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

OCT 21 1960

REGISTERED MAIL
RETURN RECEIPT REQUESTED

Mr. Sam L. Phillips
Keys Mica Company
Spruce Pine, North Carolina

Re: OME-6003 (Mica)
Keys Mica Company
Sam L. Phillips, et al.
Rice Mine
Grafton County, New Hampshire
Contract 2005

Dear Mr. Phillips:

Reference is made to the Acting Field Officer's letter of August 29, 1960, in which he pointed out the inaccurate legal descriptions of the Rice Mine area submitted by you on August 23, 1960.

Please refer to my letter of July 18, 1960, in which I suggested the use of the Commodity Stabilization Service aerial photo as a means of showing the location of the property lines and the relation of the OME work on Pegmatite No. 29 to the exterior boundaries. Have you been able either to obtain the aerial photo and show the location of the shaft as suggested or procure the correct description of the Rice Mine area? If not, possibly the description in the records at Woodsville of the property held by General Electric might help. How much would a survey of the area cost?

Please give this matter your prompt attention so that the OME may either terminate the contract or take whatever steps are necessary to protect the Government's interest.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director

LGHouk/FEJohnson/fw/hb (10/21/60)
Copy to: Docket DMEA-6003
Director's Reading File
Region IV (2)
CA & A Division
Harold Kirkemo, USGS Film 52232
Mr. Houk
Chron.

UNITED STATES

DEPARTMENT OF THE INTERIOR

OFFICE OF MINERALS EXPLORATION

Field Team Final Report
Region V

OME 6003, Contract No. .005
Rice Mine (mica)
Grafton County, New Hampshire

By

William P. Williams, Geologist
U. S. Geological Survey

June 21, 1960

OFFICE OF MINERALS EXPLORATION

FINAL REPORT

OME 6003, Keys Mica Company

Introduction

The Rice mine was visited by the undersigned in company with William Willis, mine foreman, on June 10, 1960. Unwatering of the shaft, which was filled to the collar, was necessary before the mine could be entered. The project was discussed with Mr. J. R. Beam, partner in Keys Mica Company, at his headquarters at Canaan, New Hampshire.

Work Completed

Work under the terms of OME Contract 2005 was begun on August 24, 1959, and discontinued on November 10, 1959. During that period a vertical shaft, 10 ft. by 7 ft. in cross-section rock dimensions, was sunk to a total depth of 50 feet. Two drifts, a total of 56 feet of drifting, have been driven from the bottom of the shaft. The drift to the northeast is 30 feet long while the drift to the southwest is 26 feet long, figure 1. Minimum rock dimensions of the drifts are 5 feet wide by 7 feet high. No timber was used in the drifts. Ladders and timbers had not been placed in the shaft, although ladders had been constructed and were on the ground at the shaft collar. Access to the mine was by hoist and bucket. No work has been done at the mine since November 10, 1959, with the

exception of pumping out the shaft and drifts for the purpose of mine examination.

Expenditures

OME Contract 2005 authorized completion of the following work units and their costs:

1. 50 ft. of vertical shaft at $47.00/ft.....$2,350.00
2. 100 ft. of drifts and/or crosscuts at $30.00/ft..... 3,000.00

Estimated total cost $5,350.00

Government participation at 50%.....$2,675.00

The Operator submitted the following units and costs on two monthly vouchers, MME Form 60:

1. 50 ft. of shaft at $47.00/ft.....$2,350.00
2. 70 ft. of drift at $30.00/ft..... 2,100.00

Total cost $4,450.00

Government participation at 50%.....$2,225.00

Government payments to Operator..... 2,120.00

Amount of Government participation withheld (on basis of Operator's vouchers) $105.00

True completed units and project costs, as determined by mine measurements by the writer are:

1. 50 ft. of shaft at $47.00/ft.....$2,350.00

2. 56 ft. of drifts at $30.00/ft..... 1,680.00

Total costs incurred $4,030.00

Government participation at 50%.....$2,015.00

Overpayment to Operator $105.00

About 1,000 pounds of small, poor grade mica was recovered from the project. To June 10, 1960, the mica had not been processed or sold. When this is done royalty will be due the Government. In all likelihood not a very large sum will be involved.

Property Rights

According to a deed, recorded in the Grafton County, New Hampshire, Registry of Deeds, the Operator owns in fee simple a tract of land known as the 'Rice mine' upon which the OME exploration project was undertaken. After the shaft was sunk by the Operator, one Donald Estes claimed that the shaft is on his, Estes', property.

In answer to the writer's queries, Mr. J. R. Beam, partner in Keys Mica Company, stated that the dispute has never been completely settled. According to Mr. Beam no accurate surveys of property boundaries have been made in the vicinity of the Rice mine. No markers of any kind were noted near the mine, although Estes had apparently recently blazed an east-west line of trees near the OME shaft. Mr. Beam said that Estes, when the offer was made by the Operator, was readily agreeable to accepting a royalty from any mica produced from his land should Estes prove that his claim is valid. No further action has been undertaken by Estes.

Geology

Both drifts penetrated perthite-plagioclase-biotite-muscovite pegmatite. For the most part the drifts are in the intermediate zone of the pegmatite except at their extremities where a thin, poorly defined and discontinuous wall zone of quartz-plagioclase-mica pegmatite was found. Dark gray to black quartz-biotite schist, the country rock of the area, was met with in short blast holes in the northeast drift; and the schist composing the opposite (northwest) wall of the pegmatite was exposed along a shear zone in the southwest drift.

Only relatively small discontinuous, white quartz lenses of core material were found in the northeast drift; and none were noted in the southwest drift. About 150 - 200 pounds of book mica was recovered in the northeast drift from around a white quartz core about 2 feet in diameter and a few feet long. Small, 1 to 1½ inches in diameter, books of stained mica are widely disseminated in the pegmatite in both drifts, but more so in the northeast drift. The mica is too small, stained, and broken to be recoverable for anything but scrap. No known measurable reserves of strategic mica exist within the project area.

Conclusions and Recommendations

Work under the terms of the contract appears to have reached its objective in that both, hanging and foot, walls of the pegmatite were reached and explored. The work did not result in a discovery .

Significant amounts of strategic mica were not recovered from either the shaft or the drifts. Mine examination disclosed no geologic evidence that indicated that the nature of the pegmatite would become more favorable if more underground openings were made.

It is recommended that the project be terminated in its present state on the grounds that a significant mica discovery would probably not result from the expenditure of more funds and effort.

Under the conditions it appears that little would be accomplished by undertaking the expense of land surveying in heavily wooded, mountainous terrain to settle the property boundary dispute.

Amendment No. 2 to the contract does not appear to be completely applicable. Amendment No. 2 requires that contract work shall have been resumed by May 1, 1960. The unfavorable nature of the pegmatite makes such work undesirable.

Inspected: June 10, 1960

W. F. Williams, Geologist
U. S. Geological Survey

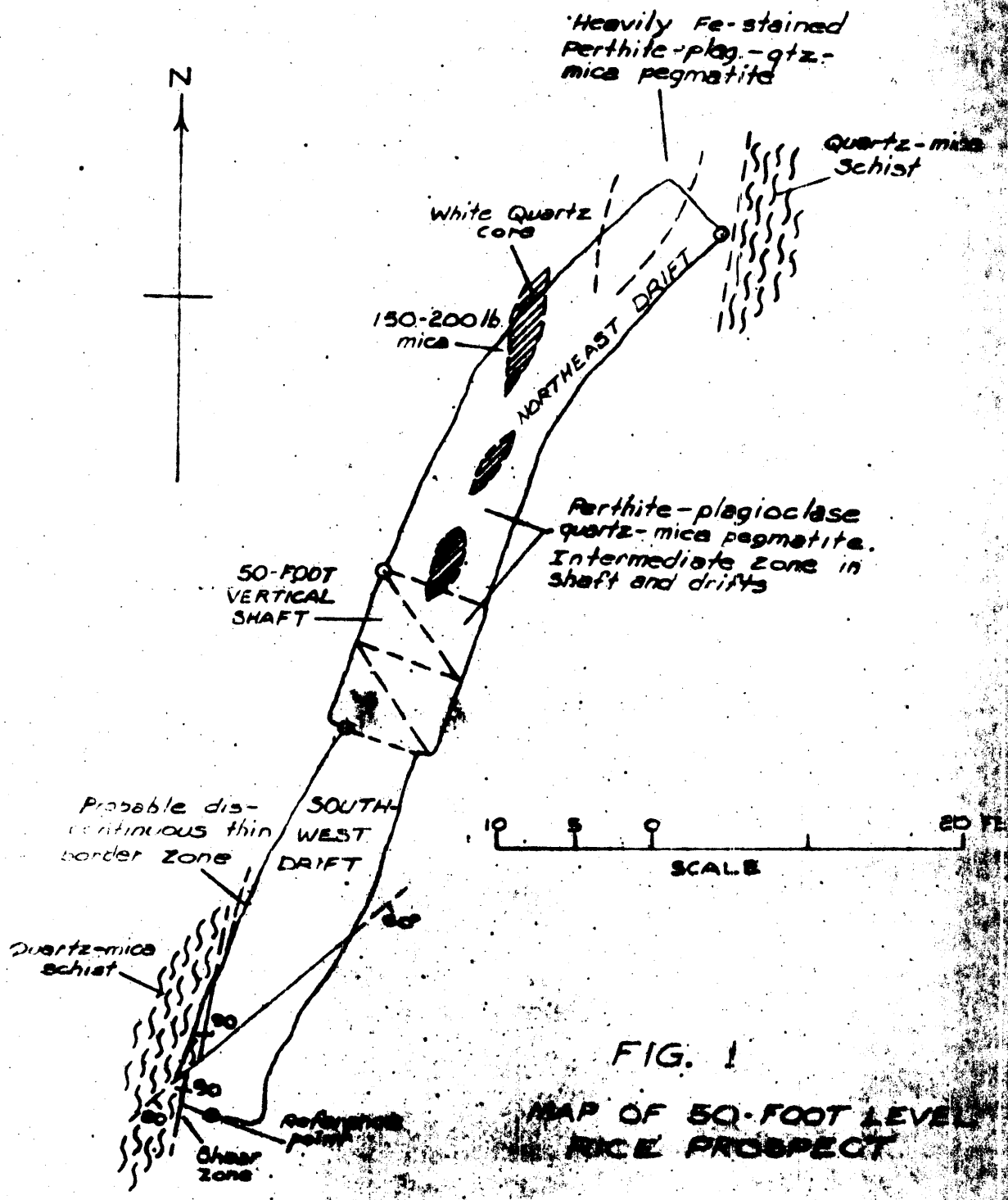


FIG. 1

MAP OF 50-FOOT LEVEL
RICE PROSPECT

OME 600 3 - CONTRACT 20
KEYS MICA COMPANY
GRAFTON COUNTY, N.H.

