DEC 1 4 1953

Mr. Tracy K. Barnard and
Mr. Fred J. Cobb
P. O. Box 430
Franklin, North Carolina

Re: Docket No. DMEA-3157 - Mica
Murray Dent Mine
Macon County, North Carolina

Dear Sirs:

Your application for aid for an exploration project and other data available to us in Washington concerning your application 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, although noting a small amount of mica on your property, indicates to us that the probability of disclosing minable ore reserves 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. Mittendorf

Administrator

WLAnderson:mg 12/9/53
Copy to: Admr. R. File
Docket File
Operating Committee
Field Team, Region VII
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

December 9, 1953

Memorandum

To: Administrator

From: Nonmetallic Minerals Division

Subject: A denial of exploration assistance and closing review.
Docket No. DMEA-3192 - Mica
Property: Turkey Nest Mine
Macon County, North Carolina
Operator's property rights - Lease for ten years from the Bureau of Land Management
Applicants: Tracy M. Barnard and Fred B. Gabe
Amount requested: $7,635.00
No contract: Application denied.

Docket Summary

10/19/53 Received application, Form MF-103

10/21/53 Memo from D. A. Brobst, USGS, recommending field examination of property.

11/16/53 Memo from W. F. Dietrich, USBM, recommending visit to this mine when in vicinity to ascertain if an exploration program is justified.

11/24/53 Referral letter to field.

11/24/53 Letter to applicant advising of field referral.

11/27/53 Received report of Examination by Field Team, Region VII. By Kefton H. Teague, Geologist, USGS, and Lawrence E. Shirley, Mining Engineer, USBM. The Field Team recommended three possibilities: (1) Denial on basis of quality of mica or exploration contract either (2) rehabilitating and extending existing drift or (3) trenching.

11/27/53 Covering memo to report by Robert A. Lawrence and William A. Beck, recommending denial.

11/30/53 Memo from D. M. Larrabee, USGS, suggesting denial.

12/4/53 Memo from W. F. Dietrich, USBM, concurring in field team's recommendation of denial on basis of quality of mica.

Review: The field team makes the following comments in their report of examination:

"Most of the mica is warped, cracked, ruled, rum or ruby-colored "A". An estimated half is black-spotted. The recovery of strategic mica from mine during World War II is reported to be about 4 percent.....According to Mr. Carl Buchanan, head buyer at the Spruce Pine Mica Depot, a high percentage of the mica is wavy and the percentage of good stain is very near the minimum.....From the above it is apparent that it is questionable as to the strategic value of the mica.....The present operation has been an unprofitable one, and one reason for requesting exploration assistance may be to "bail them out" of this condition."

Comments:

Although the field team was not able to present a firm recommendation, the above statements from the report indicates that it is doubtful if an exploration program would recover any sizeable quantities of good quality mica. Considering the poor quality of the mica and the unprofitable nature of the present operation, the Nonmetallic Minerals Division recommends that the application for exploration assistance should be denied.

Walter C. Anderson
Nonmetallic Minerals Division

WCAnderson:ag 12/9/53
Copy to: Admr. R. File
Docket File
Mr. Houk

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

December 3, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3192, Mica.

Applicant: T. M. Barnard and F. Cabe
Name and Location of Property: Turkey Nest Mine, Macon County North Carolina
Date of Field Team Report: November 24, 1953
Date Received by Ceramic & Fertilizer Materials Branch: December 1, 1953
Field Team Recommendation:

1. Denial because of the poor quality of the mica.

Comments:

1. From the statements contained in the field team report regarding previous production, it is doubtful if an exploration program sponsored by the Government would recover any sizable quantities of good quality mica.

Recommendation:

I concur in the field team's recommendation to deny subject application.

W. F. Dietrich

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~XXWASHINGTONX25XDXCXX~~
ROOM 13, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

C
O
P
Y

November 25, 1953

Memorandum

To: Operating Committee, DMEA - Washington

From: Field Team, DMEA - Region VII

Subject: DMEA-3192 (Mica) Barnard & Cabe, applicants
Field examination on Turkey Nest mine.

Enclosed herewith are 4 copies of the field examination report on the Turkey Nest Mine.

The field examiners report shows no enthusiasm for this project. Considering the poor quality of the mica, the unprofitable nature of the present operation, and the statement in the opening paragraph that "considerable reserves of mica-bearing pegmatite appear to be present" we see no reason for approving this application.

Therefore we recommend denial.

/s/ Robert A. Laurence, Executive Officer
DMEA Field Team, Region VII

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

Reviewed by
DMEA OPERATING COMMITTEE
12-2-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM, REGION VII

ON
(mica)

DMEA-3192, TURKEY NEST MINE
Macon County, North Carolina

By

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

and

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

November 24, 1953

Reviewed by
DMEA OPERATING COMMITTEE
12-2-53
(Date)

Field Examination Report
on

TURKEY NEST MINE
Docket No. DMEA-3192, (mica)
Applicants: Tracy M. Barnard and Fred Cabe, Franklin, N. C.

