DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 4060

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Routing Slip

To:	Base Metals Div.	Date	11/15/55
To:	Jo Offer Gen.	Date	11/18/55
To:	Mr. Thurson	Date	11/18/55
To:	Mr. Miller	Date	11-18-55
To:	Mr Y	Date	11-18-55
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Room 11, Post Office Building
Knoxville 2, Tennessee

July 28, 1960

Memorandum

To: L. G. Houk, Acting Field Officer, Region IV, OME

From: Robert A. Laurence

Subject: Inquiry by Panther Mountain Corporation

An inquiry was received today from Mrs. J. M. Sullins, representing the Panther Mountain Corp., of Knoxville, concerning the possibility of OME aid in drilling three or four holes at the Panther Mountain prospect in Macon County, North Carolina. Discussion brought out the fact that apparently no new work has been done since the denial of DMEA-3585 and DMEA-4060 on this same prospect. Forms and literature were given to Mrs. Sullins and she was advised to support her application with new data if she decides to apply.

Robert A. Laurence

RAL/mg
cc - Mr. L. G. Houk
Mr. V. J. Lynch
Files

File Copy
Surname
J.W. Alt
Nelson
Geehan
Selfridge

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

NOV 18 1955

Panther Mountain Corporation
719 - 13th Street
Knoxville, Tennessee

Re: Docket No. DMEA-4060 (Copper-Zinc)
(Formerly Docket No. DMEA-3585)
Panther Mountain Corporation
Panther Mountain Mine
Macon County, North Carolina

Gentlemen:

Your application for aid for an exploration project and other reports available to us in Washington concerning your application have been reviewed.

Upon the receipt of the requested information and the Field Team report pertaining to your property, your application was reactivated and was assigned a new docket number which is Docket No. DMEA-4060.

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 copper-zinc mineralization on the cited 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,

Frank E. Johnson

ACTING Administrator

JWAlt/er 11/17/55
Copy to: Docket (2)
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2) Chron.

11/9/55

Bill: This Peru patent.
Interesting structure, unique and
infringement [illegible] & manufacturing [illegible]
[illegible] [illegible] [illegible] generally.
Suggest further [illegible] into [illegible]
consideration of [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

File Copy
Surname J. Alt
Dismissed

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Robert A. Lawrence
Executive Officer
DMEA Field Team, Region V
Room 13, Post Office Building
Knoxville, Tennessee

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corp.
Panther Mountain Mine
Mason County, North Carolina

Dear Mr. Lawrence:

With reference to the cited property we have received the Field Team Report and the report by George D. Swingle, but until the Applicant submits the evidence that the Government has assigned the permits BLM-A-021786 and BLM-A-03[illegible]284 from Louise Munday Cotter to the Panther Mountain Corporation, we will hold this application in our inactive files.

We have checked this with the Bureau of Land Management and they informed us that as of November 3 this assignment has not been made.

Sincerely yours,

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

JWAlt/er 11/7/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

November 17, 1955

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Denial of application, Docket No. DMEA-4060 (formerly Docket No. DMEA-3585), (Copper-Zinc), Panther Mountain Corporation, Panther Mountain Mine, Macon County, North Carolina

The cited application, dated November 12, 1954, was received by this office on November 30. The application was referred to the Field Team for an examination on December 14, 1954.

The Applicant proposed a two-stage drilling program for a total of 1400 feet of diamond drilling at an estimated cost of $9,355.00.

On December 29, 1954, members of the Field Team met with officials of the corporation and requested additional information from them, which they agreed to supply.

As of July 21, 1955, the corporation had not supplied the requested information and on August 4, we wrote to inform them that if the information was not received within thirty days that their application would be placed in our inactive files. We did not hear from the Applicant, and on September 7 again wrote advising that the application had been placed in our inactive files. On September 9, we received a telegram from the Applicant requesting that we reconsider our action. On September 13, we wrote to it stating that the application would be held in our inactive files until the requested information had been supplied.

On October 26, 1955, we received the Field Team examination report and the Applicant's geologic report.

Upon the receipt of the requested information and the Field Team report pertaining to the property, the application was reactivated and was assigned a new docket number which is Docket No. DMEA-4060.

The Field Team states: "Considering the generally unfavorable results of prospecting as reported at the other Jackson and Macon County copper prospects, a strong recommendation cannot be made for the Panther Mountain Prospect. However, based upon the continuity of the shear zones as shown on Mr. Swingle's map, and the thick gossan zone exposed in pit No. 2, we advance a cautious recommendation for a few drill holes."

On the strength of the Field Team's recommendation and the poor results obtained on other properties on the same formation, we concur with the recommendation of the Commodity member of the USBM that this application be denied.

J. W. Ad

for W. R. Griswold

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

November 17, 1955

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for J. W. Alt

W. R. Griswold

JWAlt/er 11/17/55

Copy to: Docket (2)
XXXXXX
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 25 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
NOV 18 1955

Mr Betty

November 16, 1955

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region V - Knoxville

Subject: DMEA ~~2505~~ 4060 (copper-zinc) Panther Mountain Corporation, Knoxville, Tennessee, Panther Mountain (Munday) Pros. Macon County, North Carolina

I have just been advised by the Panther Mountain Corporation that the Bureau of Land Management has returned the proposed assignments of prospecting permits because they do not conform to the regulations and practive of the Bureau.

The Bureau's letter provided instructions for proper preparation of the proposed transfer and for filing of the request for approval. The Corporation plans to request this approval as soon as it can draw up and submit the assignments to the Bureau.

Robert A. Laurence
Robert A. Laurence

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C.
ROOM POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
NOV 18 1955

November 16, 1955

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region V - Knoxville

Subject: DMEA-3585, (copper-zinc) Panther Mountain Corporation, Knoxville, Tennessee, Panther Mountain (Hunday) Pros. Macon County, North Carolina

I have just been advised by the Panther Mountain Corporation that the Bureau of Land Management has returned the proposed assignments of prospecting permits because they do not conform to the regulations and practive of the Bureau.

The Bureau's letter provided instructions for proper preparation of the proposed transfer and for filing of the request for approval. The Corporation plans to request this approval as soon as it can draw up and submit the assignments to the Bureau.

Robert A. Laurence

RAL/mm.
cc:
Lynch
Book
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

November 15, 1955

Memorandum

To: Chief, Operations Control and Statistics Division

From: Chief, Base Metals Division

Subject: Withdrawal of Panther Mountain Corporation's application, Docket No. DMEA-3585 (Copper-Zinc), Panther Mountain Mine, Macon County, North Carolina.

Will you please transfer the cited application from the inactive files and assign it a new docket number.

After the application was placed in the inactive files and the Applicant notified of this action, they requested that we reconsider our action and later submitted to the Field Team the information that had been requested pertaining to the property.

for J. W. Cell
W. R. Griswold

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

November 15, 1955

Memorandum

To: Chief, Operations Control and Statistics Division

From: Chief, Base Metals Division

Subject: Withdrawal of Panther Mountain Corporation's application, Docket No. DMEA-3585 (Copper-Zinc), Panther Mountain Mine, Mason County, North Carolina.

Will you please transfer the cited application from the inactive files and assign it a new docket number.

After the application was placed in the inactive files and the Applicant notified of this action, they requested that we reconsider our action and later submitted to the Field Team the information that had been requested pertaining to the property.

for J.W. Alt
W. R. Griswold

JWAlt/er

Copy to: Docket (2)
Base Metals (2)
Mr. Kiilsgaard, USGS
Mr. Pennington, USBM
Chron.

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

RECEIVED
OCT 31 1955

October 28, 1955

Re: DMEA-3585
(Cu-Zn; $9,355)
Panther Mountain Corp.,
Knoxville, Tennessee
Panther Mountain
Prospect (Old Munday
Mine)
Macon County, N. C.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop,
Branch of Base Metals

Subject: Review of Field Examination report and recommendations by DMEA Field Team of October 18, 1955, received October 20, 1955

I have reviewed the application dated November 12, 1954, the comments of the field examiner, the report by George D. Swingle and the field team recommendation.

The evidence given rather conclusively indicates that primary mineralization at or near the outcrop is limited to minor lenses of material that is not ore by reason of limiting physical dimensions. Erosion at varying depths throughout adjacent areas has not exposed any quantity of commercial zinc-copper mineralization in the area at any point, nor is the geologic setting one that would be considered favorable for exploration at depth.

It would appear that the sulfide lenses in pegmatite association offer very small targets and a limited potential for worthwhile discovery. For that reason I recommend the application be denied.

O. M. Bishop

O. M. Bishop

Copy to - Div. of Minerals
Mr. Kiilsgaard, Rm. 5222
O. M. Bishop
Files

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

RECEIVED
OCT 31 1955

October 28, 1955

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Copy to - Div. of Minerals
Mr. Kiilsgaard, Rm. 5222
O. M. Bishop
Files

IN REPLY REFER TO:

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

RECEIVED
OCT 27 1955

October 26, 1955

Re: DMEA 3585
Panther Mountain Corp.
Sullin's Prospect
Macon Co., N. C.
Copper-Zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

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

Subject: Review of Field Team Report.

The applicant asks assistance in diamond drilling sulfide-bearing gneissic zone in granite. The Field Team recommends stage drilling as:--

Stage I	
Drilling, 3 holes, 700 feet at $5.50/ft.	$3,850.00
Supervision, road work, core boxes, etc.	1,626.50
Total - Stage I	$5,476.50
Stage II	
Drilling, 3 holes, 600 feet at $5.50/ft.	$3,300.00
Supervision, core boxes, analyses	579.00
Total - Stage II	$3,879.00
Grand Total - Stages I and II	$9,355.50

The Stage I holes will explore the most promising part of the zone, a 250-foot long section at the southwesterly end of the 500-foot zone within which the scattered lenses of zinc-copper-pyrite occur. The lenses appear to be aligned in subzones on strike and dip and the drill holes will be so directed as to cut the subzones more or less at right angles to the strike and dip and thus afford three "fresh" samples of the zones, that is samples from below the oxidized surface material. The very

limited sampling so far done suggests over-all low grade material, as sample No. 1 of the consulting geologist "the best channel cut that could be taken at this site" assayed:--

Copper	0.29%	Length 5 feet from "blast face"
Iron	9.04%	
Zinc	6.54%	
Lead	0.0 %	

Sample No. 2, another across 5 feet of strata, assayed:--

Copper	0.14%	Pit No. 2
Iron	11.60%	
Zinc	0.14%	
Lead	0.0 %	

A 6.5-foot sample cut by a Bureau of Mines engineer in 1950 horizontally across a lense two feet thick and dipping at about 25° assayed:--

Zinc	10.8%	Shaft cut
Copper	0.89%	
Sulfur	13.7%	

As the representative of other similar unprospected deposits this showing may warrant the proposed staged drilling.

I concur with the cautious recommendation of the Field Team that such work be done.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
OCT 27 1955

October 26, 1955

Re: DMEA 3585
Panther Mountain Corp.
Sullin's Prospect
Macon Co., N. C.
Copper-Zinc

Memorandum

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limited sampling so far done suggests over-all low grade material, as sample No. 1 of the consulting geologist "the best channel cut that could be taken at this site" assayed:--

Copper	0.20%	Length 5 feet from "blast face"
Iron	9.04%	
Zinc	6.54%	
Lead	0.0 %	

Sample No. 2, another across 5 feet of strata, assayed:--

Copper	0.14%	Pit No. 2
Iron	11.60%	
Zinc	0.14%	
Lead	0.0 %	

A 6.5-foot sample cut by a Bureau of Mines engineer in 1950 horizontally across a lense two feet thick and dipping at about 25° assayed:--

Zinc	10.8%	Shaft cut
Copper	0.89%	
Sulfur	13.7%	

As the representative of other similar unprospected deposits this showing may warrant the proposed staged drilling.

