600

MAR 8 1954

Mr. Sam L. Phillips

Spruce Pine, North Carolina

Re: Docket No. DMSA-3221 - Mica
Sam L. Phillips, John Phillips,
Lin Carpenter and John Carroll
Elmyra Mine (Elmyra Gibbs)
Yancey County, North Carolina

Dear Mr. Phillips:

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

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

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

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

Sincerely yours,

C. O. Mittenbergf

Administrator

LGHouk:gad 3/5/54
Copy to: Admr. R. File
Docket File
Field Team, Reg. 7
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

March 5, 1954

Memorandum

To: Mr. C. Q. Mittendorf

From: Lawrence G. Houk

Subject: Denial - Docket No. DMEA-3221 - Miss
Sam L. Phillips, John Phillips,
Lix Carpenter and John Carroll
Elmyra Mine (Elmyra Gibbs)
Yancey County, North Carolina

The Field Team recommend a project at the subject mine for $9,225 for a 75' shaft and 150' of drifts and crosscuts.

The Bureau of Mines commodity analyst recommends writing a contract, and the Survey concurs with field team stating it is a "long shot".

The Nonmetallic Minerals Division considers the exploration at subject mine not warranted, and recommends denial of the application for the following reasons:

1. The geologic target is obscure.
2. Exploration for blind shoots is not considered good practice.
3. Experience has shown no cases where a continuous mica shoot such as was mined in the Carroll Incline has a parallel counterpart nearby.
4. DMEA projects in attempting to explore areas immediately adjacent to old producers have in most cases proven disappointing.

LGHouk:gad 3/5/54
Copy to: Admr. R. File
Docket File
Mr. Houk

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

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

March 1, 1954

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3221

Applicant: Sam Phillips, John Phillips, Lin Carpenter and John Carroll

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

Date of Field Team Report: February 17, 1954

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

Field Team Recommendation:

1. A contract for exploration in the amount of $9,225.

Comments:

1. Exploration is proposed by a 75-foot shaft and 150 feet of drift, in a block of ground not previously explored.

2. Proposed exploration is consistent with good engineering practices.

Recommendation:

I concur in the field team's recommendation for an exploration project in the amount of $9,225.

Signed

W. F. Dietrich

IN REPLY REFER TO:

G-MD-CNM

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

Minerals Administration
RECEIVED
MAR 1 - 1954

February 24, 1954

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-3221 (MICA)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. M. Larrabee, U. S. Geological Survey
Applicant: Sam L. Phillips, John Phillips, Lin Carpenter, and John Carroll.
Name of property: Elmyra Gibbs Mine.
Location of property: Yancey County, North Carolina.
Date of field team report: February 16, 1954.
Authorship of field team report: K. H. Teague, D. H. Amos, and L. M. Shirley.
Field team's recommendation: 75' shaft
150' drifts, etc.
Cost: $9,225
Comments: It's a long shot. The Field Examiners will doubtless determine the trends and amount of crosscutting from the shaft.
ACTION RECOMMENDED: Follow field team's recommendation.

D. M. Larrabee

Larrabee:jeh
2/24/54
cc: Director's reading 4212
Branch reading 4212
DMEA 3
Larrabee G-230

C
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P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
Room 13, Post Office Bldg.
Knoxville 2, Tenn.

February 17, 1954

Memorandum

To: Operating Committee, DMEA-Washington

From: Field Team, DMEA-Region VII

Subject: Examination Report on DMEA-3221, Elmyra Gibbs Mine (mica)

Transmitted herewith are four copies of the report and six extra copies of the map. The Field Team is in agreement with the recommendations set forth in the report.

/s/ Wm. A. Beck
Wm. A. Beck, Acting
Executive Officer, DMEA
Region VII

/s/ Benjamin Gildersleeve
Benjamin Gildersleeve, Geologist
U. S. Geological Survey

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

DEPARTMENT OF THE INTERIOR
RECEIVED
10 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM, REGION VII

On

DMEA-3221, ELMYRA GIBBS MINE (mica)

Yancey County, N. C.

By

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

and

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

February 16, 1954

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

FIELD EXAMINATION REPORT
On

DMEA-3221, ELMYRA GIBBS MINE (mica)

Applicants: Sam L. Phillips, John Phillips, and Lin Carpenter, Spruce Pine, and John Carroll, Celo, North Carolina. c/o Sam L. Phillips, Spruce Pine, N. C.

This mine was operated successfully during World War II. From the available reports, past production has been from a series of pipe-like bodies that rake to the southeast. A considerable block of ground above and northeast of the "Carroll Incline" has not been explored and it appears to offer possibilities for the production of strategic mica.