This mine has produced substantial amounts of mica in the past; however, the quality has been poor. Considerable reserves of mica-bearing pegmatite appear to be present. The examiners are not able to present a firm recommendation, but instead present the following possibilities:

1. Deny application on basis of quality of mica.

2. Grant exploration assistance, using one of the following methods of approach.

   (a) Rehabilitate, widen and extend an existing 140-foot drift.

   (b) Strip possible extension of pegmatite and conduct open cut exploration.

The deposit was examined on November 12, 1953. Mr. Tracey M. Barnard accompanied the examiners on the inspection which required four hours.

The Turkey Nest Mica mine is 9.6 airline miles due west of Franklin, Macon County, North Carolina. It is below the crest on the east slope of the nose trending N. 60° E. from Wayah Bald and about 3000 feet N. 60° E of the Wayah Bald fire tower. Access is possible to within 1200 feet of the mine by car except during severe winter weather.

This Operator worked this mine during part of World War II, and for about one year during the present program. He appears to be a competent miner. The mine is held by a lease from the Bureau of Land Management. Area covered by the lease is adequate.

At present an 85 cu. ft. compressor and a double drum hoist are on the property. Recent work by the applicant has consisted of working the deposit by open cut, extending the cut about 40 feet westward from the cut shown on the map on p. 55 of Bull. 49, N. C. Geol. Survey, Mica Deposits of the Franklin-Sylva District, North Carolina. The pegmatite has been worked along the outcrop for about 320 feet and by three drifts and stopes on the 4600, 4674, and 4724-foot levels. Only the upper drift (4724-ft.) is now accessible. It is 140 feet long.

The Turkey Nest pegmatite intrudes locally granitized biotite gneiss that strikes from N. 70° E. to E. and dips between 45° and 65° N. The

pegmatite strikes N. 53° E., dips between 45 and 60° S. and averages about 7 1/2 feet in thickness. It is well zoned, consisting of a central tabular mass of quartz from 3 to 5 feet thick sheathed on each side by mica-bearing pegmatite from 1 1/2 to 2 1/2 feet thick. The mica-bearing pegmatite is a medium to coarsely crystalline aggregate of gray plagioclase (oligoclase?), quartz, and muscovite. Part of the muscovite occurs as small scrappy intergrowths with quartz and feldspar and part as larger books distributed here and there throughout the zone. The upper drift and stope explore only the portion of the pegmatite between the quartz core and the hanging wall gneiss.

Most of the mica is warped, cracked, ruled, rum or ruby-colored "A". An estimated half is black-spotted. The recovery of strategic mica from mine run during World War II is reported to be about 4 per cent. The largest book observed was about 15 to 10 inches. A considerable number of books measure 6 by 6 inches or larger.

During World War II 3,233.95 pounds of mica were sold to the Colonial Mica Corporation for $16,955.93. Value of the recent production is estimated at about $5,000.00. Prices of various recent sales has ranged between $7.50 and $12.00 per pound. According to Mr. Carl Buchanan, head buyer at the Spruce Pine Mica Depot, a high percentage of the mica is wavey and the percentage of "good stain" is very near the minimum. Of the mica sold to the Colonial Mica Corporation during World Warr II in excess of 95 percent was classified as No. 2 and No. 2 (inferior). From the above it is apparent that it is questionable as to the strategic quality of the mica.

Should exploration assistance be granted, two possible approaches are available. The applicants' proposal involves stripping the pegmatite along the outcrop for a distance of about 150 feet to the west. This would involve the removal of the loose overburden by a bulldozer, then shooting a trench about 6 to 8 feet deep along the pegmatite. Total depth of the tr nch would be about 12 feet deep, and it would be about 12 feet wide. Estimated cost of this work is as follows:

60 hrs. bulldozing @ $10/hr.....	$ 600.00
Shooting open cut 12' x 8' in crosssection for a distance of 150 ft. @ $20/linear foot..	3,000.00
Estimated Total Cost....	$3,600.00

The other approach is to rehabilitate and widen the existing 140-foot drift and extend it about 75 feet. Estimated cost using this approach is as follows:

Rehabilitate and widen 140-feet of existing drift @ $25.00/ft.	.....	$3,500.00
75 feet 5' x 7' drift @ $35/ft.		2,625.00
	Estimated total cost.....	$6,125.00

The present operation has been an unprofitable one, and one reason for requesting exploration assistance may be to "bail them out" of this condition.

November 24, 1953.