I concur with the cautious recommendation of the Field Team that such work be done.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-10/26/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
H. M. Meyer, 3623

Permits - North Carolina

BLM-A-021786

BLM-A-034284

Louise Munday Cotter

to the Panther Mountain Corporation

The Bureau of Land Management has not made total the original file permits to the Panther Mountain Corporation on Oct. 13 1955.
They wrote to Polk Wright, 349 Paterson Office, S.W. Knoxville, Tennessee. Gentlemen, with this, on these the original permits to file.

Bureau Land Management

Oscar Collins

Ex - 3688

Rm - 1555

Mr. Cook - Rm 4650

Ex - 3609? 4945

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C.
ROOM 1 U.S. POST OFFICE BLDG.
KNOXVILLE 2, TENN.

October 18, 1955

Memorandum

To: Operating Committee, DMEA - Washington

From: DMEA Field Team, Region V

Subject: Field Examination Report, DMEA-3585 (copper-zinc)
Panther Mountain Corp., Knoxville, Tenn.
Panther Mountain Prospect, Macon County, N. C.

Enclosed are three copies of the applicant's geologic report, which were received here on October 14, 1955, as a supplement to the form MF-103 submitted in November 1954, and four copies of the Field Team examination report.

We have again reminded the applicant of the need to submit evidence that the Government has assigned the permits (BLM-A-021786 and BLM-A-034284, North Carolina) from Louise Munday Cotter to the Panther Mountain Corporation. They tell us it has been done, but have submitted no documentary evidence. Possibly you could check this with a phone call to the Bureau of Land Management.

We have also asked the applicant to submit bids by three diamond-drilling contractors based on a minimum guarantee of 700-feet. These will be forwarded to you when received. In the meantime, we are using a figure in our report which approximates the probable cost.

We can not emphasize too strongly that a contract, if approved, must provide for supervision by a competent engineer or geologist. We understand that the corporation intends to continue Mr. Swingle's services as a consultant, and our estimated cost for supervision is based upon 7 days for Stage I and 6 additional days if Stage II is approved. Mr. Swingle is entirely competent to handle the job and will be acceptable to us as a supervisor.

Considering the generally unfavorable results of prospecting as reported at the other Jackson and Macon County copper

Reviewed by
DMEA OPERATING COMMITTEE
10-26-55
(Date)

prospects, a strong recommendation cannot be made for the Panther Mountain Prospect. However, based upon the apparent continuity of the shear zones as shown on Mr. Swingle's map, and the thick gossan zone exposed in pit No. 2, we advance a cautious recommendation for a few drill holes.

We suggest that, if a contract is approved, only the core-drilling by independent contract should be on a unit-cost basis. Other items should be listed as allowable maximums. (For example, the estimate of $75 per day for supervision is based upon Mr. Swingle's present arrangement of $50 fee, plus 7¢ per mile for use of his car, plus subsistence, which would total approximately $75 per day, but obviously the Operator should only be reimbursed for Mr. Swingle's actual expenses. Round trip from Knoxville to the prospect is about 250 miles, making a travel cost of $17.50 for each day that Mr. Swingle goes to the job).

Robert A. Laurence

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch

V. J. Lynch, Member
Bureau of Mines

OCT 2 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXAMINATION REPORT BY FIELD TEAM, REGION V

ON

DMEA-3585, PANTHER MOUNTAIN PROSPECT
(copper-zinc)
Macon County, North Carolina

By

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

and

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

October 19, 1955

Reviewed by
DMEA OPERATING COMMITTEE
10-26-55
(date)

FIELD EXAMINATION REPORT

DMEA-3585 (copper-zinc) PANTHER MOUNTAIN PROS.
Macon County, North Carolina

11/9/55

Applicant: Panther Mountain Corporation, Knoxville, Tennessee

The Panther Mountain Prospect was examined on October 4, 1955, by the writers in company with George D. Swingle, Associate Professor of Economic Geology at the University of Tennessee, who was retained as a consultant by the applicant. Three copies of Mr. Swingle's report are submitted along with this report.

The examination required about 5 hours. The prospect had been examined by Mr. Laurence and Mr. Beck in 1950 (before DMA).

We recommend approval of a contract for drilling, in two-stages, as outlined below:

Location: The property is 9 miles from Franklin, N. C., the nearest railroad point. It is incorrectly located on the topographic quadrangle which accompanies the application. The correct location is shown on the map accompanying Mr. Swingle's report, which is an enlargement of part of the Highlands quadrangle (176-SW). For further details, see pp 2-3 of Swingle's report.

Competence of Applicant and Operating Personnel. It would be difficult to assemble a group of persons who know less about geology and mining, and who understand less of the problems involved in exploring and developing a mineral deposit, than the individuals who make up the Panther Mountain Corporation.

The Corporation was formed in order to explore this proppect. Money was raised through the sale of stock. The Company has no equipment, no full-time personnel, and no other mining properties, and has never owned or operated a mine.

However, with considerable reluctance, the Corporation did retain a consulting geologist. Mr. Swingle is entirely competent to do the examination report, as well as to supervise the exploration project if a contract is approved, but it should be clearly understood that he is to be in charge.

Applicant's Property Rights. Mr. Swingle's map shows the two Forest Service parcels said to be held by the applicant. We have seen no documentary evidence of Bureau of Land Management approval of the assignment of these leases to the applicant Corporation, although we asked for this in December, 1954.

The applicant has been advised to acquire the two areas marked

"private acreage" on Mr. Swingle's map.

Description of Property. See Mr. Swingle's report.

Geology and Ore Reserves. We went over the ground thoroughly with Mr. Swingle, and have nothing to add to his geologic map and report. It seems probable that, as suggested in the report, there are two, and possibly three mineralized zones, containing discontinuous pods and lenses of zinc and copper sulfides. The gossan zone exposed in pit No. 2 is the most promising for thickness and continuity.

In addition to the localities sampled by Mr. Swingle, there is another which was sampled by Mr. Beck in 1950. This is at the northeast face of the open-cut above the shaft, and it contains the same type of pods or lenses of sulfides. Mr. Beck's sample was a 6.5 foot horizontal channel sample taken about 4 feet above water-level in the shaft. It contained:

10.8% Zn
0.89% Cu
13.7% S

However, a horizontal sample cut at the water level in the shaft would be almost unmineralized, as the lens sampled by Mr. Beck is only about 2 feet thick.

No reliable ore reserve figure can be estimated, as this is a wild-cat proposition; based on a few outcrops. However, if 2 mineralized zones averaging 5 feet thick each are assumed to extend from the shaft to pit No.2 and to a depth of 100 feet, and each zone consists of half of mineralized pods and half of barren rock, the maximum inferred ore reserve of this block would be 10,000 tons $\left(\frac{2 \times 5' \times 100' \times 400'}{2} \times \frac{1}{20} = 10{,}000 \text{ tons} \right)$

It should be noted that this prospect is one of a group of similar deposits occurring at intervals for about 30 miles along the regional strike just to the northwest of several large bodies of granitic rocks. (see USGS, Cowee folio in open-file, and unpublished report of Sept. 19, 1944, entitled "Copper Deposits in Jackson County, N. C.", by G. H. Espenshade, in Geological Survey files; also USGS Professional Paper 179, pages 87-92. It should be noted that the Panther Knob Prospect of the Espenshade report is not the Prospect under consideration in this application). None of these has ever been developed successfully, although the Cullowhee Mine is reported to have shipped 4500 tons of ore averaging 4% copper

Applicants Proposal. The plan of drilling outlined by Mr. Swingle is acceptable. Drilling should be staged, with holes 2,4 and 3 totalling 700 feet constituting Stage I.

Estimated Cost of Project.

Stage I

Road repair and drill site preparation - 24 hrs. dozing @ $15/hr.	$360.00
Moving in and installing drilling equipment and moving out.....	600.00 ?
700 ft. of diamond drilling, size AX @ $5.50/ft.....	3,850.00
Core boxes , 35 @ $2.50 ea.	87.50
Sample analyses - 9 samples (Cu,Pb, Zn) @ $6/ea	54.00
Supervision by Geologist or Mining Engineer, 7 days @ $75/da. including fee and expenses	525.00 ?
Estimated Cost of Stage I.....	$5,476.50

Stage II

If results of the work of Stage I indicate that further exploration is warranted, Stage II consisting of 600 feet of diamond drilling in holes Nos. 1, 5, and 6 is recommended.

600 ft. diamond drilling, size AX @ $5.50/ft.	$ 3,300.00
30 core boxes @ $2.50/ea.	75.00
Sample analyses - 9 samples (Cu,Pb,Zn) @ $6/ea	54.00
Supervision - 6 days @ $75/da. including expenses	450.00
Total estimated Cost Stage II	$3,879.00
Total Estimated Cost of Stages I and II	$9,355.50

The costs quoted above are to be considered as allowable maximum costs.

Oct. 19, 1955

R. A. Laurence, Geologist
U. S. Geological Survey

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

Docket Copy

GEOLOGY OF THE SULLINS' PROSPECT

Macon County, N. C.

by

George D. Swingle

Reviewed by
DMEA OPTIMUM COMMITTEE
10-26-55

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GEOLOGY OF THE SULLINS' PROSPECT

Macon County, N. C.

By

George D. Swingle

Recommendations

After examination of the property herein described and assay returns on samples collected from the property it is recommended that the prospect be further explored as proposed in this report.

History and Ownership

According to local residents of Macon County, ore minerals were first recognized at the prospect some 45 years ago. Shortly thereafter prospect pits were dug, a shaft was started in bedrock, and an adit driven a few feet into bedrock. Mr. William Moses of Gneiss, N. C. states that about 1950 the American Zinc Co. further explored the property by blasting and bulldozing. In so far as known the prospect has not been explored by drilling.

At present the mineral rights at and near the prospect are held by Mrs. James M. Sullins, 1719 13th Street, Knoxville, Tennessee. Examination of the prospect by the writer was at Mrs. Sullins request.

Location and Access

The prospect is located approximately 9 miles southeast of Franklin, N. C., near U. S. highway No. 64. It lies near the northwestern extremity of the U. S. T. V. A. 7½ minute quadrangle, Highlands - 176SW, being about one-half mile to the east of the western border of the quadrangle, and approximately eight-tenths of a mile south of the northern border of the quadrangle.

Two access routes are available from U. S. highway No. 64, one being the Buck Creek road, and the other the Brush Creek road. The Buck Creek

secondary road, which joins the highway one-half mile south of the village of Gneiss, N. C., trends eastward from U. S. highway No. 64. One and a half miles (airline) east of the highway, at the juction of Buck Creek with Little Buck Creek and Moss Branch, a tertiary road leads southeast from the Buck Creek road. This tertiary road is reported to have been extended beyond that point shown on the Highlands quadrangle and to join the access road indicated on the property map in this report. A Mr. Holland of Franklin, N. C., had driven a jeep over this route to the workings at the time of the writer's visit to the property and reported that the road was in fair condition, but was negotiable only in dry weather. This road was not traversed by the writer beyond the terminal point of the road drawn on the enclosed property map. From this point to the prospect the road is in fair condition. It is estimated that about 3 days bulldozer work would be required to improve the road from the Buck Creek road to the workings. For wet weather travel the steeper slopes would probably have to be gravelled.

The Brush Creek tertiary road joins U. S. highway No. 64 about one-half miles southeast of Callasaja Falls, (Scaly quadrangle 167-SE). This road is in good condition for a distance of about one-half mile from the highway. Several summer homes and cottages have been built along this portion of the road. Beyond this point the road is quite steep and is traversable with difficulty in a jeep. At present the road is impassable beyond the sharp curve indicated on quadrangle 176-SW. From this curve southeastward along Deal Branch, a tributary of Brush Creek, a badly washed and poorly defined road extends to about elevation 3460. This road is shown on the enclosed property map. This access route to the prospect is greatly inferior to the Buck Creek route at the present time. It is estimated that at least a weeks work with a bulldozer would be necessary to improve this route to the prospect.

William Moses of Gneiss, N. C., states that the American Zinc Co. utilized the Buck Creek route in bringing in their air compressor and other equipment.