June 1960

OME 6003

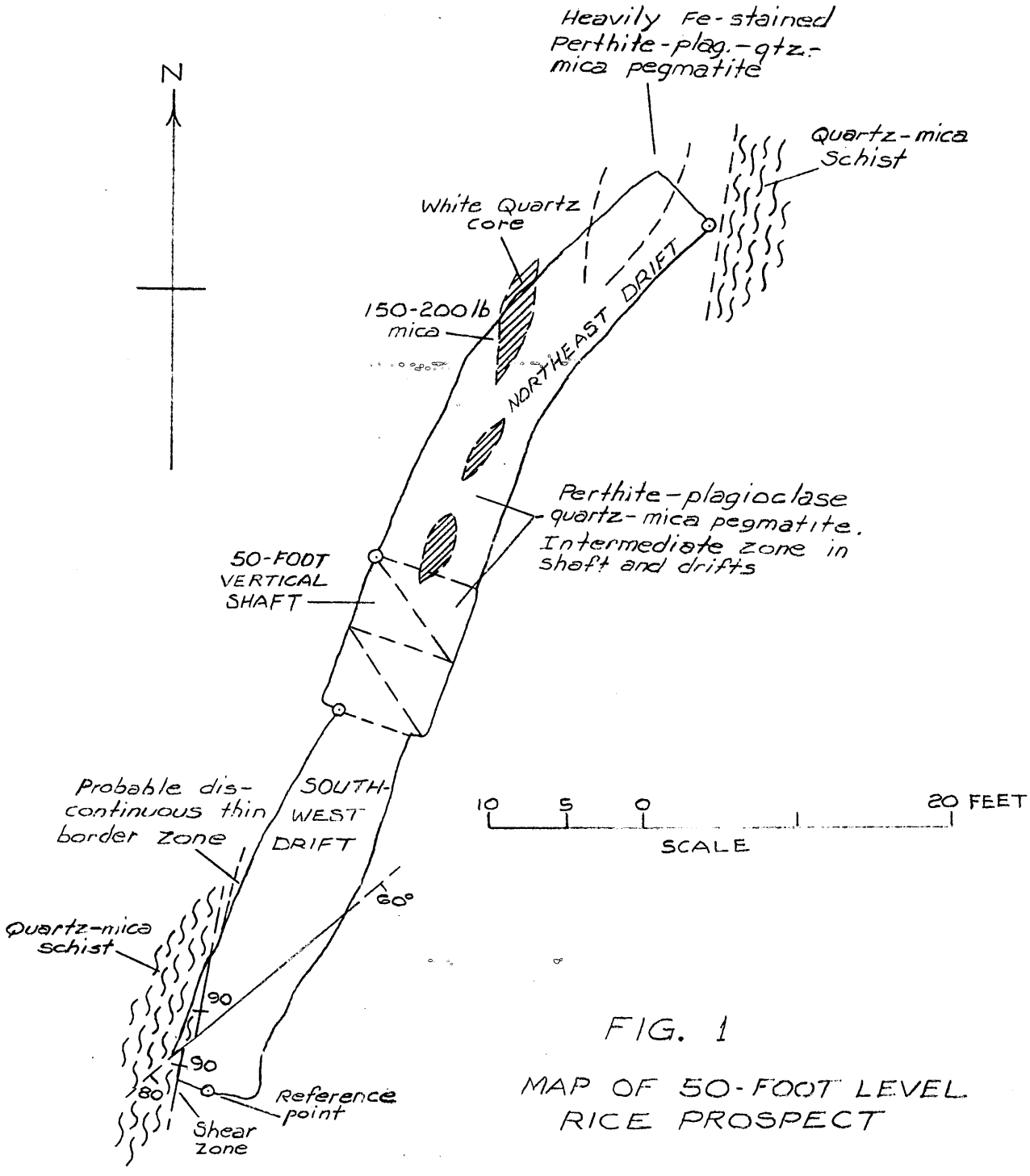
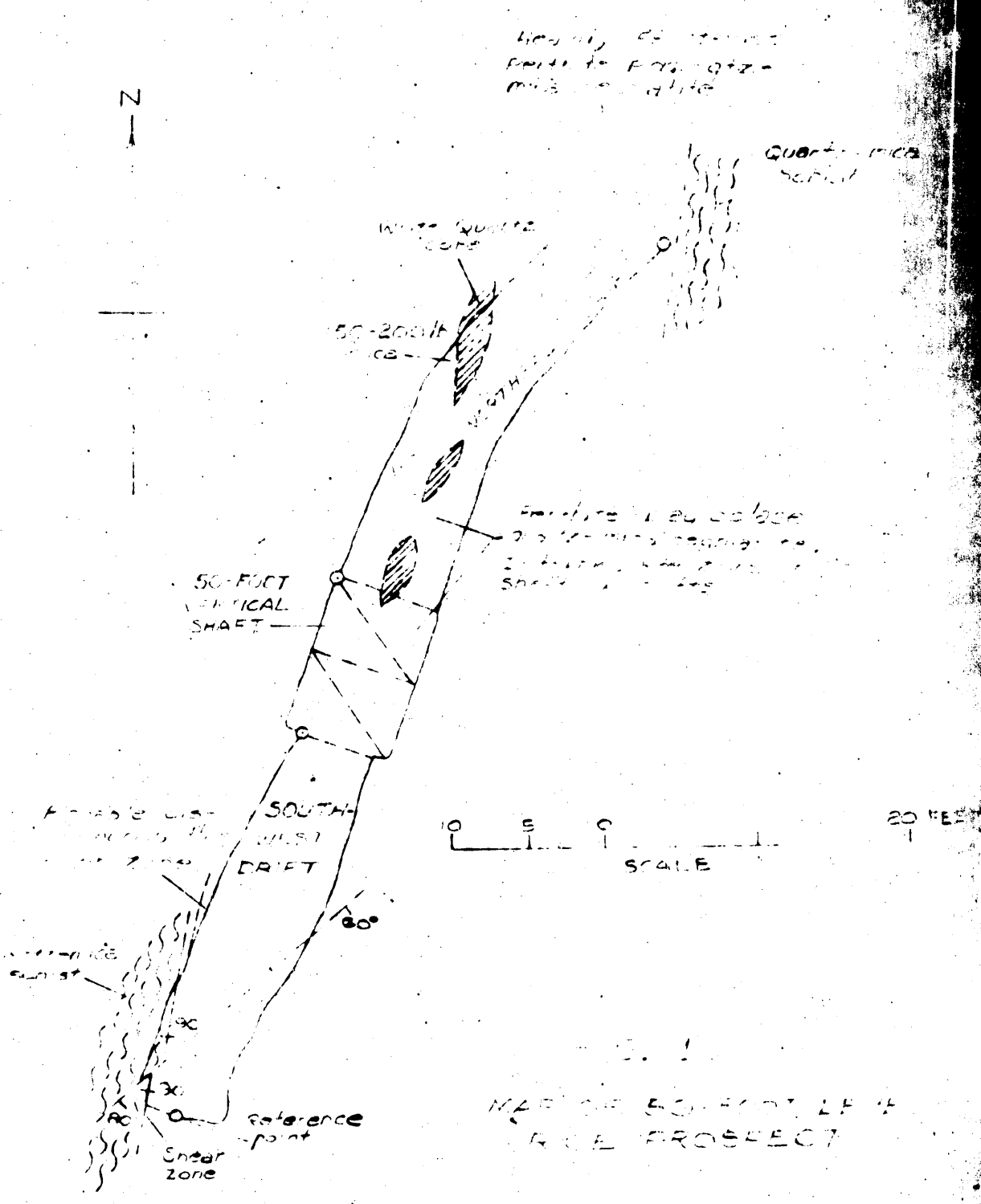


FIG. 1

MAP OF 50-FOOT LEVEL
RICE PROSPECT

OME 6003 - CONTRACT 2005
KEYS MICA COMPANY
GRAFTON COUNTY, N. H.

JUNE 1960
W. P. WILLIAMS, U. S. GEOL. SURVEY



OME 6003 - CONTRACT 20
KEYS MICA COMPANY
GRAFTON COUNTY, N

JUNE 1960

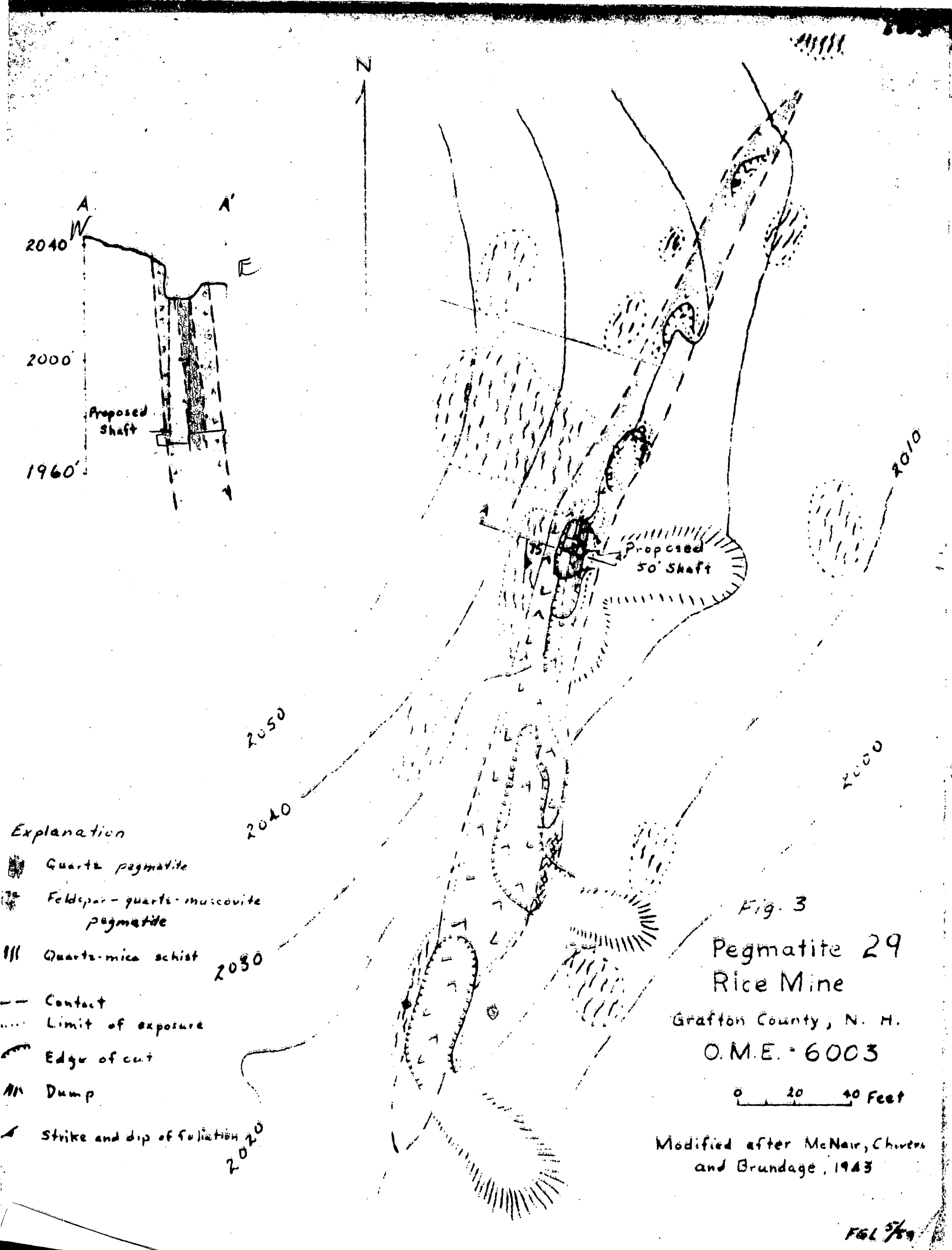


Fig. 3

Pegmatite 29
Rice Mine

Grafton County, N. H.