This deposit was examined on January 15 and 28, 1954. Messrs. Sam Phillips, John Phillips, Lin Carpenter, and Earnest Briggs accompanied the examiners on the inspection which required four hours.

The Elmyra Gibbs mine is 0.1 miles west of the South Toe River and 1.1 miles by improved county road east of Celo, Yancey County, North Carolina. Access is excellent at all times.

All of the applicants are competent to conduct the proposed project. John Carroll, who will be in charge, has spent most of his life mining mica and feldspar.

The applicants lease the property. Area covered by the lease is sufficient for the proposed project.

Much of the following report is taken from a manuscript report prepared by W. R. Griffits, U. S.G.S., July 1, 1944.

There are no surface facilities on the property, although an electric line (single phase, 220 volts) is nearby.

Numerous small depressions on the hillside south and east of the mine probably are caved shafts or adits, but nothing is known about them. Most of the early work was done from shafts, of which 8 are known. To simplify discussion, these have been given numbers on the maps and sections. Shaft 3 and 4 are now 23 feet deep; an unknown depth of debris lies in the bottom of each. Shaft 6 is 35 feet deep, and probably is also partially filled. Shaft 5 is shown at the surface by a broad, shallow depression. What is considered to be its lower, filled end is visible in an old drift below this depression. The other shafts will be mentioned later.

A few adits extend west-northwest into the hillside about 250 feet southeast of shaft 1. Only one of these is accessible at present. It extends N. 70° W. for 170 feet, ending at the pegmatite a few feet below an old drift.

Extending southwest from shaft 3 is an en-echelon series of low, narrow drifts, each about 60 feet long and trending about S 25° W. These apparently were worked from shafts 3 and 6. Shaft 5 is visible near the southeast end of the accessible drifts, but as the shaft was filled before the drift was opened it must be older than the drift. Perhaps it extends to a lower pegmatite rumored to have been mined by Gould and Watson. Shaft 2 crosses the old workings at a depth of 51 feet, affording the only means of access to them. This shaft is now being used as a manway. A short crosscut connects it with both the Gouge and Carroll inclines.

The Gouge incline extends 20 feet north and 35 feet south of the crosscut. It lies 12 feet west of the manway and trends N. 18° E. The Carroll incline was worked from shaft 1. At the shaft it is 68 feet below the surface. It is about 10 feet wide and 8 to 15 feet high. The bottom of the incline is reported to be 10 feet or more below the present muck floor in some places. Its trend is S 25° W., and its slope is about 25 degrees.

Shaft 7, 340 feet south of shaft 1, is reported to be 70 feet in total depth. Work was done on a thin pegmatite at the 65-foot level. As it was followed from the shaft, this pegmatite widened, then pinched out within a short distance. Shaft 8 is filled to within 10 feet of the surface. It is cut by a short east-west adit. This adit, like the one 60 feet farther south, is entirely in gneiss. The purpose of both is unknown.

The country rock is a fairly coarse-grained mica gneiss. It consists of lenses of feldspar and quartz 1 to 3 inches long separated by layers of mica. The parallel orientation of the lenses gives the rock a layered appearance. A few 2-foot layers of hornblende gneiss are present. This dark-colored rock is composed of hornblende and plagioclase with a small amount of epidote. The hornblende grains, about 1/10 inch long, are roughly parallel with one another, and in places the feldspar forms streaks parallel to these grains. In the west wall of the northwestern end of the Carroll incline there are several small dikes of feldspar and quartz in hornblende gneiss. These may be related to the nearby pegmatite. Separating the pegmatite from both the mica gneiss and hornblende gneiss is a thin layer of mica schist.

The strike of the country rock ranges from N. 45° E. to N. 28° W. In most places it lies between N. 30° E. and N. 28° W. The regional dip is to the west and ranges from 10 to 70 degrees. Many irregularities occur near the pegmatite. The strike varies more widely than elsewhere and the dip is locally reversed; dips of 10 to 55 degrees east have been recorded.

The principal minerals of the pegmatite are albite, microcline, quartz, muscovite, garnet, and apatite. A few vugs, about 1/8 to 1/4 inch across, are lined with small clear quartz and epidote crystals.

The general strike of the pegmatite is north and the dip is about 25 to 40 degrees west. In the thicker parts, the dip is commonly vertical or even reversed. Local dips to the east have been observed. The thickness varies greatly in different parts of the pegmatite. In the crosscut between the Gouge and Carroll inclines, it is only a few inches, and in some of the old workings it is hardly more than an inch. In the northwest end of the Carroll incline the pegmatite is 5 feet thick. The pegmatite as a whole may be considered to be a series of long pencils or pipes connected by very thin sills. The pipes plunge about 15 to 25 degrees in a S. 20° W. direction, or oblique to both strike and dip of the pegmatite.