Water Supply

Water for drilling is available at Buck Creek, or on the lower reaches of Deal Branch, but would have to be trucked or piped to the workings. Deal Branch, 1,000 feet or so from the prospect, would afford a limited supply of water during wet weather. At the time of the writer's visit to the property about 100 gallons of water had accumulated in the old shaft. Because of drainage from the shaft, however, only meager quantities of water will accumulate there.

Property Description

The several parcels of U. S. Forest Service lands upon which Mrs. James M. Sullins holds prospecting rights are indicated on the enclosed property map. Tract number 2 in which the prospect occurs and tract number 1 are the two properties examined by the writer. These two tracts are outlined by heavy dark lines on the enclosed property map.

A description of these two tracts as reported to the writer by Mrs. Sullins follows:

> Tract number 1 - being part of U. S. Forest Service tract number 54, beginning at corner 4 of tract number 54 being the same corner as corner 7 of tract 166-a-1, thence north 39 degrees and 54 minutes east 21 and 85/100 chains to corner 3, thence south 81 degrees 44 minutes east 12.9 chains to corner 2, thence south 23 degrees west 25 chains to corner 6 (shown on the enclosed property map as corner number 1), thence south 83 degrees and 22 minutes west 3.78 chains to corner 5, thence north 56 degrees and 40 minutes west 16.16 chains to the point of beginning, containing 40 acres more or less.
>
> Tract number 2 - being part of U. S. Forest Service tracts 166-a-1 and 994, beginning at corner 7 (corner 4 on the enclosed property map) south 30 degrees west with U. S. line 15 chains to a double dogwood tree, thence north 44 degrees west 22 chains to a ten inch poplar tree, thence north 21 degrees east 17 chains to a fourteen inch whiteoak tree on

old road and ridge, thence north 75 degrees east 15 chains to gap on line between Jake Franks property and U. S. tract 994, thence with meanders of ridge, with lines of tract 994, southerly to the point of beginning, containing 52 acres more or less.

The above two tracts are those described in the contract B.L.M.A. serial number 021786, State of North Carolina, Nantahala National Forest.

In addition to the above two tracts, Mrs. Sullins states that additional tracts designated as U. S. Forest Service tracts numbers 166, 109-c, 2-m-17, and 54 are held by her under contract B.L.M.A. serial number 034284. These latter tracts are outlined on the enclosed property map and are designated as tracts 3, 4, 5, and 6 respectively.

Determination of Property Boundaries

The property boundaries, as indicated on the enclosed property map, were transferred by the writer from U. S. Forest Service tract maps in the offices of the U. S. Forest Service in the Post Office Building in Asheville, N. C. The tract maps in the Asheville office are drawn on a scale of 40 chains to the inch and do not show topography. Calculations were made from the junction of Latitude 35°07'30" and Longitude 83°15'. The boundaries of tracts 3, 4, 5, and 6, as they are designated on the enclosed property map, were not field checked and thus may not be precisely plotted.

Corner 4, common to tracts 1 and 2, on the enclosed property map was determined by following blazed and painted trees, marking the boundary between U. S. land to the south and west and the private acreage (presumably held by Jake Franks, as stated in B.L.M.A. contract 021786) to the north and east, southward from corner 5 of tract 2. This U. S. F. S. boundary line is fairly well defined, by red paint on scattered trees, between corners 5 and 4 of tract 2. In a similar fashion the U. S. F. S. boundary between corners 3 and 4 of tract 2 was determined. This boundary, however, is very poorly marked by red paint on blazed trees and is very difficult to follow. Corner 4 was determined by the

intersection of these two lines (between corners 5 and 4, and corners 3 and 4 of tract 2). At the point where these two lines join at least 4 trees are prominently blazed and marked with red paint. The tree arbitrally selected as the corner tree is a large red oak with a minimum diameter of 20 inches. The trunk is noticeably flattened into an ellipse shape and the tree leans strongly north seventy degrees west.

Corner 3 of tract 2 is described above as being marked by a double dogwood tree. In the vicinity of corner 3 at least 4 double dogwood trees are present. In determining corner 3 the 15 chain distance mentioned previously was taped from corner 4 along a direction determined with a Brunton compass. The double dogwood selected as the corner was prominently blazed by the writer.

The boundary between corner 4 and corner 3 of tract 2 was flagged with yellow tape.

The boundary line between corner 3 and corner 2 of tract 2 was also flagged with yellow tape. Corner 2 was not precisely located, since in the vicinity of this corner, described above as being marked by a 10 inch poplar tree, are numerous trees which fit this description.

Corners 1 and 5 of tract 2 were not precisely located in the field. From corner 4 northeastward to corner 3, and from corner 4 southeastward to corner 5 the boundaries between the U.S.F.S. lands and the private lands are apparently not marked, ar at least the markings were not located.

On the enclosed property map the light-weight black lines represent the adjusted property lines after field checking and location of corner 4. The heavy-weight black line represent the property boundaries as plotted in the office from U.S.F.S. tract maps.

In summary, the boundaries of tract 2 between corners 5 and 4, 4 and 3, and 3 and 2 are accurately located, whereas the boundaries of tracts 1, 3, 4, 5, and 6 may require further adjustment after field checking.

Geology

Rock types. -- Gneiss and granite are the two main rock types exposed at and near the prospect. Associated with these rocks are minor amounts of pegmatite, schist, and vein quartz.

Outcrops are fairly abundant near the workings. Elsewhere, only scattered exposures occur, these being most common on steep slopes. Residium, colluvium, and, at the time of the writer's visit, heavy vegetation mask the bedrock.

Several varieties of gneiss are present in the area, including biotite gneiss, granite gneiss, pegmatitic gneiss, and diorite gneiss. Texturally, the gneisses range from fine-grained to coarsely porphyritic. The mafic content varies from less than 10 per cent to 60 per cent or greater. Segregations of the platy minerals are commonly pronounced rasulting in a distinctly banded rock. In other cases, dissemenation of the micas results in a massive rock with banding but faintly discernable. Banding in the various outcrops is quite variable in pattern. Commonly, alternate bands of quartz-rich layers and biotite layers occur at intervals of six inches or less. However, in a few outcrops individual layers may be two feet or greater in thickness.

Massive granitic rocks are present adjacent to the gneissic beds. The granite is well exposed along U. S. highway No. 64 south of Brush Creek toward Highlands, N. C. Along Brush Creek enroute to the prospect also occur massive granite outcrops. Nearly everywhere the granite is coarse-grained, porphyritic, and somewhat pegmatitic. Phenocrysts of orthoclase up to 3/4 of an inch in diameter are common. Biotite and muscovite are present with biotite being most abundant. Pegmatite veinlets are common in the granite, particularly near the gneissic rocks. Unlike the gneiss foliation is not developed in the granite proper.

The granite-gneiss contact has not been drawn on the geologic map included in this report, since this contact is gradational. In general, the granite is

present west of the prospect workings, whereas the gneissic rocks lie east of the workings. Along the workings, which trend in a generally north-south direction the rocks are transitional between well-defined gneisses to the east and granitic rocks to the west. In this transitional some remnants of gneissic structure are present in the granite, and granitic rocks occur along foliation in the gneisses. Locally, in this zone, the granite is much finer-grained than elsewhere, although medium to coarse-grained granite is also present. To the west of the gradational zone the granite becomes progressively more homogeneous until along Brush Creek south of Emmaline Gap a fairly clean granite is present. Eastward from the transitional zone the gneisses appear to contain progressively smaller quantities of granite, although pegmatite is quite common locally.

Schistose beds are confined to the gneissic areas. These rocks are not abundant in outcrop and constitute but a small percentage of the exposures observed. Characteristically, the schists are composed of coarse-grained biotite with minor quartz and other minerals. Seldom are the beds greater than a foot or so in thickness. Along the Buck Creek road, some distance from the workings garnetiferous schists are exposed, but none of these beds are noted near the prospect.

Pegmatite is conspicuous throughout the r ocks of this area. Normally, it occurs in thin anastomosing veinlets which commonly are less than a foot in thickness. Locally, fine-grained pegmatite as much as 10 feet in thickness occurs. One such occurrence of thick pegmatite is just east of the old shaft. Near the workings, occasional float fragments of sheet muscovite up to 3 inches across were noted. Presumably, these were derived or carried from a nearby coarse-grained pegmatite, however, the parent rock was not located.

Relatively minor amounts of vein quartz traverse the rocks near the workings. In thickness the veins range from less than an inch to upwards of 6 feet. Smoky and milky varieties of quartz are present.

Structure. -- From the writer's brief examination of the property the gross structural relationship between the granite body and the massive gneissic rocks could not be definitely established. However, it appears that the granite is intrusive into the gneiss. Certainly the foliation of the gneisses antidates the granite since the granite is not foliated. The intrusive relationship is further suggested by the wide transitional zone, which occurs along the workings, in which apparent xenoliths of gneiss are incorporated within granite bodies. The abundance of pegmatite and vein quartz in and near the transitional zone also is suggestive of intrusion.

Foliation in the gneisses is generally consistent with trends between north 15 degrees east and north 60 degrees east observed. Most of the strikes measured fall between north 20 degrees east and north 40 degrees east. The dip of foliation is consistently southeast, ranging from about 35 degrees to nearly 90 degrees. Locally, the gneiss is complexly contorted exhibiting a variety of fold forms.

Structural features in the granitic rocks are poorly defined and were not mapped. Near the gneissic rocks remnants of foliation preserved in the granite usually trend northeastward. However, contortion is pronounced and the foliate structures are lenticular.

Folds are not conspicuous in the rocks near the prospect. At the old shaft, however, there is an abrupt change in dip from 75 degrees west of the shaft to 45 degrees east of the shaft. It is not known if this change in dip is due entirely to folding or if it is related to shearing. A similar relationship exists along the northern face of pit No. 2. Here, the foliation flattens from 75 degrees to 35 degrees. Evidence from nearby outcrops suggests that these dip changes may be due to drag along shear zones although the evidence is not conclusive.

There is a pronounced change in the strike of foliation northward along the workings from the old adit and shaft. Near the shaft and adit strike is more

easterly than in outcrops to the north where strike gradually swings to a more northerly trend.

Shearing is well-defined in several localities near the workings. In the face and walls of the adit the gneissic rocks have been brecciated and invaded by pegmatite, leaving relict blocks of gneiss and lenticular streaks of foliated rock entirely surrounded and in part replaced by pegmatite. In turn, the pegmatites have been offset along later fractures. From examination of the adit alone the trend and dip of shearing cannot be determined. In the walls of the old shaft a similar zone of faulting apparently is present, although here massive pegmatite has more or less completely filled the shear zone. The relation of this shear zone to that in the adit is not clear. Near the northwestern extremity of pit No. 4 is another brecciated zone which is about 5 feet in width. This zone has been invaded and in part replaced by pegmatite and vein quartz. Another faulted zone is present near the northwestern end of pit No. 2. Brecciation at this locality is not as pronounced as in the previously described places. The general alignment along strike of the three brecciated exposures suggests that they are probably outcrops of the same shear zone. It is probably that additional unrecognized shear zones are also present near the workings.

Description of Workings

The workings at the prospect consist of an adit, a shaft, a blast face, and several open cuts. The adit and shaft represent the earliest workings although it is not known exactly when they were excavated. The open cuts, evidently made by a bulldozer, were excavated presumably at some later date, and finally, the blast face was exposed.

The adit represents the most westward working and also is at the lowest elevation of any of the workings. As shown on the enclosed map of the workings the adit trends north 85 degrees east and apparently was driven in anticipation of

intercepting the mineralized zone near the old shaft. The total length of the adit, from the edge of the dump to the working face is about 28 feet. The latter 5 feet of the adit is under rock; the remaining 23 feet being open at the top with rock exposed in the walls. The width of the adit, including that part which is open above and also the last 5 feet under rock, averages about 7 feet. The latter 5 feet of the adit is now about 4 to 5 feet in height. The floor of the adit merges with the top of the dump. The dump is about 13 feet wide and some 35 feet in length.