K. H. Teague, Geologist, U.S.G.S.

L. E. Shirley, Mining Engineer, U.S. B. M.

xm

IN REPLY REFER TO:

G-MD-CNM

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

November 27, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-3192 (mica)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. M. Larrabee, U. S. Geological Survey
Applicant: Tracy B. Barnard and Fred Cabe, Franklin, North Carolina.
Name of property: Turkey Nest Mine.
Location of property: 9.6 airline miles due west of Franklin, Macon County, North Carolina.
Date of field team report: November 24, 1953
Authorship of field team report: K. H. Teague, and L. S. Shirley.
Field team's recommendation: None; choice of 3.
Comments: The mica is chiefly non-strategic and of low value.
ACTION SUGGESTED: Denial.

D. M. Larrabee

Larrabee:jeh
11/27/53
cc: Director's reading 4212
Branch reading 4212
DMEA 3 ✓
Larrabee G-230

NOV 2 4 1953

Mr. Tracy M. Barnard and
Mr. Fred B. Cabe
P. O. Box 430
Franklin, North Carolina

Re: Docket No. DMEA-3192 - Mica
Turkey Nest Mine
Macon County, North Carolina

Dear Sirs:

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. Robert 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,

W. O. Mitendorf

Administrator

WCAnderson:gad 11/12/53
Copy to: Admr. R. File
Docket File
Field Team, Region VII
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk
Operating Committee

NOV 24 1953

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

Subject: Docket No. DMEA-3192 - Mica
Tracy M. Burnand and
Fred D. Cabe
Turkey Nest Mine
Macon County, North Carolina

Dear Mr. Laurence:

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

Copies of memoranda from the Geological Survey and the Bureau of Mines are enclosed for your information.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee

Approved:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

Enclosures 4

WCAnderson:gad 11/13/53
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Dietrich, 3526
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

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

Defense Minerals Administration
RECEIVED
NOV 16 1953

November 16, 1953

Memorandum

To: Nonmetallic Minerals Division
Defense Minerals Exploration Administration

From: Chief, Ceramic and Fertilizer Materials Branch

Subject: DMEA-3192, Mica.

Applicant: Tracy M. Barnard and Fred D. Cabe.
Name and Location of Property: Turkey Nest Mine, Macon County, North Carolina.
Date of Application: October 19, 1952.
Estimated Project Costs: $7,635
Comments:

1. On March 6, 1953, 46.29 pounds of mica were sold to the Government Mica Depot from this mine, of which good stained and better qualities totaled 27.75 pounds.
2. As reported in N.C. Division of Mineral Resources Bulletin No. 49, the pegmatite of the Turkey Nest mine is enclosed in biotite gneiss. The mica-bearing pegmatite is a medium - to coarse grained aggregate of plagioclase, quartz, and muscovite. The mica is run or ruby colored, and part of the mica has "A" structure.

Recommendation:
It is recommended that the field team visit this mine 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-MU-CNK

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

Memorandum

October 20, 1953

REVIEW OF APPLICATION DMEA-3192 (Mica)

To: L. G. Henk, Defense Minerals Exploration Administration
From: Donald A. Brobst, U. S. Geological Survey
Applicant's name and address: Tracy M. Barnard and Fred D. Cabe, P. O. Box 430, Franklin, North Carolina.
Name of property: Turkey Nest Mine.
Location of property: South side of high ridge about a mile east of Nayah Bald, Macon County, North Carolina.
Summary of applicant's proposal:

Bulldozing trench 250 feet long, 8 feet deep, 16 feet wide = 32,000 cubic feet - 10 days at $80	$ 800.00
Open benches resulting from trenching:	
Foreman 90 days at $12/day	1080.00
4 men 90 days ea. at $36/day	3240.00
Explosives	600.00
Small tools	200.00
Tool house	300.00
Compressor - hammer rental 4 mos. at $175/mo.	700.00
WC Insurance	350.00
Subtotal	$7270.00
Contingencies - 5% of total	365.00
Total	$7635.00

Sources of information on applicant's property:
Mica Deposits of the Franklin-Sylva District, North Carolina, by J. C. Olson and others, North Carolina Dept. of Cons. and Dev., Bull. 49, p. 54-56, 1944.
Turkey Nest mine report by M. R. Klepper.

Comments:
1. Mica reported to be ruby with some "A" and about half is specked.
2. The pegmatite is reported 7.5 feet thick with mica in the 1.5 to 2.5 foot thick zones flanking the core. More mica is concentrated on the hanging wall side, but mica is better quality on the footwall side.
3. Perhaps the applicants proposal for open cut is not the best approach, but reports suggest that this mine may be a good bet for production of strategic ruby mica.

RECOMMENDATION:
Refer to field team for examination of the property.

Brobst:jeh
10/20/53

Donald A. Brobst

cc: Director's reading 4212
Branch reading 4212
DMEA 3

Brobst G-230