O.M.E. - 6003

Modified after McNair, Chivers and Brundage, 1943

FGL 5/49

February 13, 1959
Re: OME 6003
Sam L. Phillips, John Phillips
and J. R. Beam
Rice Mine
Grafton County, N. H.
Appl. Est. $34,200 - Mica

Memorandum

To: L. G. Houk, Office of Minerals Exploration

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

Subject: Review of application

The applicants request assistance in sinking 5 shallow shafts and drifting a total of 580 feet from them. The total depth of the shafts, 3 of an estimated depth of 50 feet, one of 40 feet and one of 30 feet, is 220 feet.

The work would explore 5 different pegmatites collectively a part of the Rice Mine. Professional Paper 255 of the U. S. Geological Survey entitled Pegmatite Investigations 1942 - 1945 gives descriptions of the several pegmatites as then revealed. No work appears to have been done in the meantime.

Presumedly the projects listed by the applicants refer to the pegmatites described in the Professional Paper. Of the different pegmatites, it is said:-

Project #32 that is Pegmatite 32....."It is reported that the pegmatite mined in 1940-41 contained large muscovite books scattered across the full width of the pegmatite. This supports the belief that the wall zone as well as the core contained muscovite. The muscovite was of good quality and a satisfactory amount of sheet was obtained from it. Information concerning the percentage of crude muscovite recovered from rock mined is not available.

The pegmatite in the floor of the opencut cannot be worked by deepening the cut because of danger of caving. A cribbed shaft located in the vicinity of the tunnel and extended as a vertical shaft below the floor of the cut might permit mining the remaining pegmatite."

Prospect No. 29, Pegmatite No. 29....."The disseminated muscovite books in the core are rum-colored, small, and badly ruled and reeved; they probably would not yield a high percentage of sheet. It is estimated that the core contains less than 1 percent of muscovite. The low content of crude mica in the pegmatite and the small size and poor quality of the muscovite books discouraged mining during 1942-44."

Prospect No. 30, Pegmatite No. 30....."The scattered muscovite books in the core are rum to ruby, small, ruled, and reeved. It is estimated that the core contains 1 percent muscovite. The mica obtained from the pegmatite in 1943 was of fair quality, but the amount recovered was so small that operations were shortly abandoned."

Prospect No. 28, Pegmatite No. 28....."It is estimated that the core contains 3 percent muscovite in books that average 3 inches in diameter and 3/4 inch thick. As the core is thin and has a low mica content, and as the wall zone does not contain sheet-bearing mica books, the pegmatite probably could not be mined profitably for mica under 1942-44 conditions."

Prospect No. 38, Pegmatite No. 38?!!!"Pegmatite No. 38 is poorly exposed in a small prospect made in 1940-41. It contains medium-grained perthite, plagioclase, quartz, and small muscovite books. Muscovite is not abundant."

Evidently, as judged in 1945, the pegmatites, with one exception, No. 32, lacked potential.

Referral of the application to the Field Team is recommended.

N. E. Nelson

cc: OME (3)
W. F. Dietrich
Director's reading
Branch reading
Chron. file
Docket file
NENelson/mm
G-MD-2-13-59

OME Form 40
Dec. 1958

FEB 10 1959
O.M.E.

6003

Budget Bureau No. 42-R1368
Approval expires Dec. 31, 1963

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85-701 (72 Stat. 700; 30 U.S.C. 641)

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

San L. Phillips, John Phillips and
J. R. Beam, Partners
Keys Mica Company
Spruce Pine, N. C.

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: OME 6003

DATE RECEIVED: 2-10-59

REGION: V

DIVISION CODE: 600

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	
CORPORATION	
PARTNERSHIP	X
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED: N. C

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
San L. Phillips	Spruce Pine, N. C.	Partner
John Phillips	Spruce Pine, N. C.	Partner
J. R. Beam	Spruce Pine, N. C.	Partner

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Mica

ESTIMATED COST OF PROJECT: $ 34,200.00

PROPERTY NAME	LOCATION COUNTY	STATE
Rice Mine	Grafton	N. H.

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). 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 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. 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 3(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 Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME 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, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

1/29/59
DATED

John Phillips (Signed) original
BY *(Signature)*

Partner
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. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the exploration [redacted] cost.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) 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 adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. 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 land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if 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, giving quantities and grades and sampling methods used. Support 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 have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show 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 *land boundaries* or to the closest identifiable corner.

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

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or 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. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. 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 equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *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 in the exploration work.

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

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(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*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C. 48740

EXTRA COPY
O. M. E.
RECEIVED FEB 10 1959

DATE	INITIALS	CODE

February 6, 1959

Mr. Sam L. Phillips
Spruce Pine, N. C.

Dear Mr. Phillips:

Re: The RiceProperty
Runmey, N. H.

Our loan committee has turned down your request for a loan of $35,000.00, for the purpose of prospecting for mica, on the above mentioned property.

Very truly yours,

Edward Ballew, Jr.

Edward Ballew, Jr.

B/m

EXTRA COPY
O. M. E.
RECEIVED FEB 10 1959

DATE	INITIALS	CODE

MF-103 (Continuation Sheet)

1 - (a) Copies of letters to Bank and Mitchell County Building & Loan Association enclosed.

(b) none

(c) Applicants are prepared to furnish their share of the costs, with cash and equipment.

2. (a) Owner - there is no lein.

(b) Legal description of property:

A certain tract of land located in the Town of Groton, County of Grafton, State of New Hampshire, commonly known as the Rice Mine to wit: that tract of land adjacent to the lands formerly owned by Lovejoy and White, beginning at a spruce tree on the top of the mountain; thence west to the Groton-Dorchester Town Line; thence north along said Town Line to what is called Hook Pasture; thence on said pasture, to the land now or formerly owned by Kinner and Parker; thence south to the first named bound containing 50 acres more or less.

Being part of the premises conveyed to the grantor by deed of General Electric Company dated May 12, 1958 and recorded in Lib. 905, Fol. 241 of the Grafton County Registry of Deeds.

3. (a) This property was explored extensively by General Electric Co. and others, the last work being done in 1940 and 1941.
(b) Applicant had no interest in previous work.
(c) No records on past production.
(d) No records.
(e) Map attached.
(f) This property is located in a mica belt which has produced some of the best quality mica in New England.

4. (a) Project is accessible. Sam Phillips or J.R. Beam will meet the representatives, and can be reached by addressing mail to them at Canaan, New Hampshire Tel. No. Lakeside 34420.
(b) Canaan, N.H. is nearest supply point. Employees live at this town.

5. (a) We plan to explore a total of five prospects on the property, these prospects numbered and marked with red on the attached map. Each prospect will be explored by sinking a shaft and drifting, as shown on itemized extimated cost below.
(b) No access road to be built.
(c) Work will be started within 60 days, weather permitting.

6. Now on file with D.M.E.A.

7. Estimate of costs:

<u>Project #32:</u>

50' Shaft @ $50.00 per foot . . . . . $ 2,500.00
200' Drift or Crosscut @ $40.00 per foot 8,000.00

Prospect No. 29:

50' Shaft @ $50.00 per foot . . . . . $ 2,500.00
100' Drift @ $40.00 per foot 4,000.00

MF-103 Continuation Sheet No. 2

Prospect No. 30

50' Shaft @ $50.00 per foot	$ 2,500.00
100' Drift @ $40.00 per foot	4,000.00

Prospect No. 28

40' Shaft @ $50.00 per foot	2,000.00
80' Drift @ $40.00 per foot	3.200.00

Prospect No. 38

30' Shaft @ $50.00 per foot	1,500.00
100' Drift @ $40.00 per foot	4,000.00
Total cost of projects	$ 34,200.00

UNITED STATES
DEPARTMENT OF THE INTERIOR

OFFICE OF MINERALS EXPLORATION

Field Examination Report

On

OME-6003 (mica)

Rice Mine, Grafton County, New Hampshire

REGION V

EXTRA COPY
O. M. E.
RECEIVED MAY 29 1959

DATE	INITIALS	CODE

Frank C. Lesure, Geologist
Geological Survey

Harry L. Burmeister, Mining Engineer
Bureau of Mines

Reviewed by
OME OPERATING COMMITTEE

(date)

May 27, 1959

OFFICE OF MINERALS EXPLORATION

FIELD EXAMINATION REPORT
ON

OME-6003 (mica)

Rice Mine, Grafton County, New Hampshire

Summary

Eleven pegmatites have been prospected or partly mined at the Rice mine. The pegmatites are en echelon lenticular bodies that have mineralogical and structural similarities. The pegmatites are in general zoned and composed of perthite, plagioclase, quartz, muscovite and biotite. Sheet muscovite is generally scattered in a core of perthite and quartz or may be in shoots in an intermediate zone of perthite-plagioclase-quartz associated with a discontinuous quartz core.

Production from one of the five pegmatites included in the application (No.32) was 15 to 20 tons of mine-run mica last year. Mining is to be continued at this pegmatite and no further exploration is warranted at this time. Three of the remaining four pegmatites (Nos. 28,30, and 38) have not been prospected since World War II. Because of the lack of information concerning their zonal patterns no definite targets are apparent and no work is recommended.