As indicated on the enclosed workings map a shaft is located about 75 feet east of the adit. The shaft was started on a steeply sloping rock face so that the southeastern wall is essentially open. The three rock walls are of varying height but probably average about 15 feet. The base of the shaft measures about 5 to 7 feet with the upper portion flaring out to somewhat greater dimensions. The bottom of the shaft was sunk apparently about 6 feet beneath the natural rock face. At present debris and a little water mask the bottom.

South of the shaft, for a distance of about 20 feet along the natural rock face, the bedrock has been blasted away exposing a portion of the mineralized zone down dip. The height of the blast face varies, but probably averages about 6 feet. It appears that the maximum depth (parallel to strike) of the blast face is 3 to 4 feet.

As shown on the workings map the open cuts are north and northeast of the shaft and blast face. Pit No. 1, the northernmost open cut observed, is roughly 100 feet in length and probably averages 15 feet in width. This open cut is approximately 5 feet deep. The small pit designated as No. 1a is very small and was probably hand dug. It is about 5 feet long, 4 feet wide and 2 feet deep. Pit No. 2 excavated roughly parallel to the ground slope is some 90 feet long, from 10 to 20 feet wide, and is, along the upslope side, about 8 feet deep. Pit No. 3 is about 50 feet long, 15 feet wide, and 5 or 6 feet deep.

Pit No. 4 is very shallow, averaging about 4 feet in depth. It is 10 feet in width and about 30 feet in length.

Mineralization

Ore mineralization, observed by the writer, is confined to the immediate vicinity of the workings. No attempt was made to trace the mineralized zone for any great distance along strike nor to search for additional mineralized zones in adjacent areas. Ore minerals occur in place in relatively fresh bedrock exposures, in strongly weathered gossan zones above fresh rock, and as weathered float fragments detached from bedrock.

Relatively fresh exposures of mineralized rock are present in the walls of the adit, at the blast face near the shaft, and along the northern face of Pit No. 2. The most heavily mineralized areas are those at the blast face and in Pit No. 2. Mineralization consists of disseminated pyrite at the adit and is not at all impressive. At the blast face pyrite, sphalerite, minor chalcopyrite, and rare magnetite are present in order of abundance. These minerals occur as replacement bodies, locally concentrated and as disseminated crystals, and in part as fracture fillings in gneiss, vein quartz, pegmatite and granite. The mineralization is conformable, largely, with the foliation and is not noticeably cross-cutting. Concentrations of the ore minerals in pod and lense shaped bodies is conspicuous. The lenses, pods, and stringers are very irregular in size, shape, and distribution. The largest mineralized lense exposed here is about 6 feet in length and 18 inches thick at its widest part. The third dimension, along strike, of this lense is unknown. A foot or so beneath this lense is another measuring some 12 inches in thickness at its widest point, and being exposed over a length of 3 feet. This lense apparently continues, at least for a short distance, down dip.

Another exposure of relatively fresh mineralized rock occurs in Pit No. 2.

Here, a mineralized zone contains rather fresh sulfides. Pyrite, sphalerite, minor magnetite, and sparse chalcopyrite occur in abundance in the order named. The upper portion of this 3 feet zone becomes progressively leached until at the original ground surface only an iron-stained gossan remains. The mineralization here is quite similar to that at the blast face. The predominant gangue, as at the blast face, is quartz with minor biotite and possibly other silicates. Pegmatite in minor quantities is also present but its relation to the ore minerals is unknown.

Gossan in place is present in Pit No. 2 and about 15 feet northwest of the northwestern corner of Pit No. 4. As described above a zone about 3 feet, consisting in part of gossan and in part of fresh mineralized rock, occurs in Pit No. 2. Overlying this 3 feet thick zone is a gossan zone having a thickness of about 4 feet. This latter zone consists of heavily iron-stained quartz. Undoubtedly, where fresh, this zone is sulfide bearing. The breccia zone a few feet northwest of Pit No. 4 is iron-stained and contains a few thin streaks of scattered pyrite. Mineralization is very weak here.

Float fragments of gossan, some of which contain fairly fresh sulphides occur in Pit No. 1, Pit No. 1a, Pit No. 3, and about 30 feet east of the blast face. The exact source of these fragments is unknown. The float which is present 30 feet east of the blast face consist largely of vein quartz, with pyrite and sphalerite crystals visible. This float is unusual in that although the quartz is apparently strongly leached and quite porous the sulphides are relatively fresh. The float fragments in the above mentioned pits are now largely quartz, iron oxides, and biotite.

The ore mineralization seems to be closely associated with vein quartz which has permeated the country rocks along zones of weakness. Mineralized vein quartz occurs in place in Pit No. 2. Here, massive vein quartz up to 6 feet in thickness contains pyrite, chalcopyrite, sphalerite and possibly

magnetite, as well as biotite and muscovite. Float fragments of slightly iron-stained quartz occur in Pit No. 1, Pit No. 2, Pit No. 3, and in the road opposite Pit No. 4.

Sampling

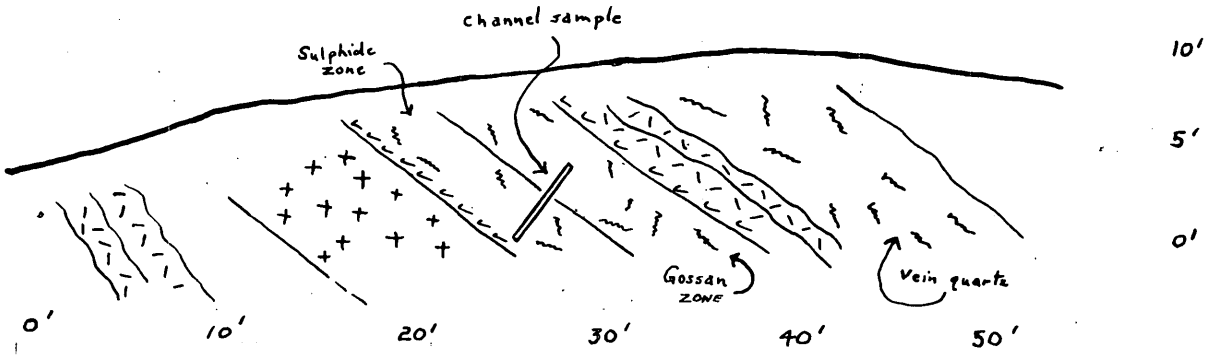
Two channel samples were collected by the writer, one from the mineralized zone exposed at the blast face, the other from exposures in Pit No. 2. The location of the two samples are shown on the enclosed sketch map of these sites. Each sample was cut as nearly as possible to a depth of 1 to 2 inches and across an approximate 4 inch width. Each sample was 5 feet in length.

Sample No. 1, from the blast face, was cut normal to the dip. This sample, at the upper end, began in barren pegmatite or coarse granite, thence through about 10 inches of a mineralized quartz lense, thence through barren granite, thence through about 12 inches of mineralized quartz and gneiss, and ended in barren granite. The sample probably represents the best channel cut that could be taken at this site.

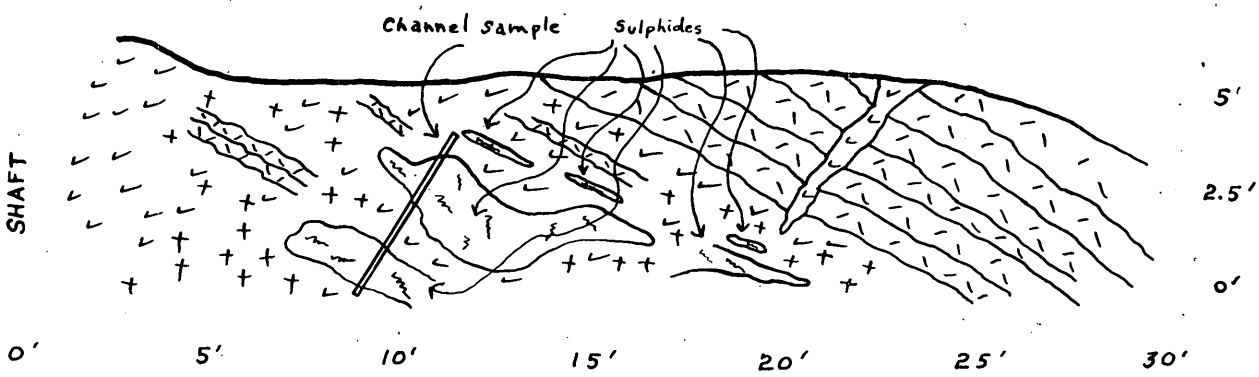
Sample No. 2 was collected from the mineralized and gossan zone in pit No. 2 and was also normal to the dip. The upper 3 feet of the sample was cut from iron-stained quartz which contained little or no visible sulfides. The lower 2 feet of the sample also cut leached quartz with sparse sulfides, except for approximately the last 15 inches which traversed relatively fresh quartz and sulphides. The values in this sample are believed to be lower than those anticipated had the sample been cut from a fresh exposure of the mineralized zone.

The two channel samples each weighing approximately 30 pounds were submitted to the Nichols Laboratories, Knoxville, Tennessee. Mr. Nichols reports that the bulk samples were crushed, quartered, and assayed with the following returns:

Sample No. 1		Sample No. 2	
Copper	-- 0.29	Copper	-- 0.14
Iron	-- 9.04	Iron	--11.60
Zinc	-- 6.54	Zinc	-- 0.14
Lead	-- 0.0	Lead	-- 0.0



Sketch of mineralized zone exposed in pit No. 2
showing location of channel sample



Sketch of mineralized zone exposed in blast face
showing location of channel sample

Iron values are not reliable, according to Mr. Nichols because of contamination from the crusher. Sulphur was not determined. The remainder of the quartered crushed samples are held by the writer.

In so far as the writer can determine the values above check with a casual examination of the samples. Sphalerite seems rather abundant in sample No. 1 although pyrite is more plentiful. Copper is apparently low since there is a noticeable lack of staining at the prospect. Definitely identified secondary copper minerals were not observed in the gossan zones nor in fresh rock. Galena was not seen in any of the rocks examined.

Proposed Exploration

Six drill holes have been plotted on the enclosed map of the workings to further explore this prospect. Although much is to be desired regarding the occurrence of the mineralization, drilling is believed preferable to further blasting, pitting, or trenching. The general alignment of mineralized float and outcrops suggests that the sulphides are fairly well localized along a relatively narrow zone, at least at the surface. Within this mineralized zone the mineralization may be quite spotty or lenticular. The proposed drill holes are planned to intercept the surface showings and to extend beyond the postulated shear zone which trends northeastward from the adit and through Pit No. 2. The inferred position of mineralized zones are plotted on the enclosed cross sections of drill holes.

It is proposed that each drill hole be on a 45 degree angle in the belief that the mineralization will continue to approximately follow foliation at depth. The precise attitude of the shear zone is unknown. For this reason the holes should be extended beneath the surface expression of this zone in the event the angle of dip should steepen or in case ore shoots should extend from this zone.