In the Elmyra Gibbs mine, the thick portions of the pegmatite dip more than 40 degrees and cross the foliation planes of the gneiss. Where the pegmatite is discordant and nearly flat lying it is generally thin. It seems also to be thin where it is steeply dipping and concordant. There also are places where the pegmatite is steeply dipping, discordant, and thin, which suggest that there are other factors that influence its thickness. The mine is unique among these in pipe-like pegmatites in that many of these pipes are exposed and all are connected. In most other mines only a few apparently unconnected pipes are exposed.

Gould and Watson are said to have worked in a large pegmatite that lies beneath the pegmatite on which all subsequent work was done. No direct evidence for the existence of a second pegmatite was found. Shaft 5 may extend to a lower level.

Most of the mica from the Carroll incline is rum or reddish-rum in color. The mica in the old workings was probably greenish rum. A considerable part, perhaps a third, of the mica from the Carroll incline is specked. Many books 4 to 6 inches across were seen in this incline, and one book found in the Gouge incline was more than a foot across and at least 3 inches thick. It appeared to be unstained.

The pegmatite exposed in the Carroll incline contains a small amount of mica scattered through the entire visible mass. That in the Gouge incline contained mica near the hanging wall, and perhaps in the body of the pegmatite as well.

Most of the early work was done by Gould and Watson, a Boston concern. Lewis McCarthy, as manager for that company, worked the Elmyra Gibbs and the nearby Dink Rock mine in about 1890. After Gould and Watson ceased operations, a large number of local men worked the mine. Among them were Charlie Gibbs, A. M. Patton, Rob Gibbs, and Ned Edge.

Joe Gouge drove the incline near the botton of shaft 2, probably in 1933. He then followed a thin streak of pegmatite for a few feet west from a point on the west wall of his incline. Later, in order to prospect the area west of his earlier workings, he sank shaft 1. Gouge's short drift or crosscut to the west is said to have been stopped less than a foot from good mica.

John Carroll of Celo, N. C., began work about 1940 from shaft 1. Mica was found after a few weeks of unproductive work. During the next 8 months the Carroll incline was lengthened 100 feet from a point near the shaft. This was the richest part of the pegmatite found by Carroll and nearly a ton of block mica was recovered daily. Work continued for 2 or 3 years in the Carroll incline, but early in 1944 the south heading was abandoned and a drift was run northward parallel to and 5 to 10 feet west of the north end of the main Carroll incline. After that the incline about 60 feet south of the shaft was deepened. The last work was unprofitable and on June 9, 1944, work was stopped in the Carroll incline and started in the north end of the Gouge incline.

The shaft (No. 7) 340 feet south of shaft 1 was sunk by Carroll about 1943. Although "a couple of thousand" dollars worth of mica was recovered, no persistent pegmatite was found and the shaft was abandoned. A short time ago a Mr. Thomason unwatered the shaft but did no further work.

There is no record of the production of mica during the early work in the Elmyra Gibbs mine, but the total production is said to have amount to more than $100,000. Gould and Watson obtained most of this.

In U. S. Geological Survey Bulletin 936A production for 1933 is given as 351 pounds of clear sheet and 483 pounds of punch mica. The size of the sheet was tabulated as follows:

1 1/2 x 2	2 x 2	2 x 3	3 x 3	3 x 4	3 x 5	4 x 6	6 x 8
32.8%	23.1%	17.7 %	7.1%	4.8%	6.0%	6.4%	2.1%

According to the microfilm records, Colonial Mica Corp., purchased slightly more than $55,000 worth of mica from this mine during World War II.

This deposit is difficult to appraise. None of the old workings are accessible, nor is there surface evidence available on which to base recommendations. The only available information is from U. S. G. S. manuscript reports and from local people. Griffits in his report makes the statement: "Promising places for exploration are both east and west of the Carroll incline." He also suggested that long holes be drilled from the Carroll incline. As the shafts are now caved and the workings flooded this approach is impracticable.

The block of ground northeast of the Carroll incline, between it and the group of old workings represented by surface pits and shafts 5 and 6, seem to offer promise for successful exploration. The map shows no underground openings in this area. It would appear to the examiners that this area deserves additional exploration.