We recommend that exploration assistance be granted on the fifth pegmatite, No.29. Recent prospecting has outlined a quartz core with an intermediate zone of perthite-plagioclase-muscovite containing 3 to 5 percent good quality ruby mica. A fifty-foot shaft and 100 feet of drifting and crosscutting should explore adequately this pegmatite and may outline significant reserves.

Introduction

Location: The Rice mine is near the top of a small mountain at an elevation of about 2000 feet., 1.7 miles S. 58°W of North Groton, Groton Township, Grafton County, New Hampshire (Fig. 1 and Cardigan, N.H., U.S.G.S. 15-Min quad.) The mine can be reached from North Groton by driving south on the paved road 0.25 mile, turning left on a graded road and following this road for 1.2 miles. Turn left onto a poorly graded, steep mine road, 1.1 miles to the mine. This mine road is passable only by four-wheel drive vehicle

or trucks.

Examination: The examination of the Rice mine was made May 15, 1959 and lasted four hours. The Examiners were accompanied by Mr. J. R. Beam. Mr. Beam was not familiar with the application as submitted by his partners but mined one of the Rice pegmatites in 1958. Although a map of the proposed prospect area is reported to have been submitted with the application no copy was sent to the field for the use of the Examiners. The geologic map made by McNair, Chivers and Brundage (U.S. Geol. Survey Prof. Paper 255, Pl.31, copy attached as figure 2) was used to locate the pegmatites that Mr. S. L. Phillips apparently wished to explore. Because very little additional prospecting has been done at the Rice mine since the area was mapped during World War II, the descriptions given by Cameron and Others (U.S. Geol. Survey Prof. Paper 255, p.226-229) are adequate and are quoted extensively in this report.

History: According to McNair (Cameron and Others, 1954, p.226) the Rice mine was opened in 1897 by C. A. Smith of Groton, New Hampshire. The mine was operated intermittently until 1940 and was worked by the General Electric Company, Schenectadly, N.Y., in 1940 and 1941. Some additional prospecting was done in 1943. A. H. McNair and V. Chivers of the U. S. Geol. Survey mapped the mine in 1943 and McNair visited it again in 1945.

In 1957 John L. Maderic mined in the large open cut at pegmatite No.32. He sold his interests to the Applicants who

began mining in Pegmatite No.32 in 1958. Mr. Beam reports that production from this pegmatite during 1958 amounted to 15 to 20 tons of good quality muscovite. While the mining was going on some prospecting was done on Pegmatite 29, 28, and 33.

The recent mining in Pegmatite No.32 has been in the center of the open cut. The cut was deepened 10 to 30 feet to a total depth of 65 feet and a bench about 20 feet high was advanced to the southwest near the area of the crosscut shown in section CC' figure 2. Work was stopped because of winter weather. At present there is about 25 feet of water in the bottom of the cut. The pegmatite is reported to have widened to 15 feet with depth. Mr. Beam informed the Examiners that he intends to begin mining again at Pegmatite No.32 as soon as he can build a camp and get the mine pumped out. According to Mr. Beam mining costs averaged $800.00 per week and production averaged one ton of mine-run mica per week last year. He said that trimming costs averaged $000.00 per ton and that the mica averaged $2,000 per ton of mine-run.

During 1958 about 15 rounds were shot in the central cut at Pegmatite No.29. About 10 tons of pegmatite was removed. Mr. Beam reports a recovery of about 1000 pounds of mine-run mica.

A small pit, 3' x 5' x 2', was also made near the northern prospect pit at Pegmatite No.28. A few pounds of mica may have been recovered. Mr. Beam also reported that some mica was recovered from Pegmatite No.33.

Property rights: This property is reported as being owned by the Applicant in fee simple. The application states that the record of deed was furnished with the application. The Applicant was instructed to furnish a map of the entire Rice Mine property on which is to be indicated the location of Prospect 29 in relation to the location of No.32 which is being operated. Mr. Beam will try to get a copy of the entire property map from the County Recorder's office and submit it to the Knoxville office.

Geology

Eleven pegmatites have been partly mined or prospected at the Rice mine. The pegmatites are en echelon lenticular bodies that strike N. 20°E and are vertical or dip steeply southeast. The pegmatites are in general concordant with the foliation of the quartz-mica schist country rock. Small rolls in the wall rock at Pegmatite No.32 plunge about 55° SW and Mr. Beam states that muscovite seems to be concentrated in shoots in the pegmatite along these rolls. The following descriptions of the individual pegmatites are taken from Cameron and others, 1954, p.226-229. Additional observations made in recent exposures have been added where necessary.

Pegmatite No.28.- " Two small prospect pits were made in pegmatite no.28 in 1941. The pegmatite, exposed for 140 feet along strike, is 8 to 13 feet wide, strikes N.20°E. and dips 75°E. The border zone, 2 to 6 inches thick, consists of fine-grained quartz, muscovite, and plagioclase. The muscovite commonly occurs as plumose aggregates that are arranged normal to the contact and expand inward. The wall zone, 1 to 3 feet thick, consists of medium-grained plagioclase, quartz, small thin muscovite books intergrown with biotite, and minor pink garnet in small crystals.

The core, 1 to 4 feet thick, consists of medium- to coarse-grained perthite, plagioclase, quartz, muscovite, and black tourmaline. Most of the quartz occurs as irregular bodies that occupy spaces between perthite and plagioclase subhedral crystals, but some of it is graphically intergrown with perthite and black tourmaline. The core seems to be least clearly defined near the ends of the pegmatite.

Free-splitting ruby muscovite books, from 2 by 2 to 6 by 8 inches across and as much as 1 inch thick, are scattered throughout the core. Although some books are reeved and mineral stained, it is believed that a satisfactory percenrage of small-sized sheet could be obtained from them. It is estimated that the core contains 3 percent muscovite in books that average 3 inches in diameter and 3/4 inch thick. As the core is thin and has a low mica content, and as the wall zone does not contain sheet-bearing mica books, the pegmatite probably could not be mined profitably for mica under 1942-44 conditions."

The recent prospecting at this pegmatite has not added much to the war-time picture. Muscovite in books up to 6" x 8" is present on the dump. The quantity of muscovite is not great and the estimate of 3% muscovite in the core zone may be large. The zonal picture is not as clear in this pegmatite as in some of the other ones.

<u>Pegmatite No.29</u>.- "Three small cuts and three prospect pits were made in pegmatite no.29 in 1940-41. The pegmatite is about 400 feet long and 10 to 30 feet thick. It strikes N.10°W. and dips 75° to 85°E. The border zone, 2 to 8 inches thick, consists chiefly of quartz, but plumose aggregates of muscovite and small amounts of plagioclase are also present. The zone grades inward into the wall zone. This zone, 1 to 6 feet thick, is present along both walls and is composed of medium-grained plagioclase, quartz, biotite, muscovite, and garnet. Some of the plagioclase is graphically intergrown with quartz. Thin strips of biotite, in part intergrown with muscovite, in some places are as much as 6 feet long. The core, 1 to 18 feet thick, consists of coarse-grained perthite, plagioclase, quartz, muscovite, tourmaline, and graphic granite. Small intergrowths of tourmaline and quartz are common, and irregular quartz bodies which range from 1/2 by 2 to 4 by 12 feet in area of exposure are present in the core. Some of the quartz bodies contain sparsely distributed small green

crystals of beryl.

The disseminated muscovite books in the core are rum-colored, small, and badly ruled and reeved; they probably would not yield a high percentage of sheet. It is estimated that the core contains less than 1 percent of muscovite. The low content of crude mica in the pegmatite and the small size and poor quality of the muscovite books discouraged mining during 1942-44."

The recent prospecting near the center of this pegmatite has exposed a massive quartz core 4 to 5 feet thick for possibly 20 feet or more along strike. The amount of muscovite recovered in what might be an intermediate zone of perthite-plagioclase-muscovite near the quartz core is probably 3 to 5 percent. This muscovite is reported by Mr. Beam to range from 3" x 4" up to 6" x 10". Some pieces on the dump were 4" x 10". The mica is of good quality. It is ruby, hard, flat and free splitting. Some is ruled and reeved. The mica recovered from the recent prospecting was sold with mica from Pegmatite No.32 so that no quality data are available. The war-time description suggests that this quartz mass may be part of a discontinuous quartz core. If so, muscovite in minable shoots may be associated with the discontinuous masses of quartz.

<u>Pegmatite No.30</u>.-" A cut 55 feet long, 5 to 15 feet deep, and 6 to 10 feet wide was made in pegmatite no.30 during the summer of 1943. The pegmatite is about 110 feet long and 6 to 10 feet thick. It strikes N.10°E and dips 80°E. It is lens-shaped, bending eastward at its north end, and is concordant to the foliation of the wall rock. Lineation in the wall rock near the pegmatite plunges 60°SE. The zonal structure in the body is similar to that of pegmatite no.28, except that the core contains less perthite and tourmaline and more blocky plagioclase. Some of the perthite in the core is porous and contains small flakes of secondary light green muscovite.

The scattered muscovite books in the core are rum to ruby, small, ruled, and reeved. It is estimated that the core contains

one percent muscovite. The mica obtained from the pegmatite in 1943 was of fair quality, but the amount recovered was so small that operations were shortly abandoned."

No prospecting has been done at this pegmatite since the war. The cut is overgrown and exposure are poor.

Pegmatite 32.-" An opencut 30 feet deep and a 30 foot crosscut tunnel leading to the bottom of the cut were made in pegmatite no.32 prior to 1940. In 1940-41 the cut was enlarged to a depth of 10 to 50 feet. A narrow crosscut trench leading to the cut was made at the north end, and the cut was deepened and extended southward to a basic dike that cuts obliquely across the pegmatite. In 1943 a small prospect pit revealed that although the pegmatite continued some distance south of the basic dike, it was narrow at the surface and did not contain abundant muscovite. The pegmatite has a length of at least 210 feet and is 1 to 10 feet in thickness. It strikes about N. 10°E. and has an irregular, nearly vertical, dip. It is poorly exposed in the cut, but thin patches of pegmatite on the walls of the cut and material on the dump indicate that the pegmatite contained white plagioclase, quartz, perthite, rum to ruby muscovite, and minor tourmaline, apatite, and small light-green scrap mica-bearing muscovite. The pegmatite removed from the cut seems to have had a border zone, a wall zone that was rich in plagioclase and muscovite and extended in most places to the center of the pegmatite, and a discontinuous core of perthite, quartz, muscovite, and plagioclase. It is reported that the pegmatite mined in 1940-41 contained large muscovite books scattered across the full width of the pegmatite."

Although this pegmatite has been worked recently water in the bottom of the cut prevented close examination. The production in 1958 of 15 to 20 tons of mine-run muscovite supports the favorable predictions made in the war-time report. The recent work, however, has been in the open cut and the danger of caving as reported by McNair (Cameron and Others, 1954, p.227) seems to be exaggerated. Mr. Beam reports that muscovite is found in shoots associated with the rolls along the walls of the pegmatite.