Each hole should be drilled on a 45 degree angle in a north 50 degree

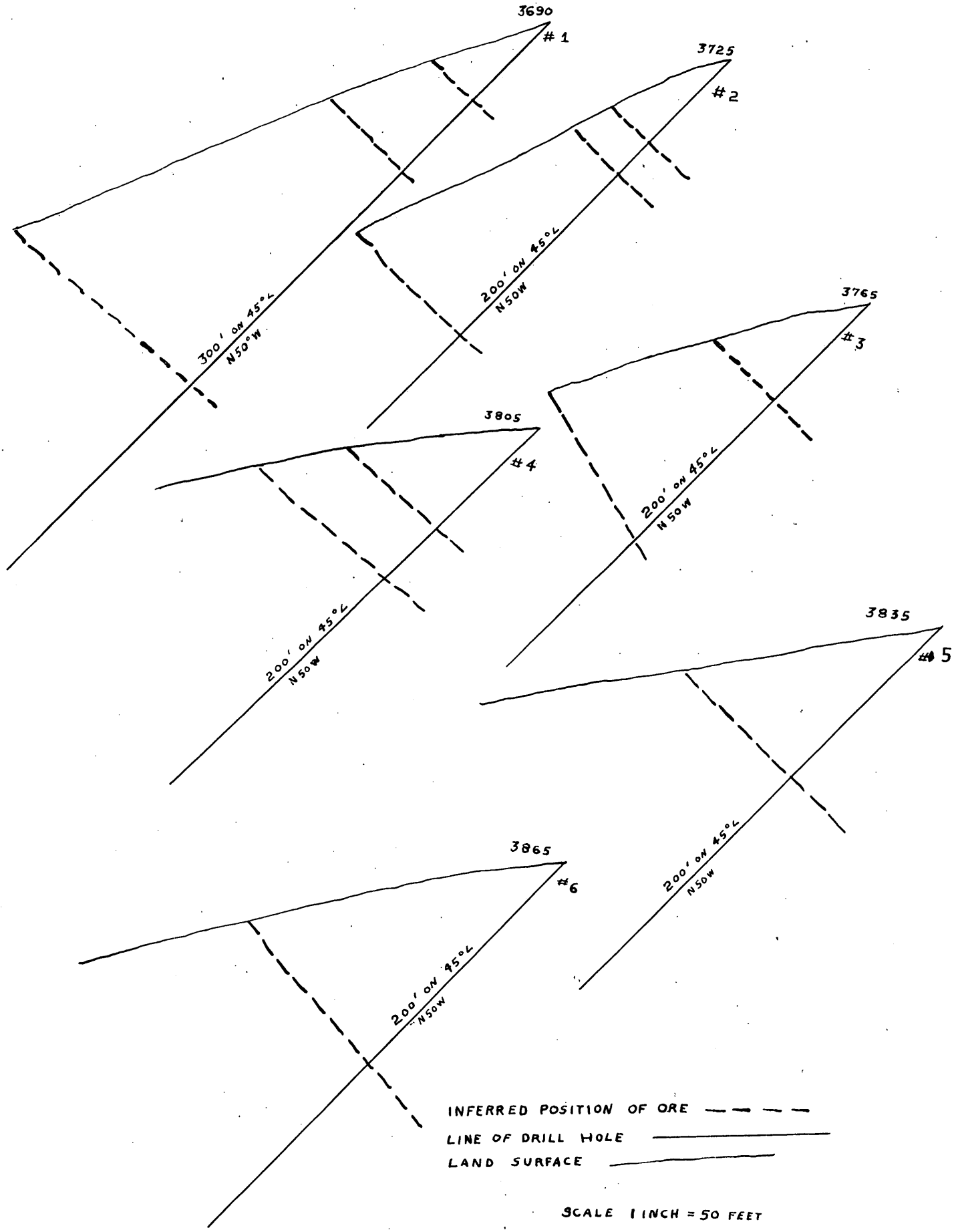
west direction and should extend 200 feet, except for drill hole No. 1 which should be 300 feet in length. It is believed that drilling to these lengths will intercept any ore shoots which might be present in the light of present knowledge. The north 50 degrees west direction will approximately intercept the foliation normal to strike.

This proposed 1300 feet of drilling should reveal the number of mineralized zones present, their attitude, thicknesses, and values. Future drilling, if desirable, can best be planned after logging the holds proposed herein. It is suggested that drill hole No. 2 be drilled first and No. 1 be drilled last. Since information obtained as each hole is completed may result in the relocation of the remaining holes the above pattern should not be regarded as being inflexible.

George D. Swingle

Submitted Sept. 27, 1955

[illegible]SS SECTIONS OF PROPOSED DRILL [illegible]ES



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

October 18, 1955

Memorandum

To: Operating Committee, DMEA - Washington

From: DMEA Field Team, Region V

Subject: Field Examination Report, DMEA-3585 (copper-zinc)
Panther Mountain Corp., Knoxville, Tenn.
Panther Mountain Prospect, Macon County, N. C.

Enclosed are three copies of the applicant's geologic report, which were received here on October 14, 1955, as a supplement to the form MF-103 submitted in November 1954, and four copies of the Field Team examination report.

We have again reminded the applicant of the need to submit evidence that the Government has assigned the permits (BLM-A-021786 and BLM-A-034284, North Carolina) from Louise Munday Cotter to the Panther Mountain Corporation. They tell us it has been done, but have submitted no documentary evidence. Possibly you could check this with a phone call to the Bureau of Land Management.

We have also asked the applicant to submit bids by three diamond-drilling contractors based on a minimum guarantee of 700-feet. These will be forwarded to you when received. In the meantime, we are using a figure in our report which approximates the probable cost.

We can not emphasize too strongly that a contract, if approved, must provide for supervision by a competent engineer or geologist. We understand that the corporation intends to continue Mr. Swingle's services as a consultant, and our estimated cost for supervision is based upon 7 days for Stage I and 6 additional days if Stage II is approved. Mr. Swingle is entirely competent to handle the job and will be acceptable to us as a supervisor.

Considering the generally unfavorable results of prospecting as reported at the other Jackson and Macon County copper

10-26-55

prospects, a strong recommendation cannot be made for the Panther Mountain Prospect. However, based upon the apparent continuity of the shear zones as shown on Mr. Swingle's map, and the thick gossan zone exposed in pit No. 2, we advance a cautious recommendation for a few drill holes.

We suggest that, if a contract is approved, only the core-drilling by independent contract should be on a unit-cost basis. Other items should be listed as allowable maximums. (For example, the estimate of $75 per day for supervision is based upon Mr. Swingle's present arrangement of $50 fee, plus 7¢ per mile for use of his car, plus subsistence, which would total approximately $75 per day, but obviously the Operator should only be reimbursed for Mr. Swingle's actual expenses. Round trip from Knoxville to the prospect is about 250 miles, making a travel cost of $17.50 for each day that Mr. Swingle goes to the job).

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch, Member
Bureau of Mines

RAL/xm
cc:
Opr.Com.h
Lynch
Laurence

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXAMINATION REPORT BY FIELD TEAM, REGION V

ON

DMEA-3585, PANTHER MOUNTAIN PROSPECT
(copper-zinc)
Macon County, North Carolina

By

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

and

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

October 19, 1955

10-26-55

FIELD EXAMINATION REPORT

DMRA-3585 (copper-zinc) PANTHER MOUNTAIN [redacted].
Macon County, North Carolina

Applicant: Panther Mountain Corporation, Knoxville, Tennessee

The Panther Mountain Prospect was examined on October 4, 1955, by the writers in company with George D. Swingle, Associate Professor of Economic Geology at the University of Tennessee, who was retained a a consultant by the applicant. Three copies of Mr. Swingle's report are submitted along with this report.

The examination required about 5 hours. The prospect had been examined by Mr. Laurence and Mr. Beck in 1950 (before DME).

We recommend approval of a contract for drilling, in two-stages, as outlined below:

Location: The property is 9 miles from Franklin, N. C., the nearest railroad point. It is incorrectly located on the topographic quadrangle which accompanies the application. The correct location is shown on the map accompanying Mr. Swingle's report, which is an enlargement of part of the Highlands quadrangle (176-SW). For further details, see pp 2-3 of Swingle's report.

Competence of Applicant and Operating Personnel. It would be difficult to assemble a group of persons who know less about geology and mining, and who understand less of the problems involved in exploring and developing a mineral deposit, than the individuals who make up the Panther Mountain Corporation.

The Corporation was formed in order to explore this proppect. Money was raised through the sale of stock. The Company has no equipment, no full-time personnel, and no other mining properties, and has never owned or operated a mine.

However, with considerable reluctance, the Corporation did retain a consulting geologist. Mr. Swingle is entirely competent to do the examination report, as well as to supervise the exploration project if a contract is approved, but it should be clearly understood that he is to be in charge.

Applicant's Property Rights. Mr. Swingle's map shows the two Forest Service parcels said to be held by the applicant. We have seen no documentary evidence of Bureau of Land Management approval of the assignment of these leases to the applicant Corporation, although we asked for this in December, 1954.

The applicant has been advised to acquire the two areas marked

"private acreage" on Mr. Swingle's map.

Description of Property. See Mr. Swingle's report.

Geology and Ore Reserves. We went over the ground thoroughly with Mr. Swingle, and have nothing to add to his geologic map and report. It seems probable that, as suggested in the report, there are two, and possibly three mineralized zones, containing discontinuous pods and lenses of zinc and copper sulfides. The gossan zone exposed in pit No. 2 is the most promising for thickness and continuity.

In addition to the localities sampled by Mr. Swingle, there is another which was sampled by Mr. Beck in 1950. This is at the northeast face of the open-cut above the shaft, and it contains the same type of pods or lenses of sulfides. Mr. Beck's sample was a 6.5 foot horizontal channel sample taken about 4 feet above water-level in the shaft. It contained:

10.8% Zn
0.89% Cu
13.7% S

However, a horizontal sample cut at the water level in the shaft would be almost unmineralized, as the lens sampled by Mr. Beck is only about 2 feet thick.

No reliable ore reserve figure can be estimated, as this is a wild-cat proposition; based on a few outcrops. However, if 2 mineralized zones averaging 5 feet thick each are assumed to extend from the shaft to pit No.2 and to a depth of 100 feet, and each zone consists of half of mineralized pods and half of barren rock, the maximum inferred ore reserve of this block would be 10,000 tons ($\frac{2 \times 5' \times 100' \times 400'}{2} \times \frac{1}{20} = 10{,}000$ tons)

It should be noted that this prospect is one of a group of similar deposits occurring at intervals for about 30 miles along the regional strike just to the northwest of several large bodies of granitic rocks. (see USGS, Cowee folio in open-file, and unpublished report of Sept. 19, 1944, entitled "Copper Deposits in Jackson County, N. C.", by G. H. Espenshade, in Geological Survey files; also USGS Professional Paper 179, pages 87-92. It should be noted that the Panther Knob Prospect of the Espenshade report is not the Prospect under consideration in this application). None of these has ever been developed successfully, although the Cullowhee Mine is reported to have shipped 4500 tons of ore averaging 4% copper

Applicants Proposal. The plan of drilling outlined by Mr. Swingle is acceptable. Drilling should be staged, with holes 2,4 and 3 totalling 700 feet constituting Stage I.

Estimated Cost of Project.

Stage I

Road repair and drill site preparation - 24 hrs. dozing @ $15/hr.	$360.00
Moving in and installing drilling equipment and moving out.....	600.00
700 ft. of diamond drilling, size AX @ $5.50/ft.....	3,850.00
Core boxes , 35 @ $2.50 ea.	87.50
Sample analyses - 9 samples (Cu,Pb, Zn) @ $6/ea	54.00
Supervision by Geologist or Mining Engineer, 7 days @ $75/da. including fee and expenses	525.00
Estimated Cost of Stage I.....	$5,476.50

Stage II

If results of the work of Stage I indicate that further exploration is warranted, Stage II consisting of 600 feet of diamond drilling in holes Nos. 1, 5, and 6 is recommended.

600 ft. diamond drilling, size AX @ $5.50/ft.	$ 3,300.00
30 core boxes @ $2.50/ea.	75.00
Sample analyses - 9 samples (Cu,Pb,Zn) @ $6/ea	54.00
Supervision - 6 days @ $75/da. including expenses	450.00
Total estimated Cost Stage II	$3,879.00
Total Estimated Cost of Stages I and II	$9,355.50

The costs quoted above are to be considered as allowable maximum costs.

