUDINAL AND TRANSVERSE SECTIONS

—//—

VERTICAL AND HORIZONTAL SCALE 1" = 40'

FIGURE 1



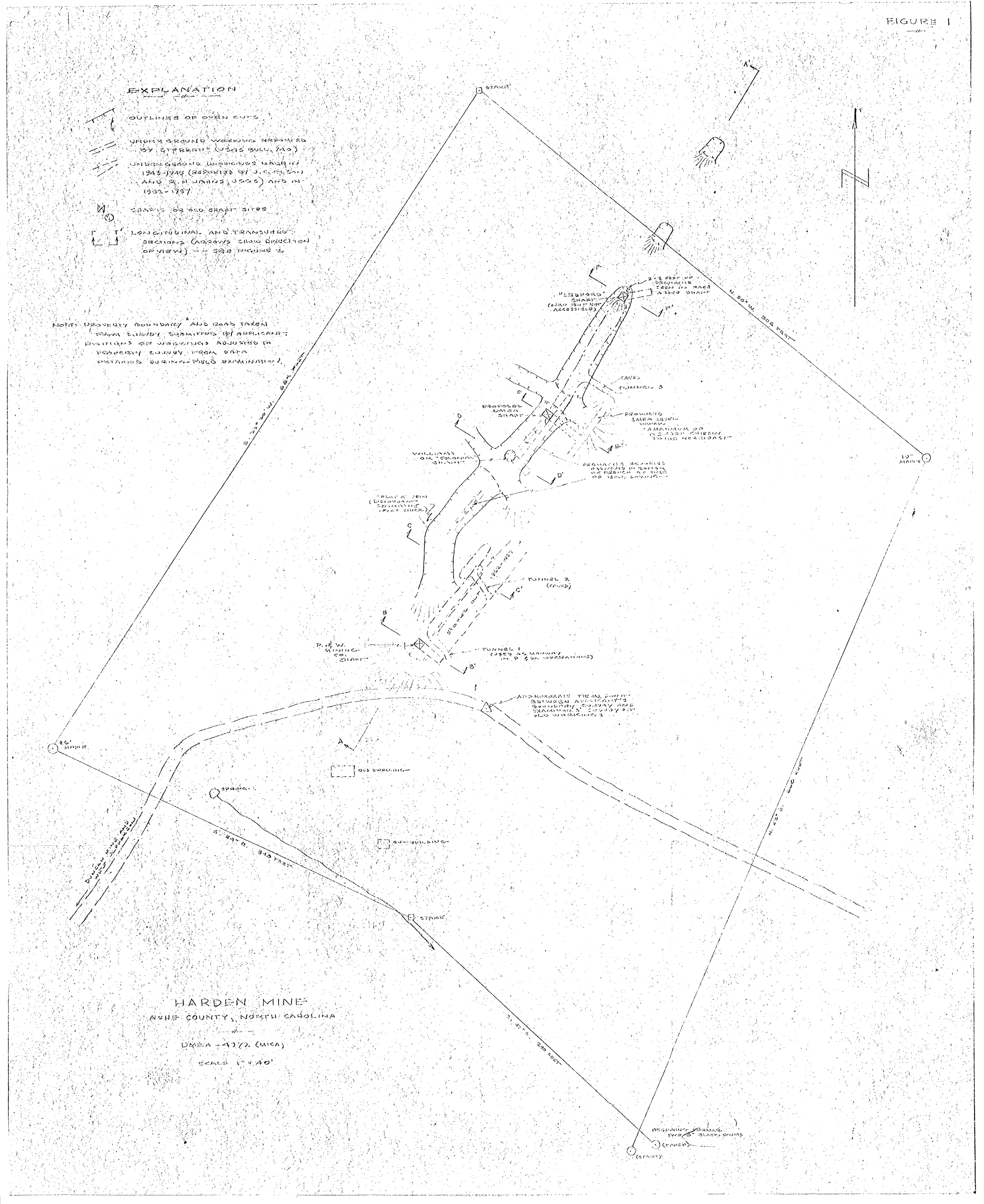
HARDEN MINE

ASHE COUNTY, NORTH CAROLINA

DMEA - 4972 (MICA)

SCALE 1" = 40'

FIGURE 1


EXPLANATION
OUTLINES OF OPEN CUTS
UNDERGROUND WORKINGS REPORTED BY STERRETT (USGS BULL. 740)
UNDERGROUND WORKINGS MADE IN 1943-1946 (REPORTED BY J. C. GLASS AND R. H. JAMES, USGS) AND IN 1952-1957
SHAFTS OR OLD SHAFT SITES
LONGITUDINAL AND TRANSVERSE SECTIONS (ARROWS SHOW DIRECTION OF VIEW) -- SEE FIGURE 2
NOTES: PROPERTY BOUNDARY AND ROAD TAKEN FROM SURVEY SUBMITTED BY APPLICANT; POSITIONS OF WORKINGS ADJUSTED TO PROPERTY SURVEY FROM DATA OBTAINED DURING FIELD EXAMINATION.
STAKE
N. 50° W. 306 FEET
S. 39° 30' W. 685 FEET
S. 64° E. 343 FEET
S. 47° E. 296 FEET
N. 42° E. 600 FEET
"LEDFORD" SHAFT (OPEN BUT NOT ACCESSIBLE)
2-3 FEET OF PEGMATITE SEEN IN FACE ABOVE SHAFT
CAVED TUNNEL 3
PROPOSED DMEA SHAFT
PROPOSED DMEA LEVEL WORK - A MAXIMUM OF 150 FEET CHIEFLY TO THE NORTHEAST
WILLIAMS OR "COLONIAL" SHAFT
PEGMATITE REMAINS OBSERVED IN BOTTOM OF TRENCH AT TIME OF FIELD EXAMINATION
"BLUE A" VEIN (DISCORDANT PEGMATITE 1 FOOT THICK)
TUNNEL 2 (CAVED)
STOPED OUT
P. & W. MINING CO. SHAFT
TUNNEL 1 (USED AS MANWAY IN P. & W. OPERATIONS)
APPROXIMATE TIE-IN POINT BETWEEN APPLICANT'S BOUNDARY SURVEY AND EXAMINER'S SURVEY OF OLD WORKINGS
26" MAPLE
OLD DWELLING
SPRING
OUT-BUILDING
DUNCAN MINE AND MILL (1944-1957)
STAKE
10" MAPLE
BEGINNING CORNER TWO 8" BLACK GUMS
(FINISH)
(START)
HARDEN MINE
ASHE COUNTY, NORTH CAROLINA
DMEA - 4072 (MICA)
SCALE 1" = 40'