Pegmatite No.38.-" Pegmatite no.38 is poorly explosed in a small prospect made in 1940-41. It contains medium-grained

perthite, plagioclase, quartz, and small muscovite books. Muscovite is not abundant."

No additional prospecting has been done at this pegmatite since the war. The pegmatite appears to be 15 feet or more thick near the southern limit of the exposure. It contains scattered books of muscovite up to 6" x 6" and some up to 2" thick. The amount of quartz seems to increase towards the south indicating that the pegmatite may be zoned.

Recommendations

We recommend that exploration assistance be granted on Pegmatite No.29. The recent prospecting has outlined a quartz core and found muscovite apparently in an intermediate zone associated with this core. It is recommended that a contract be written providing for a 5' x 7' cross-sectional shaft to be sunk a total of 50 feet at the location indicated in Fig.3. It is also recommended that a crosscut shall be driven on an approximate bearing of N.75°W. and S75°E., from a point at or near the bottom of the shaft to the walls of the pegmatite. If after the walls are reached and a mica zone has been encountered in crosscutting, drifting may be done in either direction. Total crosscutting and drifting is not to exceed 100 feet.

No work is recommended at pegmatite 28 because exposures are insufficient to determine the zonal picture and to outline a definite target to explore. This pegmatite, however, does warrant further prospecting.

No work is recommended at Pegmatite No.30. There has been no work at this pegmatite since the war to change the unfavorable report of the earlier mapping.

No work is recommended at Pegmatite No.32 because active mining was carried on at this pegmatite last year and the Applicants intend to continue mining this coming year.

No work is recommended at Pegmatite No.38 because the body has not been adequately prospected to outline the possibilities of internal structure. Mr. Beam told the Examiners that he intends to prospect No.38 when he brings his equipment in because the pegmatite is so close to the road. The presence of some mica and the suggestion of zoning indicate that this pegmatite is worthy of prospecting despite the gloomy picture present in the war-time descriptions.

COSTS

Costs were calculated after the Operator agreed that five feet of advance could be made in the 5' x 7' drift and/or cross-cut each 10 hour shift on straight time, and that 2 feet of advance could be made per shift in shaft sinking. Depreciation of equipment was calculated on data furnished by the Operator. Wages currently paid by the Operator were used.

Sinking 50 feet of 5' x 7' shaft

Using 2' of advance per 10 hr. shift or 25 shifts to complete 50 ft

	Per Shift	
1 driller, $1.80/hr.	$18.00	
1 mucker, $1.54/hr.	15.40	
1 top & hoistman, $1.54/hr.	15.40	
Total labor	$48.80	
Super. at $8/da.	8.00	
Total labor & Super. per shift.....		$56.80
Equipment: Using per shift costs calculated for Keyes No.5 East and Rice No.29 Dr. and/or XC		
Total depreciation cost per shift		7.97
Supplies:		
0.6 case powder at $12.50	7.50	
Gas & oil, compressor & hoist 0.6 x $10.44	6.26	
Detonators, 26 at 30¢	7.80	
Drill steel 0.33 x $2.33	0.70	
Gas & oil for generator (elect. pump)	3.30	
Total supplies per shift		25.56
Taxes, OAP, Insur.		
6% on $56.80		3.41
Total cost for 2' advance per shift...		$93.74

$\frac{\$93.74}{2}$ = $46.87 per foot of sinking

50 x $46.87 = $2,343.50 Total cost sinking 50 feet.

100 feet of 5' x 7' Crosscut and/or Drift

		10 hr. Shift	Total/ Shift
Driller -	$1.80/hr.	$18.00	$18.00
3 Muckers	1.54 "	15.40	46.20
1 Hoist & top man	1.54 "	15.40	15.40
Drill helper	1.54 "	15.40	15.40
	Total labor (1 shift) 5'		$95.00
Supt. - 1 at $8/day			8.00
	Total Labor & Super. per shift		$103.00

Equipment — 30 working days

1 Electric pump, cost $250 at 36 mo. 1(1 mo.)= $7.....	10.00	$0.33
1 Compressor - new $3,000. depret. over 60 mo. = $50/mo. allow 1 1/2 Mo = ...	75.00	2.50
1 Elec. gen. $3,000 - 60 mo.- 1 mo. = $50.....	68.00	2.26
1 Hoist, cable, bucket $2,000 depreciation over 60 months = $33/mo.-allow 1 1/2 mo. = $49	49.00	1.63
Drill & jackleg - $600 dep. over 24 mos. =$25/mo. allow 1 1/2 = $37.50.....	37.50	1.25
Total equipment for 1 shift of 5 feet		7.97

Supplies:

1 case, 50 lbs powder per 5' of advance	12.50
Gas & oil (compressor & hoist) 28 gal. gas - 4 qts oil.....	10.44
Detonators - 18 at $0.30	5.40
Drill steel, 1 set carb. tung steel, 3 to set	2.33
Gas & oil for generator for pump	3.30
Total supplies 1 shift.....	$33.97

Miscellaneous:	Total / Shift
Taxes & S.A.P.-Ins. 6% on $103 =	$6.18
Total all costs 1 shift or 5 ft.	$151.12

Total 100' drift and/or XC = $3022.00

$\frac{151.12}{5}$ = $30.22 per ft. of drift or crosscut.

Total cost of contract:

Sinking 50 feet	$2343.50
100 feet drifting and/or crosscutting.....	3022.00
	$5365.50

Reference

Cameron, E. N., and Others, 1954, Pegmatite investigations 1942-45 New England: U. S. Geol. Survey Prof. Paper 255.

Frank G. Lesure, Geologist
Geological Survey

Harry L. Burmeister,
Mining Engineer
Bureau of Mines

May 27, 1959

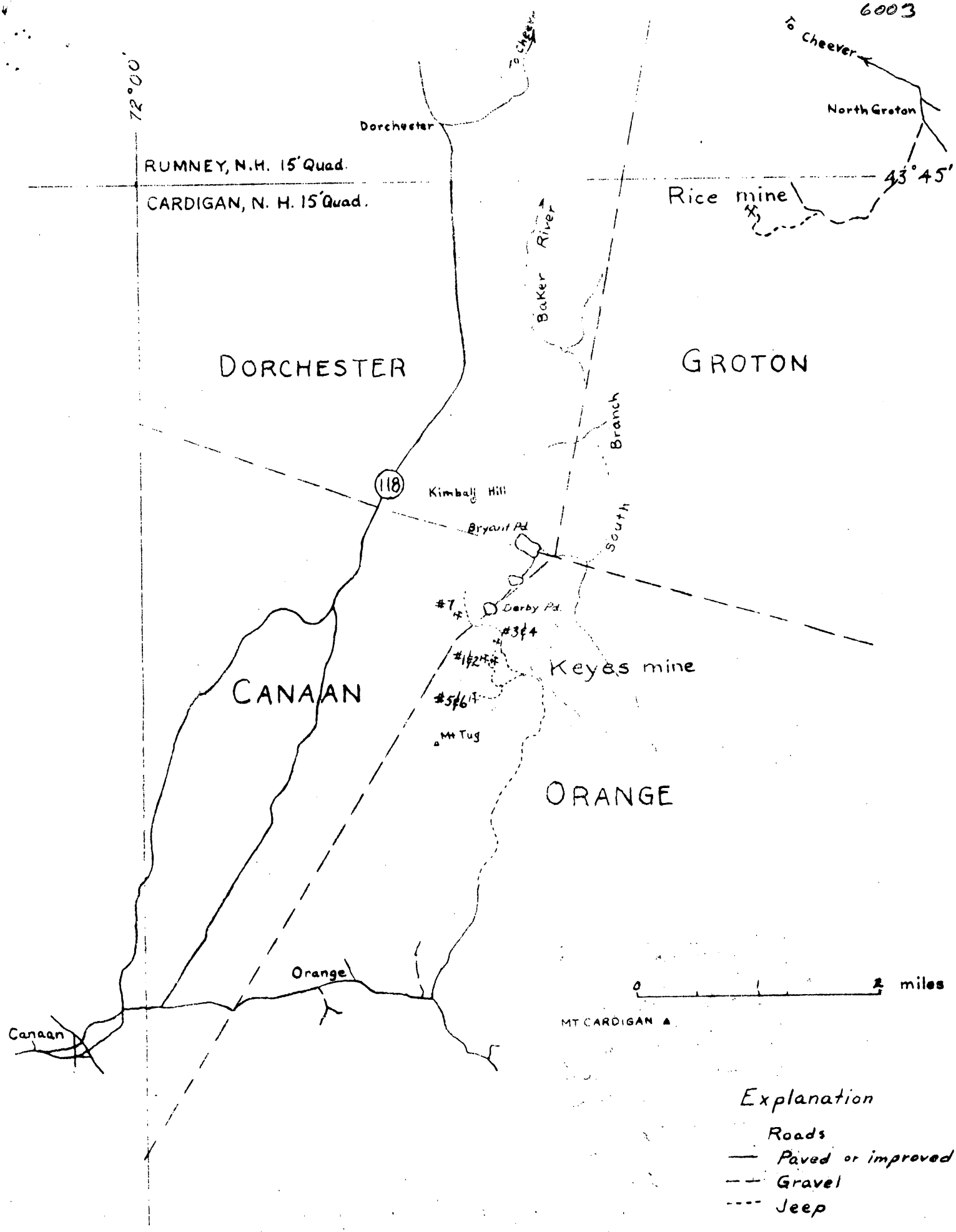


Fig. 1 – Location of Keyes and Rice mines, Grafton County, N.H.