Oct. 19, 1955

R. A. Lawrence, Geologist
U. S. Geological Survey

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

File Copy
Surname

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

SEP 13 1955

Panther Mountain Corporation
719 - 13th Street
Knoxville, Tennessee

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corporation
Panther Mountain Mine
Macon County, North Carolina

Gentlemen:

With reference to your telegram, dated September 9, 1955, we will hold your application for Government exploration assistance in our inactive files until you supply the requested information. Upon the receipt of this information your application will be reconsidered.

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/er 9/12/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Chron.

Telefax WESTERN UNION Telefax

CT KVA350 PD KNOXVILLE TENN 9 1206PME 1955 SEP 9 PM 1 02

C D MITHENDORF DEFENSE MINERALS EXPIRATION

ADMINISTRATION US DEPT INTERIOR WASHDC

RELET STOP GEOLOGIST PREPARING REPORT DATA REQUESTED

STOP LOCAL BUREAU OF MINES AVISED STOP PLEASE RECONSIDER

ACTION

PANTHER MOUNTAIN CORP

1955 SEP 9 PM 1 12

SECRETARY'S
MAIL CENTER

SEP - 9 1955

INTERIOR DEPT.

DMEA

FAX

RECEIVED

SEP - 9 1955

DMEA-3585

1270 (1-51)

File Copy
Surname
J. Alt
Griswold

500

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

September 7, 1955

Memorandum

To: Chief, Operations Control and Statistics Division

From: Chief, Base Metals Division

Subject: Withdrawal of application — Docket No. DMEA-3585 (Copper-Zinc), Panther Mountain Corporation, Panther Mountain Mine, Macon County, North Carolina

Will you please withdraw the cited application from the active files. The Applicant has not replied to our letter of August 4, in which we requested the information which was requested by the Field Team on December 29, 1954.

W. R. Griswold

W. R. GRISWOLD

JWAlt/bjl (9/7/55)

Copy to: Docket
Base Metals
Chron.

C
O
P
Y

Sept. 7, 1955

Panther Mountain Corporation
719 - 13th Street
Knoxville, Tennessee

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corporation
Panther Mountain Mine
Macon County, North Carolina

Gentlemen:

This is with reference to the cited application for Government exploration assistance. As you have not replied to our letter of August 4, we assume that you do not wish to pursue the matter of your application for exploration assistance. Therefore, we are placing it in our inactive files.

We regret the necessity of this; however, it is done without prejudice to your property.

Sincerely yours,

SIGNED (C. O. Mittendorf)

Administrator

JWalt/bjl (9/7/55)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kiilsgaard
Region V (2)
Chron.

Tanker Mountain Corporation
419 - 13th Street
Knoxville, Tennessee

Re: Docket No. DMRA-3255 (Copper-Lead)
Tanker Mountain Corporation
Tanker Mountain Mine
Macon County, North Carolina

Gentlemen:

This is with reference to the other application for Government exploration assistance. As you have not replied to our letter of August 1, we assume that you do not wish to pursue the matter of your application for exploration assistance. Therefore, we are placing it in our inactive files.

We regret the necessity of this; however, it is done without prejudice to your property.

Sincerely yours,

Steve (C. C. Mitchell)

Administrator

Mitchell:jl (9/7/55)

Copy to: Docket
Adm. R. File
Op. Committee
Dave Metals
Mr. Bishop
Mr. Killegrand
Region V (2)
Owen.

File Copy
Surname

J. Alt
Griswold
Kilsgaard
Geehan
Martin
Fitzpatrick

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

AUG - 4 1955

Panther Mountain Corporation
719 - 13th Street
Knoxville, Tennessee

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corporation
Panther Mountain Mine
Macon County, North Carolina

Gentlemen:

With reference to the cited application, Mr. Robert A. Laurence, Executive Officer, DMEA Field Team, Region V, has informed us that to date you have not supplied the additional data that he requested in a meeting with officials of your Corporation on December 29, 1954. Before a field examination could be made of your property, he requested the following data:

(1) Assignment of prospecting permits to the Corporation, properly approved by the Bureau of Land Management.

(2) Some indication that a responsible geologist or engineer will be retained by the Corporation to supervise its work.

(3) A property map.

(4) A geologic map showing locations of proposed work and justification of each.

We wish to advise you that if you do not supply us with this requested data within thirty days, we will assume that you do not desire to pursue the matter of your application for Government exploration assistance and we will place it in our inactive files.

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/er 8/3/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Chron.

RCG.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
JUL 25 1955

July 21, 1955

Memorandum

To: Operating Committee - DMEA - Washington

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

Subject: DMEA-3585, Panther Mountain Corp. (Copper-zinc)

On December 14, 1954, you referred the subject application to the Field Team for field examination, if necessary. We arranged for a conference with officials of the Corporation, which was held on December 29, 1954. That conference was attended by the President and the Secretary-Treasurer of the Corporation, Mr. R. M. Collins, drilling contractor, and Messrs Laurence, Beck and Teague.

It was pointed out to the applicant that the application was inadequate and that the following additional data were needed before we could make a field examination:

(1) Assignment of prospecting permits to the Corporation, properly approved by the Bureau of Land Management

(2) Some indication that a responsible geologist or engineer will be retained by the Corporation to supervise its work.

(3) A property map.

(4) A geologic map showing locations of proposed work, and justification of each.

At the end of the meeting, the Corporation officials agreed to furnish the required data, and we withheld reporting to you until the data were available. Since that time, we heard nothing further from the Corporation until yesterday, when the Secretary-Treasurer telephoned and, somewhat belligerently wanted to know who in the Government was holding up the approval of their application. At the end of a half-hour conversation she reluctantly agreed to try to get some data from a geologist but left the clear impression that the whole Corporation is dissatisfied with the way we are handling this application. Incidentally, at several times since the December meeting, we have had inquiries from local citizens who say they have been offered stock in the Corporation and who wanted to know

what are the Corporation's chances of obtaining a Government loan.

Therefore, we are presenting the following review of this application for your information.

This prospect came to the attention of the Geological Survey and Bureau of Mines in 1950 and was seen at that time, in separate visits, by Mr. Beck and Mr. Laurence. (This was before DMA). There is a small prospect opening with a mineralized pod whose maximum width is about 6 feet; channel samples of this contain approximately 10% Zn and 1% Cu. That is the only encouraging feature of this application and is the only reason we have waited out this long delay. At the time of those visits, there was too littl exposed to tell much about the structural control, except that it appears to be a mineralized shear zone rather than a vein. None of our staff has seen the prospect since then. In December 1950, with the co-operation of American Zinc Company, the owners made some shallow bulldozer trenches along the strike of the foliation, to the northeast of the pit. Apparently the specimens referred to in the application came from those trenches. Note that the assay map accompanying the application, apparently prepared by American Zinc Company, specifically refers to "specimens" and not "samples." A considerable amount of earnest effort on our part has completely failed to convey to the Applicant an understanding of the difference between a specimen and a sample.

In the summer of 1951, Mr. James Sullins (husband of the Secretary-Treasurer of the applicant Corporation) conferred with us about the possibility of doing $20,000 worth of diamond drilling at Panther Mountain. We pointed out that there was insufficient information on which to lay out a drilling program and suggested that he hire a consulting geologist to examine the prospect. We have repeatedly renewed that advice through the intervening years but apparently it falls on deaf ears.

Some time in 1953 or 1954, the Panther Mountain Corporation was chartered in Tennessee for the purpose of exploring and developing copper deposits in North Carolina. Apparently the Munday heirs (Mrs. Sullins, Mrs. Brown, Mrs Cotter) own the controlling interest, but there are other stockholders.

To sum up our opinions concerning this application:

(1) The property contains an occurrence of copper and zinc sulphides which is worthy of additional geologic study.

(2) At present, there is not sufficient information on which to base any kind of recommendation for exploration and without such information we would only recommend denial.

(3) The applicant apparently does not have the necessary funds to contribute its share of the costs of an exploration project, and can raise the funds only through the sale of additional stock.

(4) The Corporation does not have in its employ a competent engineer or geologist, and apparently does not want to hire one. No official of the Corporation has any mining experience and those to whom we have talked obviously know nothing about exploration for and development of mineral deposits.

(5) The Applicant does not have control of the property, in as much as the Bureau of Land Management has not approved the assignment of the prospecting permit by Louise Munday Cotter to Panther Mountain Corporation.

Therefore, we recommend that the Washington office ask the Applicants to submit, by a reasonable deadline date - say October 31, 1955 - the required geologic report, property map, and assignment of prospecting permit.

Robert A. Laurence

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch

V. J. Lynch, Member
Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1051 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

WASHINGTON OFFICE

Pending

RECEIVED
JUL 25 1955

July 21, 1955

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Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch, Member
Bureau of Mines

RAL/mm
cc:
Opr. Com-4
Lynch
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 15, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
JUL 25 1955

July 21, 1955

Memorandum

To: Operating Committee - DMEA - Washington

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

Subject: DMEA-3585, Panther Mountain Corp. (Copper-zinc)

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Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch, Member
Bureau of Mines

RAL/mm
ccs
Opr. Com-4
Lynch
Files

File Copy
Surname
J. W. Alt
Signed
Selfridge
JK Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

DEC 14 1954

Mr. Robert A. Lawrence
Executive Officer
DMEA Field Team, Region VII
Room 13, Post Office Building
Knoxville, Tennessee

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corporation
Panther Mountain Mine
Macon County, North Carolina

Dear Mr. Lawrence:

A review of the cited application, of which you have a copy, indicates that an examination of the property is necessary. Will you please have such an examination made and submit your report and recommendations to us.

The Applicant should be requested to furnish a property map showing where the proposed work is to be done.

The Prospecting Permits of the Bureau of Land Managment, Serials BLM-A-021786 and BLM-A-034284, North Carolina, accompanying the application are made out to Louise Munday Cotter. In order to have these permits assigned to the Panther Mountain Corporation, she will have to apply to the Bureau of Land Managment requesting this assignment.

Enclosed are copies of memorandums from the Commodity members, E. L. Newcomb, USGS, and O. M. Bishop, USBM, dated December 7, and December 9, 1954 respectively.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

Enclosures

JWAlt/er 12/13/54

APPROVED:

/s/ Robert W. Geehan (JHB)
Member, Bureau of Mines,

Thor H. Kiilsgaard
Member, Geological Survey (JHB)

Copy to: Docket
Admr R. File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

File Copy
Surname
J. W. Alt
Linwood
Gehon
Kulsgaard
Feldridge
Epstein

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

DEC 1 4 1954

Panther Mountain Corporation
719 - 13th Street
Knoxville, Tennessee

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corporation
Panther Mountain Mine
Macon County, North Carolina

Gentlemen:

Your application for Government assistance to explore your property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration, and has been referred for a field examination to:

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

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

Sincerely yours,

B. D. Mittendorf (for)

Administrator

JWAlt/er 12/13/54

Copy to: Docket
Admr & File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region VII (2)
Chron.

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1954
Mail & Log - Received by W.R.G.

December 7, 1954

Re: DMEA-3585
Panther Mt. Corp.
(Panther Mt. Mine)
Macon County, N.C.
$15,000 - Copper-Zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The applicant has proposed a diamond drilling project without specifying where or how many holes would be drilled. The exploration objectives are not defined but we can infer that the applicant will test for possible mineralization at depth along the strike of the vein or veins.

We do not have any geologic information on this property, and I doubt that the applicant can supply any additional data.

Inasmuch as the Field Team examiners are very frequently in the area of the applicant's prospect in connection with numerous DMEA mica dockets, I believe a field referral should be made. In fact, the Survey files in Knoxville may contain data pertinent to the applicant's property. Although the application may be referred to the Field Team, they should be instructed to make an examination only if they believe it is warranted.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1954

December 7, 1954

Re: DMEA-3585
Panther Mt. Corp.
(Panther Mt. Mine)
Macon County, N.C.
$15,000 - Copper-Zinc

Memorandum

To: W. R. Grimsrud, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The applicant has proposed a diamond drilling project without specifying where or how many holes would be drilled. The exploration objectives are not defined but we can infer that the applicant will test for possible mineralization at depth along the strike of the vein or veins.