We recommend that a 75-foot shaft be sunk at the approximate location shown on the attached map and 150 feet of level work conducted from the shaft,

Estimated Cost:

Tool House....	$150.00	
Powder Magazine	50.00	
Exploder Magazine	25.00	
75-foot, 5' x 7', 2-compartment shaft @ $50/ft.	3,750.00	
150 ft. drift and/or crosscut @ $35/ft.	5,250.00	
Estimated Total Cost.....		$9,225.00

Estimated time required - 8 months

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

and

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

Spruce Pine, North Carolina
February 16, 1954

DMEA-3221

Mr. Lawrence G. Houk, Chief
Nonmetallic Minerals Division
Department of The Interior DMEA
Washington 25, D. C.

Dear Mr. Houk:

The applicants of the Elmyra Gibbs Mine do hereby agreed to pay in money the 25% required by regulation. Instead of 10% as first stated.

Sincerely yours,

John Phillips
Sam Phillips
Jim Carpenter

600

FEB 12 1954

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

Subject: Docket No. DMEA-3221 - Miss Sam L. Phillips, John Phillips, Lin Carpenter and John Carroll Elmyra Mine (Elmyra Gibbs) Yancey 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 from the Geological Survey, dated December 11, 1953, and from the Bureau of Mines, dated December 16, 1953, are enclosed for your information.

Please obtain a written statement from the applicants that the new Government participation rate of 75 percent is acceptable to them.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

J. H. Hedges

Member, Bureau of Mines

D. M. Larrabee

Member, Geological Survey

Enclosures 4

WCAnderson:gad 2/12/54

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

600

FEB 12 1954

Mr. Sam L. Phillips

Spruce Pine, North Carolina

Re: Docket No. DMEA-3221 - Mica
Sam L. Phillips, John Phillips,
Lin Carpenter and John Carroll
Elmyra Mine (Elmyra Gibbs)
Yancey County, North Carolina

Dear Mr. Phillips:

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

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

Sincerely yours,

C. O. Mittendorf

Administrator

WCAnderson:gad 2/12/54
Copy to: Admr. R. File
Docket File
Operating Committee
Field Team, Region VII
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Hook

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 17 1953

December 16, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3221, Mica

Applicant: Sam and John Phillips, Len Carpenter and John Carroll

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

Date of Application: December 7, 1953

Date Rec'd by Ceramic and Fertilizer Materials Branch: December 7, 1953

Estimated Project Cost: $9,750.00

Comments:

1. This mine was classified on November 6, 1944 by Colonial Mica to be a "non-ruby" mine. In U. S. Geological Survey Professional Paper 225, page 67, mica from this mine was classed a brownish olive color, generally accepted as a transition color from green to rum mica. A total of 662 pieces of mica were tested and found to be 100 percent E-1 capacitor quality.

2. The mine is located in the general area of mines that have been productive.

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

W. F. Dietrich

IN REPLY REFER TO:

G-MD-CNM

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

December 11, 1953

Memorandum

REVIEW OF APPLICATION DMEA-3221 (mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. M. Larrabee, U. S. Geological Survey
Applicant's name and address:
Sam Phillips and others, Spruce Pine, North Carolina.
Name of property: Almyra Pine (Almyra Gibbs).
Location of property: Yancey County, North Carolina.
Summary of applicant's proposal:
1) Sink a shaft 5' x 7' x 125'.
2) Drift 100'.
Cost: $9750.00.
Sources of information on applicant's property:
1) _____, and Gray, L. C., June 6, 1944, Geologic, topographic, underground maps, and structure sections of Almyra Gibbs mica mine, Yancey County, North Carolina: U. S. Geol. Survey Strat. Min. Inv. prelim. maps (2).
2) Griffitts, W. R., June 27, 1944, Almyra Gibbs mica mine, Yancey County, North Carolina: U. S. Geol. Survey file report. Unpublished.
3) _____, July 1944, Almyra Gibbs mica mine, Yancey County, North Carolina: U. S. Geol. Survey file report. Unpublished.
4) _____, January 1945, Almyra Gibbs mica mine, Yancey County, North Carolina: U. S. Geol. Survey file report. Unpublished.
Comments:
1) Griffitts (Jan. 1945, p. 2) says that "probably 20,000 pounds or more mica remain in the pegmatite south of the present workings." Long holes drilled from the McCartney and Carroll inclines would reveal nearby pipes with less expense than would crosscuts, raises, and winzes."
2) Applicant plans to pay only 10%, instead of required 25%.

RECOMMENDATION:
Obtain reply from applicant as to his willingness to pay 25% of costs before referring to Field Examiners.

McKenney:Larrabee:jeh
12/11/53
cc: Director's reading 4212
Branch reading 4212
DMEA 3
Larrabee G-230

D. M. Larrabee

12/8/53

Mr. Sam L. Phillips, et al.