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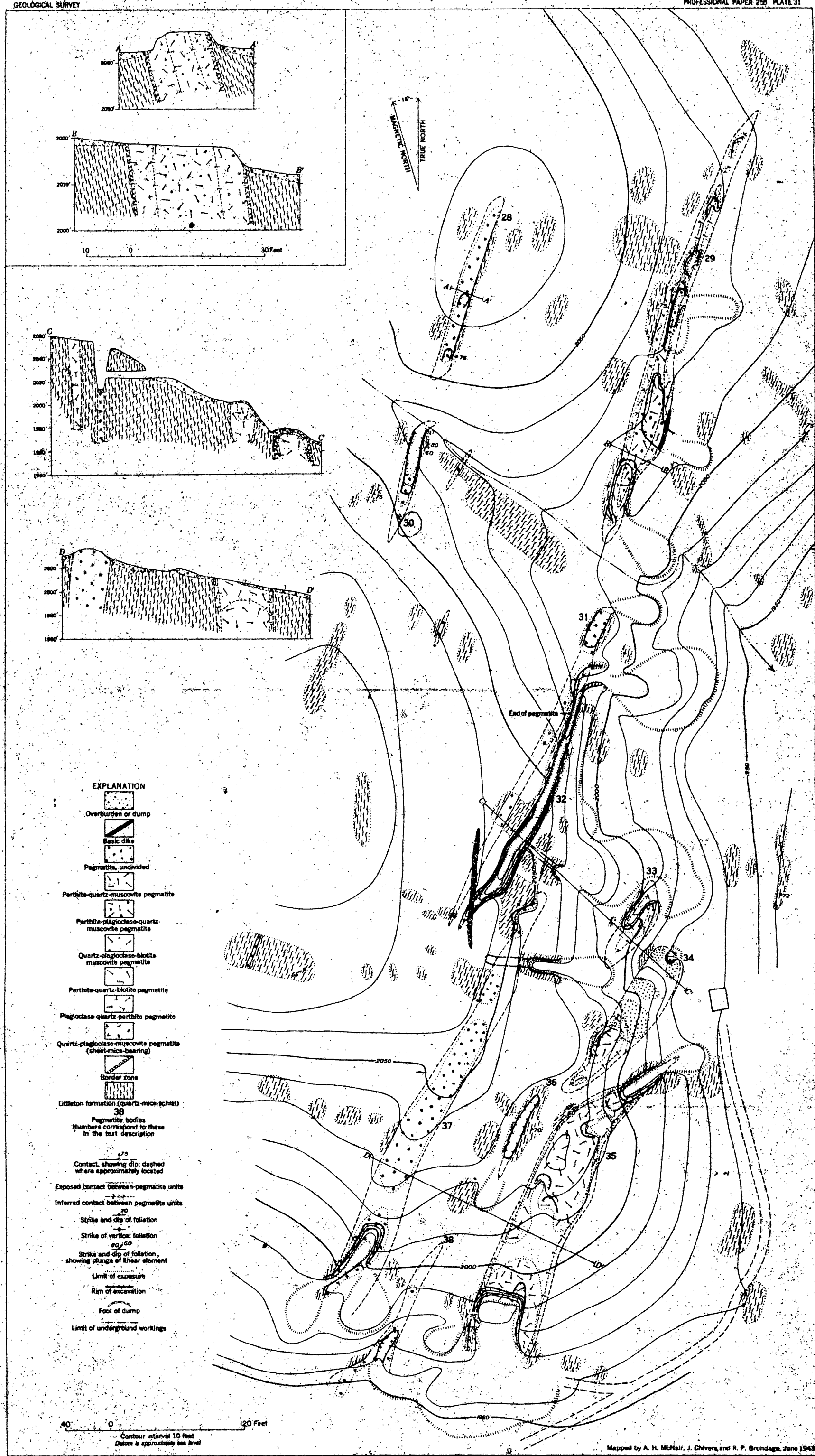
O. M. E.
RECEIVED MAY 29 1959

DATE	INITIALS	CODE



GEOLOGIC MAP AND SECTIONS OF THE RICE MICA MINE, GROTON, NEW HAMPSHIRE

Figure 2

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O. M. E.
RECEIVED MAY 29 1959

DATE	INITIALS	CODE

6003

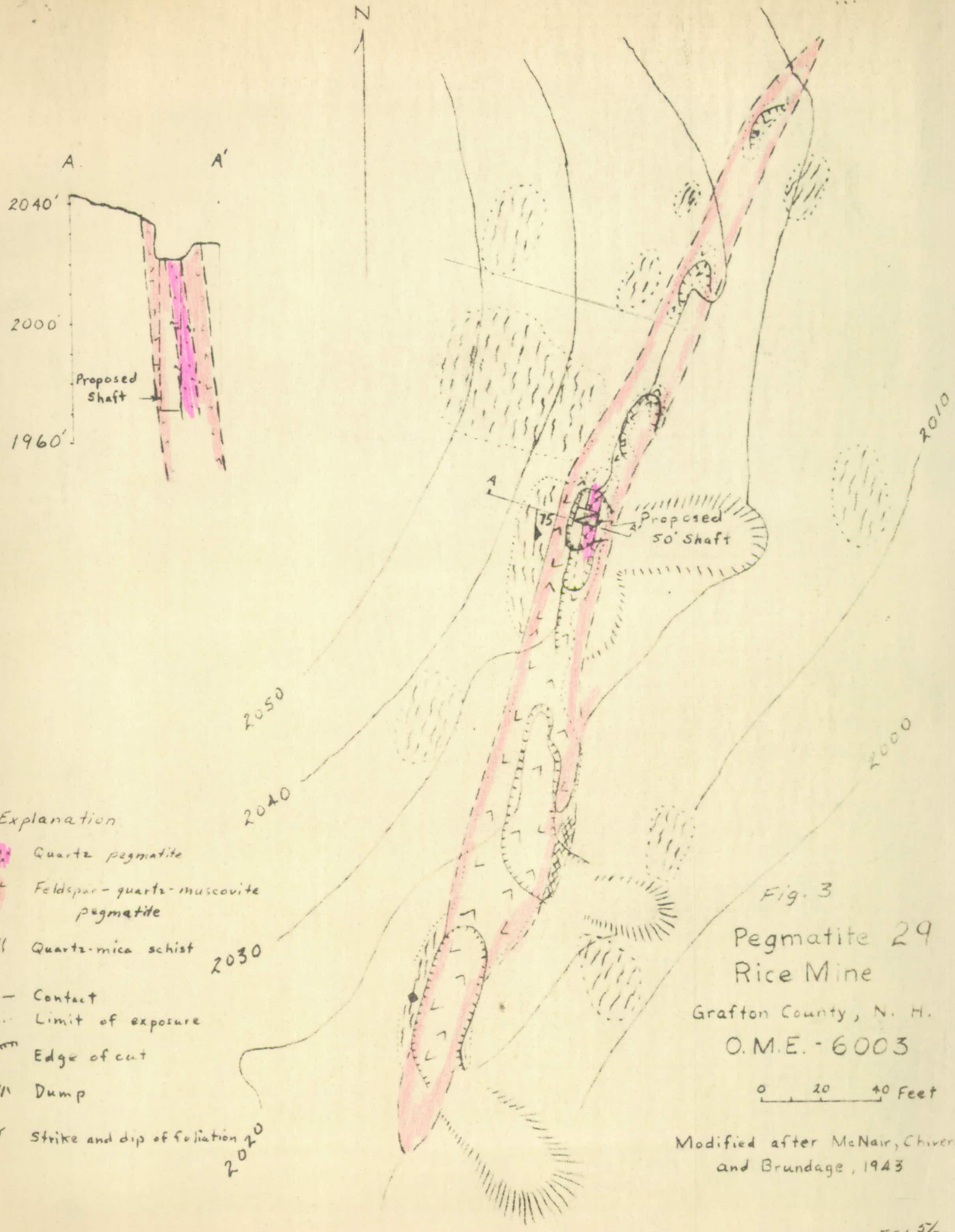


Fig. 3

Pegmatite 29
Rice Mine
Grafton County, N. H.
O.M.E. - 6003

Modified after McNair, Chivers and Brundage, 1943

FGL 5/59

[redacted]

[redacted]

[redacted]

Operator: Kaye Mica Company, Spruce Pine, North Carolina

Location: Rice Mine, Grafton County, New Hampshire

The Rice mine was visited by the undersigned in company with S. L. Phillips on July 1, 1959. Work on a short access road was expected to begin as soon as a dozer could be brought to the site; stripping of overburden will follow completion of the road.

[redacted]

Robert A. Laurent, Geologist
U. S. Geological Survey

FOIPA CITY
D. V.
RECEIVED
DATE

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Introduction

[redacted]

page-4, [illegible]).

[illegible], phosphorite, quartz, [illegible] limestone beds. [illegible] is not discovered.

No additional prospecting has been done on this pegmatite since the war. The pegmatite appears to be 15 feet or more thick near the northern limit of the exposure. It contains centimeter books of muscovite up to 6" x 6" and crude up to 3" thick. The amount of quartz seems to increase towards the south indicating that the pegmatite may be zoned.

Recommendations

We recommend that exploratory assistance be granted on Pegmatite No.34. The recent prospecting has outlined a quartz core and found muscovite apparently in an intermediate zone associated with this core. It is recommended that a contract be written providing for a 5' x 5' exploratory shaft to be sunk a total of 50 feet at the location indicated in Fig.3. It is also recommended that a crosscut shaft be driven on an approximate bearing of N.75°W. and 65°W. from a point 40 or more feet below of the shaft to the walls of the pegmatite. If after the walls are reached and a vein zone has been encountered in cross-cutting, drifting may be done in either direction. Total cross-cutting and drifting is not to exceed 100 feet.

No work is recommended on pegmatite 35 because exposures are insufficient to determine the zonal pattern and to outline a definite target to explore. This pegmatite, however, does warrant further prospecting.

The core, 1 to 4 feet thick, consists of medium- to coarse-grained perthite, plagioclase, quartz, muscovite, and black tourmaline. Most of the quartz occurs as irregular bodies that occupy spaces between perthite and plagioclase subhedral crystals but some of it is graphically intergrown with perthite and black tourmaline. The core seems to be least clearly defined near the ends of the pegmatite.

Free-splitting ruby muscovite books, from 2 by 2 to 6 by 6 inches across and as much as 1 inch thick, are scattered throughout the core. Although some books are roved and mineral stained, it is believed that a satisfactory percentage of small-sized sheet could be obtained from them. It is estimated that the core contains 3 percent muscovite in books that average 3 inches in diameter and 3/4 inch thick. As the core is thin and has a low mica content, and as the wall zone does not contain sheet-bearing mica books, the pegmatite probably could not be mined profitably for mica under 1943-44 conditions."

The recent prospecting at this pegmatite has not added much to the war-time picture. Muscovite in books up to 6" x 6" is present on the dump. The quality of muscovite is not great and the estimate of 3% muscovite in the core zone may be large. The zonal picture is not as clear in this pegmatite as in some of the other ones.

<u>Pegmatite No.29</u>.- "Three small cuts and three prospect pits were made in pegmatite no.29 in 1940-41. The pegmatite is about 400 feet long and 18 to 30 feet thick. It strikes N.10°W. and dips 75° to 85°E. The border zone, 2 to 8 inches thick, consists chiefly of quartz, but plumose aggregates of muscovite and small amounts of plagioclase are also present. The zone grades inward into the wall zone. This zone, 1 to 6 feet thick, is present along both walls and is composed of medium-grained plagioclase, quartz, biotite, muscovite, and garnet. Some of the plagioclase is graphically intergrown with quartz. Thin strips of biotite, in part intergrown with muscovite, in some places are as much as 6 feet long. The core, 1 to 15 feet thick, consists of coarse-grained perthite, plagioclase, quartz, muscovite, tourmaline, and graphic granite. Small intergrowths of tourmaline and quartz are common, and irregular quartz bodies which range from 1/2 to 3 to 4 by 12 feet in area of exposure are present in the core. Some of the quartz bodies contain sparsely distributed small gra

crystals of beryl.