We do not have any geologic information on this property, and I doubt that the applicant can supply any additional data.

Inasmuch as the Field Team examiners are very frequently in the area of the applicant's prospect in connection with numerous DMEA mica dockets, I believe a field referral should be made. In fact, the Survey files in Knoxville may contain data pertinent to the applicant's property. Although the application may be referred to the Field Team, they should be instructed to make an examination only if they believe it is warranted.

E. L. Newcomb

ELNewcomb:hlm
G-12/7/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
C. H. Johnson, 3621 Interior

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

December 9, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM, Reviewed by Walter E. Lewis

Subject: Docket No. DMEA-3585 (copper-zinc), Panther Mountain Corporation, Panther Mountain Mine, Macon County, North Carolina. Application for aid.

We have reviewed the subject application and recommend referral to the Field Team so that the DMEA Field Team in Knoxville can contact the applicant to discuss their application. We recommend that the Executive Officer point out to the officials of the Panther Mountain Corporation that they have failed to complete the application in respect to answers under instruction 5 (b) of the application. In addition, they should have in their employ a reputable geologist or mining engineer that could lay out the initial work program, if it is worthy of exploration, and supervise the work after it is once underway. The company officials should be made to understand that competent supervisory personnel is necessary for any project under DMEA.

Judging from the data presented in the application, we seriously doubt that diamond drilling is justified. Apparently there are exposures on two or three small veins in the area, but whether these veins have any important strike length is yet to be determined. Some trenching has been done and it is likely more will be required before diamond drill holes could be located wisely. Future trenching should be laid out carefully on the basis of strikes and dips of the exposed veins so that it can be ascertained whether or not these veins have the continuity of structure necessary for the formation of a significant ore deposit.

The Executive Officer may feel that he needs more information on the property before discussing the exploration program with the company officials. If this is the case, then it is recommended that an examination be made to supply him with the necessary data. The decision of whether or not a field examination is made is left to the discretion of the Executive Officer.

It should be noted by the Field Team that mention is made of a 26-foot vein under 4 (c). This figure (26 feet) is apparently obtained by adding the widths of three different veins or the widths from three different places on the same vein.

O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Edward L. Newcomb, Room 5227
O. M. Bishop
Files

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

December 9, 1954

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O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Edward L. Newcomb, Room 5227
O. M. Bishop
Files

File Copy
Surname
J.W. Alt.
Jensen

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

DEC - 2 1954

Honorable Howard H. Baker
House of Representatives
Washington, D. C.

Re: Docket No. DMEA-3585 (Copper-Zinc)
Panther Mountain Corporation
Panther Mountain Mine
Mason County, North Carolina

My dear Mr. Baker:

This is to acknowledge your letter of November 27, 1954, and the receipt of the application for Government exploration assistance for the cited application.

You may be assured that this application will be given our immediate consideration and that we will inform this corporation as to what action will be taken regarding their proposed project.

Sincerely yours,

C. O. Mittendorf

Administrator

JWALT/er 12/1/54

Copy to: Docket
Admr. R. File
Op. Committee
Region VII (2)
Base Metals
Mr. C. H. Johnson, USBM
Mr. Kiilsgaard, USGS
Chron.

R.G.B.

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

November 30, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region VII

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region VII.

DMEA -3585 Panther Mountain Corp.

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

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

November 30, 1954
Subject: DMEA-3585
Re: Exploration Assistance
Panther Mountain Mine

Panther Mountain Corp.
719 13th Street
Knoxville, Tennessee

Gentlemen:

The receipt of your application dated November 12, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3585 and referred to the Base Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

HOWARD H. BAKER
SECOND DIST., TENNESSEE

COMMITTEE:
WAYS AND MEANS

Congress of the United States
House of Representatives
Washington, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 29 1954

Huntsville, Tennessee
November 27, 1954

Defense Minerals Exploration Admn.
U. S. Department of the Interior
Washington 25, D. C.

Gentlemen:

Re: Panther Mountain Corp.
Knoxville, Tennessee

I enclose herewith original and three carbon copies of MF-103, Application for Aid in an Exploration Project, Panther Mountain Corporation, 719 13th Street, Knoxville, Tennessee.

The stockholders of this corporation are constituents of mine and have asked me to transmit this application to you. In my judgment, these people are trustworthy and dependable and I hope that the application will receive full and thorough consideration at an early date.

Sincerely,

Howard H. Baker

HHB:dl

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
NOV 29 1954

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3585
Metal or Mineral Copper & Zinc
Date Received
Estimated Cost $15,000
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address Panther Mountain Corporation, Dick Rector, Pres., 5918 Clinton Hwy. Knoxville, Tenn.
719 - 13th Street, (Bonnie M. Brown, V.P., 3952 Kingston Pk. Knoxville, Tenn.
Knoxville, Tenn. (Ethlyn M. Sullins, 719 - 13th St., Knoxville, Tenn.
Sec.-Treas.)

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized. Incorporated in Tennessee, March 23, 1953.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See Prospecting Permits -
Acquired Lands, Serial BIM-A-021786;
Acquired Lands, Serial BIM-a-034284,
North Carolina.

(*b*) State any mine name by which the property is known. Panther Mountain Mine (Old Munday Mine)

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee, subject to exploration project results.

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. See 3.(a) above.

(*e*) If you own the land, describe any liens or encumbrances on it Do not own land.

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. No known claims.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See attached typed sheet No. 1.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. None.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. See attached typed sheet No. 1.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See attached typed sheet No. 1.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

See attached typed sheet No. 1.

16—66551-1

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Copper, Zinc, and Iron Pyrite.

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. See maps and sketches attached.

(*c*) The work will start within 30-60 days and be completed within 2-3 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. See attached typed sheet No.2.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.). See attached typed sheet No. 2.

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants. Covered under drilling contract.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. None.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be. None.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project. None.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project. None.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes. Covered under drilling contract.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above. None.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes.

(*b*) How do you propose to furnish your share of the costs?

[x] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

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.

Dated November 12 28, 1954

PANTHER MOUNTAIN CORPORATION
(Applicant)

By Dick Burton
President

Ethelyn M. Sullivan
Sec.-Treas.

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

EXPLORATION OF PANTHER MOUNTAIN
ACQUIRED LANDS, SERIAL BLM-A-021786
ACQUIRED LANDS, SERIAL BLM-A-034284
(MACON COUNTY) NORTH CAROLINA

4. (a) The vein outcrops and has been exposed at several points for some five hundred (500) to one thousand (1000) feet. Exploration has been done a number of different times over the past thirty (30) years. Approximately eighteen months (18) to two (2) years ago, some fifteen hundred ($1500) to two thousand ($2000) dollars of bulldozer, air compressor and labor exploration was done, which was too costly to justify results obtained. Was never core drilled, nor any actual mining done. All previous work open for inspection.

(b) None.

(c) Outcroppings indicate a vein of various widths up to possibly twenty-six (26) feet wide, and has been cross-cut with bulldozer and fixed up at one point by drilling and blasting. Maps, sketches and analyses attached.

(d) Ten miles from Franklin, North Carolina, on U. S. Highway 64, turn left off Highway 64 some two miles macadam road, approximately one and one-half miles, rough logging road.

(e) Manpower, materials, supplies and equipment covered under drilling contract. Springs on property, and peak branch along one boundary, should supply abundance of water for drilling. Gasoline drill rig furnished by contractor.

5. (d) Panther Mountain Corporation formed for the purpose of performing this exploration. A. N. C. Drilling Company, Incorporated, Ferguson, Kentucky, to perform drilling under contract. Mr. R. M. Collins to supervise operations.

Experience: Drilled Eagle Creek Mine, Fontana, North Carolina, for Ducktown Copper Company, Ducktown, Tennessee.

Recently finished drilling Maw Knob, Copperhill, Tennessee, for Tennessee Copper Company, Copperhill, Tennessee.

6. (a) Diamond drilling will be left up to geologist and contractor.

Diamond drillings size AX (1-1/8") core --	$5.00 per foot
Mobilization and demobilization --	$500.00
Assaying samples, single sample $3.00 each metal assayed for.	
All four metals $10.00 per sample.	
50 samples or more less 25% discount.	
50 samples $10.00 less 25% --	$375.00
Core Boxes @ $2.50 each, in lots of 10, and incidentals --	$500.00
Total cost of exploration --	$15,000.00

Form 4-1099
(Feb. 1948)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Acquired Lands
Serial BLM-A-021786
North Carolina
State

PROSPECTING PERMIT

Copper and Iron — Nantahala National Forest

Permission is hereby granted, pursuant to Section 402 of the President's reorganization Plan No. 3 of 1946, and regulations thereunder approved December 18, 1947 (43 C. F. R. 209.31 et seq.) to Louise Hunday Center, Franklin, North Carolina

for a period of 2 years from the date hereof to use the following-described lands:

Unit I. Being part of Forest Service tracts #166a-I and #994, beginning at corner 7, tract 166a-I, S 30° W, with U. S. line, 15 chains to a double dogwood; thence N. 44° W, 22 chains to a 10" poplar; thence N. 21° E 17 chains to a 14" white oak on old road and ridge; thence N. 75° E. 15 chains to the Gap on line between Jake Franks and U. S. tract #994; thence with meanders of ridge with lines of tract #994, southerly to point of beginning, containing 54 acres, more or less.

Unit II. Being part of Forest Service tract #54, beginning at corner 4 of tract #54 (being the same as corner 7 of tract #166a-I); thence N 39° 54' E 21.85 chains to corner 3, thence S 82° 44' E, 12.9 chains to corner 2; thence S 23° W, 25 chains to corner 6; thence S 83° 22' W, 3.78 chains to corner 5; thence N 56° 40' W. 16.16 chains to point of beginning, containing 40 acres, more or less.

Total area 92 acres more or less.

for the purpose of making excavations or doing other work thereon necessary for determining whether there are mineral deposits other than oil and gas, oil shale, coal, phosphate, sodium, potassium, and sulfur of such a quantity and value as would justify their commercial development under mining permit, for which purpose such structures and facilities as are requisite thereto may be erected, maintained, and occupied. Representative of Forest Service:

Forest Supervisor, Nantahala National Forest, Franklin, North Carolina

This permit is granted subject to all valid claims to the described lands, and to the following conditions:

1. The permittee shall pay in advance to the Director, Bureau of Land Management, for deposit to the credit of the Treasurer of the United States, in consideration for this use, a rental $ 0.25 per acre or fraction thereof.

2. The permittee shall comply with all regulations of the Secretary of the Interior, shall conduct his operations in an orderly manner and in accordance with the operating and safety regulations of the Department of the Interior (30 C.F.R. 231) and the laws of the State and of the United States.

3. The area herein described shall be subject at all times to any other lawful uses by the United States, its lessees, licensees, and assigns; PROVIDED, That such uses shall not prevent, obstruct, or unduly interfere with the permittee in the exercise of any privilege granted hereby.

4. The appropriate representative of the United States agency having control of the land for this permit is: Mineral Supervisor, Room 3227, General Services Administration Building, Washington 25, D. C.

5. To conduct all operations authorized by this permit with due regard for good land management; not to cut or destroy timber without first obtaining permission from the appropriate agency official, and to pay for all such timber cut or destroyed at rates prescribed by such official; to avoid unnecessary damage to improvements, timber, crops or other cover; whenever practicable, to control soil erosion resulting from the operation; to prevent pollution of soil and water resources; unless otherwise authorized by the appropriate agency official, not to drill within 200 feet of any building standing on the leased land; whenever required in writing to fence all sump holes and other excavations made by permittee.

6. To do all in his power to prevent and suppress forest, brush or grassfires on the leased land and in its vicinity, and to require his employees, contractors, subcontractors, and employees of contractors and subcontractors to do likewise. Unless prevented by circumstances over which he has no control, the permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the land at the disposal of the appropriate agency official for the purpose of fighting forest, brush, or grass fires, with the understanding that payment for such services shall be made at rates to be determined by the official, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character, PROVIDED, That if the permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors caused or could have prevented the origin or spread of the said fire or fires, no payment shall be made for services so rendered.