Spruce Pine, North Carolina

Re: Docket No. DMEA-3221 - Mica
Elmyra Mine
Yancey County, North Carolina

Dear Mr. Phillips:

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

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

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

Sincerely yours,

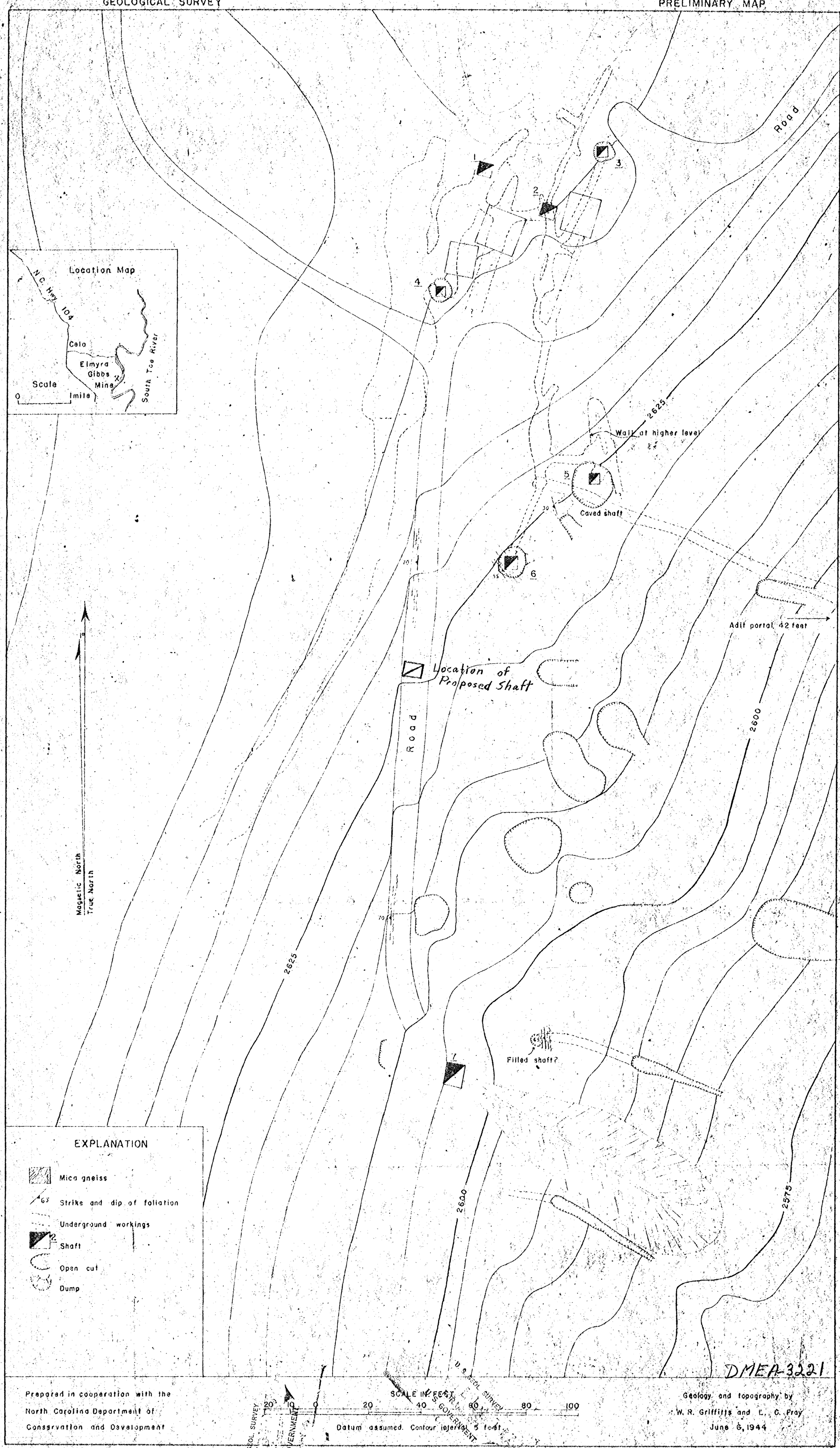
Lawrence G. Houk, Chief
Nonmetallic Minerals Division

Enclosure

LGHouk:gad 12/8/53
Copy to: Admr. R. File
Docket File
Field Team, Region VII
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STRATEGIC MINERALS INVESTIGATIONS
PRELIMINARY MAP



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

Geology and topography by
W. R. Griffitts and L. C. Pray
June 6, 1944

ELMYRA GIBBS MICA MINE, YANCEY COUNTY, NORTH CAROLINA