The disseminated muscovite books in the core are rose-colored, small, and badly ruled and reeved; they probably would not yield a high percentage of sheet. It is estimated that the core contains less than 1 percent of muscovite. The low content of crude mica in the pegmatite and the small size and poor quality of the muscovite books discouraged mining during 1943-44."

The recent prospecting near the center of this pegmatite has exposed a massive quartz core 4 to 5 feet thick for possibly 20 feet or more along strike. The amount of muscovite recovered in what might be an intermediate zone of perthite-plagioclase-muscovite near the quartz core is probably 3 to 5 percent. This muscovite is reported by Mr. Beam to range from 3" x 4" up to 6" x 10". Some pieces on the dump were 4" x 10". The mica is of good quality. It is ruby, hard, flat and free splitting. Some is ruled and reeved. The mica recovered from the recent prospecting was sold with mica from Pegmatite No.32 so that no quality data are available. The war-time description suggests that this quartz mass may be part of a discontinuous quartz core. If so, muscovite in minable sheets may be associated with the discontinuous masses of quartz.

Pegmatite No.30.-" A cut 55 feet long, 5 to 15 feet deep, and 6 to 10 feet wide was made in pegmatite no.30 during the summer of 1943. The pegmatite is about 110 feet long and 6 to 10 feet thick. It strikes N.10°E and dips 80°E. It is lens-shaped, bending eastward at its north end, and is concordant to the foliation of the wall rock. Lineation in the wall rock near the pegmatite plunges 60°SE. The zonal structure in the body is similar to that of pegmatite no.28, except that the core contains less perthite and tourmaline and more blocky plagioclase. Some of the perthite in the core is porous and contains small flakes of secondary light green muscovite.

The scattered muscovite books in the core are rose to ruby, small, ruled, and reeved. It is estimated that the core contains

June 4, 1959

Memorandum

To: L. G. Rowe, Office of Minerals Exploration

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

Subject: Review of field examination report, OME 6003 (Mica)
Keys Mica Company, Rice Mine, Grafton County, New Hampshire

The examining team have submitted a favorable report about the applicant's property. Eleven pegmatites have been partly mined or prospected at the Rice mine.

One of the five pegmatites included in the application produced 15 to 20 tons of mine-run mica last year.

Of the several pegmatites on the applicant's property, the examining team have selected one as the most promising upon which to do further work. Recent prospecting discloses muscovite that is in an intermediate zone favorably associated with a quartz core.

I agree with the recommendations of the examining team for approval of an OME contract to provide for the exploratory work outlined in the report of field examination. The prospects for success appear to be good.

W. P. Williams

RICE MINE

CONTRACT NO 2005
DATED 6-18-59.
TO START BY 7-15-59
TO COMPLETE BY 10-18-59.

JUL 6 1959
O.M.E.

EXPLORATION PROJECT CONTRACT
KEYS MICA COMPANY
DOCKET NO. OME-6003

ANNEX I

Legal description of the property.

A certain tract of land located in the Town of Groton, County of Grafton, State of New Hampshire, commonly known as the Rice Mine, to wit: That tract of land adjacent to the lands formerly owned by Lovejoy and White, beginning at a spruce tree on the top of the mountain; thence west to the Groton-Dorchester Town Line: Thence north along said Town Line to what is called Hook Pasture; thence on said pasture to the land now or formerly owned by Kinner and Parker; thence south to the first named bound containing 50 acres more or less; being part of the premises conveyed by deed of General Electric Company dated May 12, 1958, and recorded in Lib. 905, Fol. 241 of the Grafton County Registry of Deeds; and being all the premises conveyed by deed of John L. Maderio recorded in Vol. 912 at Page 358 in the Grafton County Registry of Deeds.

The land is shown on the attached map entitled: Figure 2, Property Map of Rice Mine, Keys Mica Company.

Excluded Area

Area including Pegmatite No. 32 as shown by shaded boundaries on Figure 2, is excluded from the contract.

The Operator is the owner of the above-described land in fee simple.

Inspected Aug. 11, 1959
No work done to Aug. 11, '59

EXPLORATION PROJECT CONTRACT
KEYS MICA COMPANY
DOCKET NO. OME-6003

EXHIBIT A

Description of the work

Exploration for concentrations of strategic mica shall be performed in the area indicated on the attached map entitled "Figure 1, Pegmatite 29, Grafton County, New Hampshire", as follows:

1. From the surface near the hanging wall contact at the approximate location indicated on Figure 1, sink a two-compartment vertical shaft to a depth not to exceed 50 feet.

2. From near the bottom of the shaft, crosscut to both walls of the pegmatite and then drift northeasterly and/or southwesterly in the pegmatite. The total amount of crosscutting and drifting shall not exceed 100 feet.

F.T. Rep't #
FEC'S NW-SE

The shaft, crosscuts, and drifts shall be timbered as necessary and shall have cross sectional dimensions of not less than five feet by seven feet in the clear of timber.

No payment shall be made for work completed closer than 100 feet to the outside boundary of the property.

The location, direction, inclination, and extent of all work are subject to Government approval.

Estimated Cost of the Project

1. 50 feet of vertical shaft @ $47.00/ft.	$2,350.00
2. 100 feet of drifts and/or crosscuts @ $30.00/ft.	3,000.00
Estimated total cost of the work	$5,350.00
Government participation @ 50%	$2,675.00

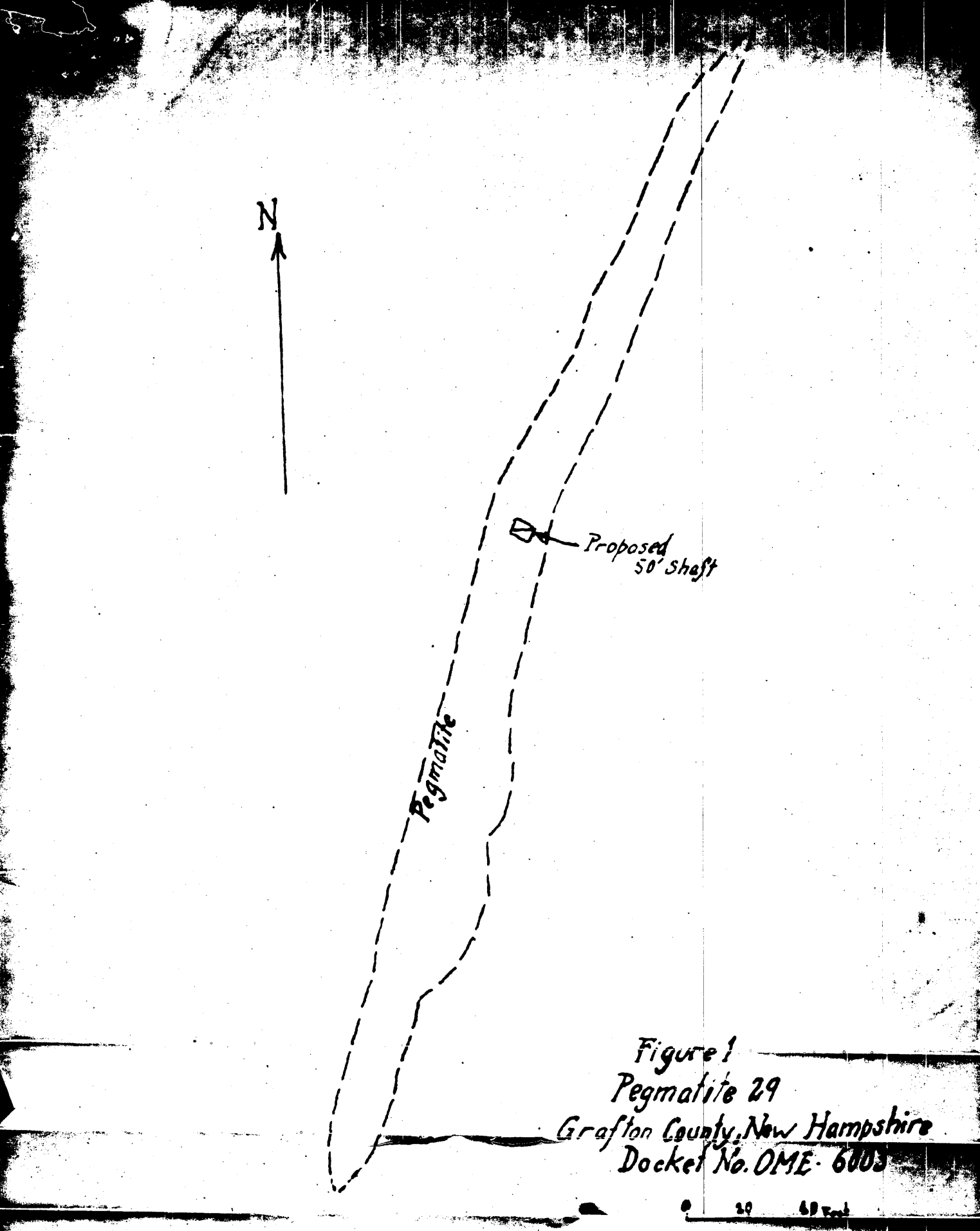


Figure 1
Pegmatite 29
Grafton County, New Hampshire
Docket No. OME-6003

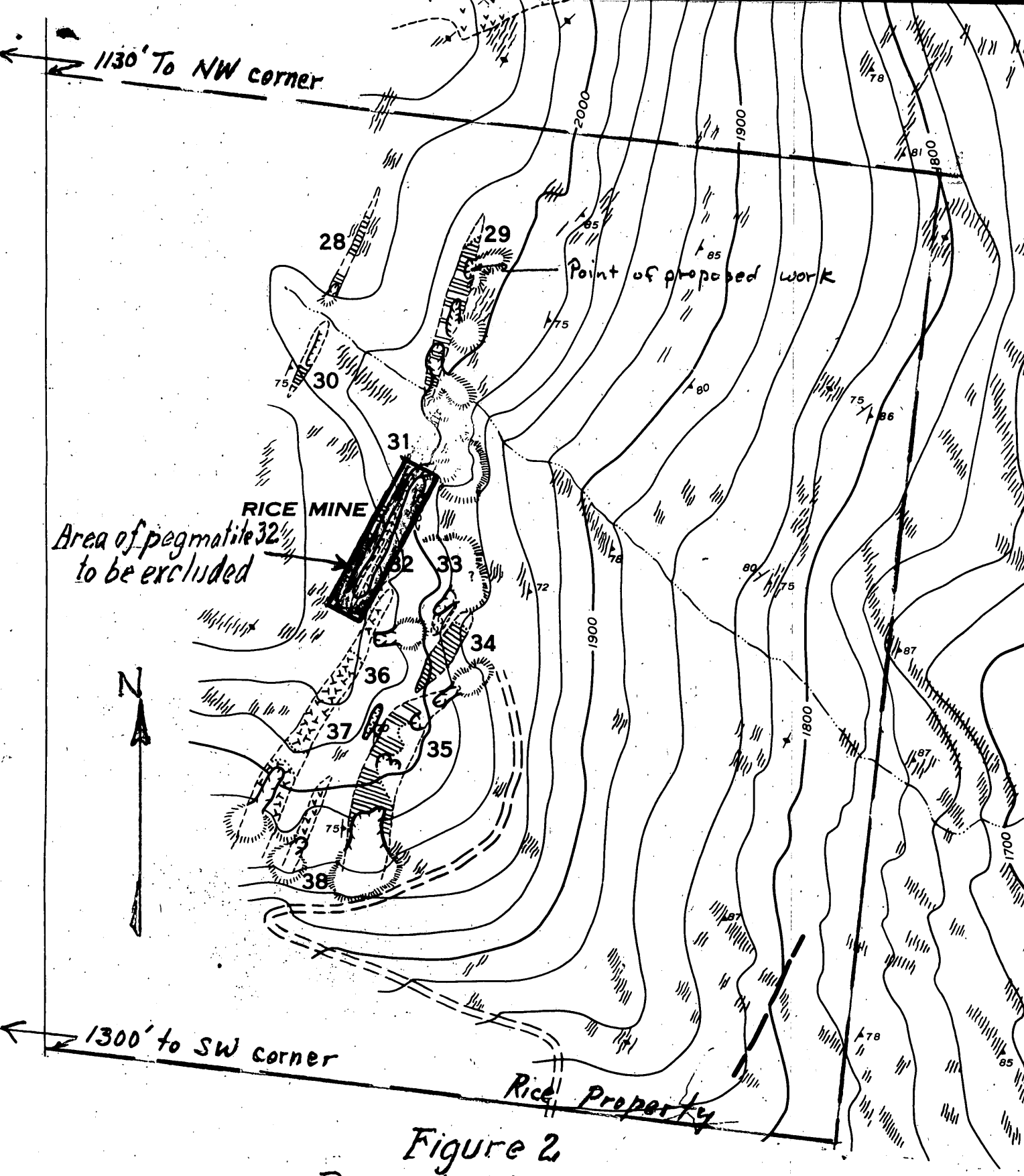
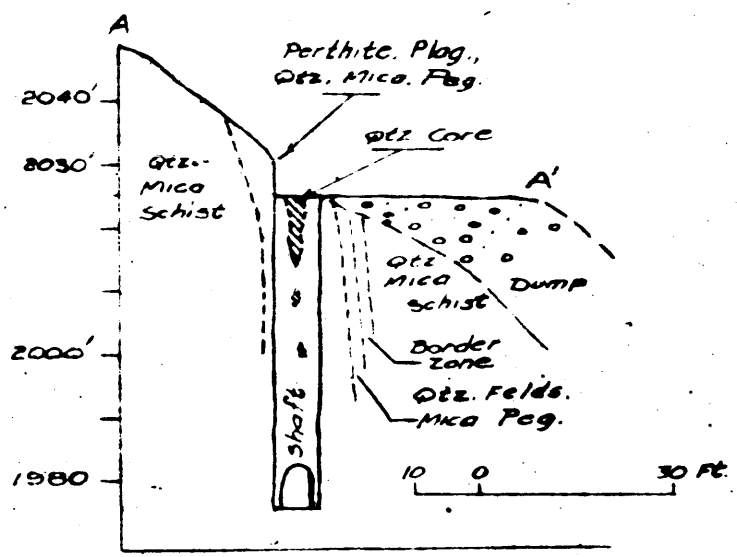


Figure 2
Property Map of Rice Mine
Keys Mica Company

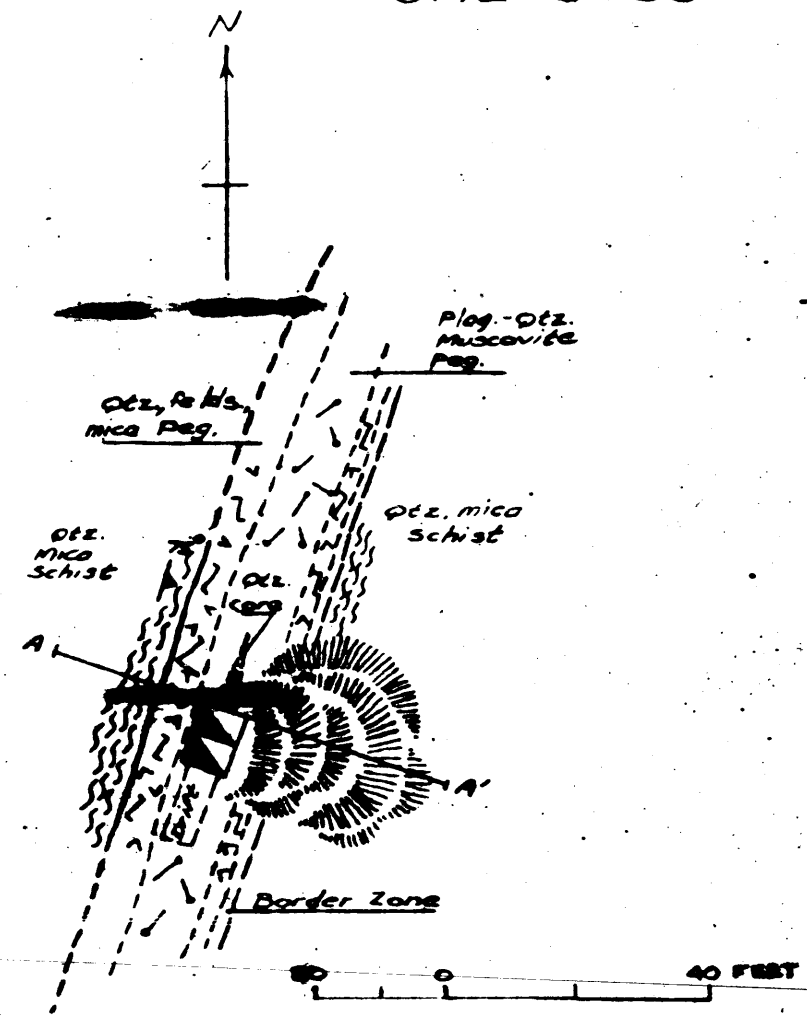
Docket No. OME-6003

Scale
200 0 1000 Feet
Contour interval 20 feet
Datum is approximate sea level

OME 6003



SECTION



MAP OF RICE PROSPECT

OME 6003 - IDM-E 2005
KEYS MICA COMPANY
GRAFTON COUNTY, N.H.
OCTOBER, 1993

W.P. Williams

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Room 11 Post Office Bldg.
Knoxville 2, Tenn.

June 23, 1960

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region IV

Subject: Termination of Keys Mica Contract 2005 (RMI-4003)

Enclosed is Final Field Team Report on the subject contract. I concur in Mr. Williams' recommendation that additional work is not justified and that the contract be terminated, effective December 18, 1959.

The Operator has been paid $2,120.00, but only $1,840.00 is due him. He must repay $280.00.

The contract should be amended to provide a unit cost for a one-compartment shaft ($40.00). This may be done in the termination agreement. The termination transmittal letter to Mr. Phillips should request the final Operator's report.

The enclosed memorandum to Legal and recommendations for the termination agreement and Amendment No. 3 are attached for your comments.

Attachments

EXPLANATION

● 7

Mines and prospects
Numbers refer to list below

LIST OF MINES AND PROSPECTS

1. Clement prospect
2. Cotton prospect
3. Fellows mica mine
4. Brown mica mine
5. New Gove mica prospect
6. McGinnis mica mine
7. Eight-Ball mica prospect
8. Rogers feldspar prospect
9. Leggett mica prospect
10. Belden mica mine
11. Atwood mica mine
12. Keniston mica prospect
13. Burgess prospect
14. Ashley mica prospect
15. Nickerson mine
16. Acme mica prospect
17. Fairburn mica prospect
18. Kimball Hill mica mine
19. Union mica mine
20. Hackett mine
21. Valencia mica mine
22. Nancy No. 1 mine
23. Nancy No. 2 mine
24. Charles Davis mica mine
25. Fletcher mine
26. Craylip mica prospect
27. Palermo No. 1 mine
28. Palermo No. 2 mica mine
29. Palermo No. 3 mica mine
30. Rice mine
31. Pike's Ledge pegmatite
32. Brown Lot mica mine
33. Brown Lot No. 10 feldspar quarry
34. Keyes No. 3 and 4 mines
35. Keyes No. 1 and 2 mines
36. Keyes No. 5 and 6 mines
37. Pinnacle mica mine
38. Strain mica mine
39. W. M. Pettes prospect
40. W. M. Pettes prospect
41. Standard mica mine
42. African mine
43. Hoyt Hill mica mine
44. Coleman mica mine
45. Williams mica prospect
46. Morgan mica prospect
47. Marston mica mine
48. Truman Patten mica mine
49. Monarch mica mine
50. Itaska mica mine
51. Wadhams-Tucker mica mine
52. Hutchins Hill mica mine
53. E. E. Smith mica mines
54. Pattuck mica mine
55. Mud mica mine
56. Jake Patten mica prospect
57. Danbury mica mine
58. Pickwick mica mine
59. Stone feldspar prospect
60. Thurman Powell prospect
61. Ruby and Barney mines
62. Buffum mica mine
63. Hale mica mine
64. New Hill mica mine
65. Ruggles feldspar-mica mine
66. Kilton mica mine
67. Kilton mica prospect
68. Alger No. 1 mine
69. DeMott mica mine
70. Carpenter mica mine
71. United mica mine
72. Saunders mica mine
73. Prescott mica prospect
74. Aaron Ledge mica mine
75. Columbian Gem mine
76. Reynolds mica prospect
77. Colby mica mine
78. Melvin Hill mica prospects
79. Globe mica mine

INDEX MAP OF THE GRAFTON DISTRICT, NEW HAMPSHIRE, SHOWING LOCATION OF MINES AND PROSPECTS

1 0 5 Miles

Contour interval 20 feet
Datum is mean sea level