During periods of serious fire danger to forest, brush, or grass, as may be specified by the appropriate agency official, the permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the leased area except at established camps, and shall enforce this prohibition by all means within his power. PROVIDED, That the appropriate agency official may designate safe places where, after all inflammable material has been cleared away, camp fires may be built for the purpose of heating lunches and where at the option of the permittee smoking may be permitted.

The permittee shall not burn rubbish, trash, or other inflammable material except with the consent of the appropriate agency official and shall not use explosives in such manner as to scatter inflammable materials on the surface of the land during the forest, brush, or grassfire season, except as authorized to do so or on areas approved by such official.

The permittee shall build or construct such fire lines or do such clearing on the land as the appropriate agency official decides is necessary for forest, brush, and grass fire prevention and shall maintain such fire tools at his headquarters on the leased land as are deemed necessary by such official.

7. To pay the lessor or his tenant, as the case may be, for any and all damage to or destruction of property caused by permittee's operations hereunder; to save and hold the lessor harmless from all damage or claims for damage to persons or property resulting from the permittee's operations under this permit, and where the surface of the leased land is owned by other than the lessor, to pay such owner, or his tenant, as the case may be, for damage or injury to livestock, crops, trees, pipe lines, buildings, and other improvements on the land.

8. Upon any partial or total relinquishment, cancellation or expiration of this permit, permittee shall, as to that part of the land as to which his rights have terminated, and to the extent deemed necessary by the appropriate agency official fill all sump holes, ditches and other excavations, remove or cover all debris, and shall, so far as reasonably possible, restore the surface of the leased land to its former condition.

9. Upon the abandonment, termination, or cancellation of this permit, and in the absence of an agreement to the contrary, the permittee, if all the rental charges have been paid, may, within a reasonable period, to be determined by the Director, Bureau of Land Management, remove all structures which have been placed on the premises by him, except where the material was furnished free by the agency having control of the surface, but upon failure to remove the structures within the period prescribed, they shall become the property of the United States.

10. The permittee shall permit inspection of premises and operations by duly authorized representatives of the Department of the Interior and Agriculture, and shall provide, whenever so requested by the forest officer in charge, a way across the lands covered by this permit for the free ingress or egress of forest officers and for users of national-forest land and purchasers of national-forest products.

11. This permit shall become null and void if the Director, Bureau of Land Management, shall find and determine (a) that the permittee knowingly and without adequate extenuation has violated or failed to comply with any of the conditions of said permit, to the detriment of the United States, or (b) that the lands herein described must be occupied by a public agency for some major purpose of public interest or necessity with which the continuation of mining operations under this permit would be incompatible.

12. The conditions of this permit are completely set forth herein and none of its terms can be varied or modified except in writing by the Director, Bureau of Land Management, and in accordance with the regulations of the Secretary of the Interior.

13. The right to mine or remove minerals in merchantable quantities is not granted in this permit. The permittee, however, shall have a preference right during the term of this permit to secure a mining permit covering any of the lands described in this prospecting permit.

14. There is expressly reserved to the United States all fissionable source materials, together with the right, at any and all times, to enter upon the land and prospect for, mine and remove such materials, pursuant to Executive Order 9908 (12 F.R. 8223).

15. The permittee, in the exercise of this permit, shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin and shall include in all subcontracts a provision imposing a like obligation on subcontractors.

16. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this permit or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this permit if made with a corporation for its general benefit.

17. This permit shall be renewable from year to year, and shall be considered as so renewed upon receipt by the Bureau of Land Management of payment of the annual advance rental fee, provided, however, the acceptance of such fee and assent to such automatic renewal shall be, in each instance, in the sound discretion of the Director, Bureau of Land Management, provided further that this permit may be terminated for cause at any time, after due notice to the permittee.

Date Mar 20 1951

/s/ William Zimmerman, Jr.
Assistant Director, Bureau of Land Management

I, Louise Munday Cotter, in consideration of a certain amount of common stock in the Panther Mountain Corporation, heretofore agreed on, hereby assign all of my rights in the foregoing Prospecting Permit to the Panther Mountain Corporation of Knoxville, Tennessee.

This the 12 day of May, 1953.

Louise Munday Cotter (Sgd.)
Louise Munday Cotter

Form 4-1099
(Feb. 1948)

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COPPER, Etc.
PROSPECTING PERMIT

Acquired Lands
Serial BIM-A-034284
North Carolina
(State)

Nantahala National Forest

Permission is hereby granted, pursuant to Section 402 of the President's Reorganization Plan No. 3 of 1946, and regulations thereunder approved December 15, 1947 (43 C.F.R. 200.31 et seq.), to Louise M Cotter, 719 - 13th Street, Knoxville, Tennessee, for a period of _____ years from the date hereof to use the following-described lands:

"That part of Forest Service Tract No. 54, acquired by the U.S. from A. G. Wood, lying east of a line from corners two to six of said tract."

"All of Forest Service Tract No. 2-M-17, acquired by the U.S. from Macon Land Co."

"All of Forest Service Tract No. 166, acquired by the U.S. from S. A. Mundy."

Containing 277.10 acres more or less,

for the purpose of making excavations or doing other work thereon necessary for determining whether there are mineral deposits other than oil and gas, oil shale, coal, phosphate, sodium, potassium, and sulfur of such a quantity and value as would justify their commercial development under mining permit, for which purpose such structures and facilities as are requisite thereto may be erected, maintained, and occupied.

This permit is granted subject to all valid claims to the described lands, and to the following conditions:

1. The permittee shall pay in advance to the Director, Bureau of Land Management, for deposit to the credit of the Treasurer of the United States, in consideration for this use, a rental $ 0.25 per acre or fraction thereof.

2. The permittee shall comply with all regulations of the Secretary of the Interior; shall conduct his operations in an orderly manner and in accordance with the operating and safety regulations of the Department of the Interior (30 C.F.R. 231) and the laws of the State and of the United States.

3. The area herein described shall be subject at all times to any other lawful uses by the United States, its lessees, permittees, licensees, and assigns; PROVIDED, That such uses shall not prevent, obstruct, or unduly interfere with the permittee in the exercise of any privilege granted hereby.

4. The appropriate representative of the United States agency having control of the land for this permit is: Forest Supervisor, Asheville, North Carolina.

5. To conduct all operations authorized by this permit with due regard for good land management; not to cut or destroy timber without first obtaining permission from the appropriate agency official, and to pay for all such timber cut or destroyed at rates prescribed by such official; to avoid unnecessary damage to improvements, timber, crops or other cover; whenever practicable, to control soil erosion resulting from the operation; to prevent pollution of soil and water resources; unless otherwise authorized by the appropriate agency official, not to drill within 200 feet of any building standing on the leased land; whenever required in writing to fence all sump holes and other excavations made by permittee.

6. To do all in his power to prevent and suppress forest, brush or grass fires on the leased land and in its vicinity, and to require his employees, contractors, subcontractors, and employees of contractors and subcontractors to do likewise. Unless prevented by circumstances over which he has no control, the permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the land at the disposal of the appropriate agency official for the purpose of fighting forest, brush, or grass fires, with the understanding that payment for such services shall be made at rates to be determined by the official, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character: PROVIDED, That if the permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors caused or could have prevented the origin or spread of the said fire or fires, no payment shall be made for services so rendered.

During periods of serious fire danger to forest, brush, or grass, as may be specified by the appropriate agency official, the permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the leased area except at established camps, and shall enforce this prohibition by all means within his power; PROVIDED, That the appropriate agency official may designate safe places where, after all inflammable material has been cleared away, camp fires may be built for the purpose of heating lunches and where, at the option of the permittee smoking may be permitted.

The permittee shall not burn rubbish, trash, or other inflammable material except with the consent of the appropriate agency official and shall not use explosives in such manner as to scatter inflammable materials on the surface of the land during the forest, brush, or grass fire season, except as authorized to do so or on areas approved by such official.

The permittee shall build or construct such fire lines or do such clearing on the land as the appropriate agency official decides is necessary for forest, brush, and grass fire prevention and shall maintain such fire tools at his headquarters on the leased land as are deemed necessary by such official.

7. To pay the lessor or his tenant, as the case may be, for any and all damage to or destruction of property caused by permittee's operations hereunder; to save and hold the lessor harmless from all damage or claims for damage to persons or property resulting from the permittee's operations under this permit; and where the surface of the leased land is owned by other than the lessor, to pay such owner, or his tenant, as the case may be, for damage or injury to livestock, crops, trees, pipe lines, buildings, and other improvements on the land.

8. Upon any partial or total relinquishment, cancellation or expiration of this permit, permittee shall, as to that part of the land as to which his rights have terminated, and to the extent deemed necessary by the appropriate agency official fill all sump holes, ditches and other excavations, remove or cover all debris, and shall, so far as reasonably possible, restore the surface of the leased land to its former condition.

9. Upon the abandonment, termination, or cancellation of this permit, and in the absence of an agreement to the contrary, the permittee, if all the rental charges have been paid, may, within a reasonable period, to be determined by the Director, Bureau of Land Management, remove all structures which have been placed on the premises by him, except where the material was furnished free by the agency having control of the surface; but upon failure to remove the structures within the period prescribed, they shall become the property of the United States.

10. The permittee shall permit inspection of premises and operations by duly authorized representatives of the Departments of the Interior and Agriculture, and shall provide, whenever so requested by the forest officer in charge, away across the lands covered by this permit for the free ingress or egress of forest officers and for users of national-forest land and purchasers of national-forest products.

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STIPULATIONS

Lessee (permittee) will construct and maintain all roads needed for this operation on locations and to standards approved by the Forest Supervisor.

11. This permit shall become null and void if the Director, Bureau of Land Management, shall find and determine (a) that the permittee knowingly and without adequate extenuation has violated or failed to comply with any of the conditions of said permit, to the detriment of the United States, or (b) that the lands herein described must be occupied by a public agency for some major purpose of public interest or necessity with which the continuation of mining operations under this permit would be incompatible.

12. The conditions of this permit are completely set forth herein and none of its terms can be varied or modified except in writing by the Director, Bureau of Land Management, and in accordance with the regulations of the Secretary of the Interior.

13. The right to mine or remove minerals in merchantable quantities is not granted in this permit. The permittee, however, shall have a preference right during the term of this permit to secure a mining permit covering any of the lands described in this prospecting permit.

14. There is expressly reserved to the United States all fissionable source materials, together with the right, at any and all times, to enter upon the land and prospect for, mine and remove such materials, pursuant to Executive Order 9908 (12 F.R. 8223).

15. The permittee, in the exercise of this permit, shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin and shall include in all subcontracts a provision imposing a like obligation on subcontractors.

16. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this permit or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this permit if made with a corporation for its general benefit.

17. This permit shall be renewable from year to year, and shall be considered as so renewed upon receipt by the Bureau of Land Management of payment of the annual advance rental fee, provided, however, that acceptance of such fee and assent to such automatic renewal shall be, in each instance, in the sound discretion of the Director, Bureau of Land Management, provided further that this permit may be terminated for cause at any time, after due notice to the permittee. The representative of the Geological Survey for this permit is: Mining Engineer, Rm 3227 General Services Administration Building, Washington 25, D. C.

Date May 1 1954

Apr 9 1954

C. R. Drixilins (Sgd.)
For the Director, Bureau of Land Management
Assistant Chief, Division of Minerals

I, Louise Munday Cotter, in consideration of a certain amount of common stock in the Panther Mountain Corporation, heretofore agreed on, hereby assign all of my rights in the foregoing Prospecting Permit to the Panther Mountain Corporation of Knoxville, Tennessee.

This the 10th day of July, 1954

Louise Munday Cotter (Sgd.)
Louise Munday Cotter

pp

PARKER [illegible] CORP.
ROCKVILLE, TENN.
BLM-A-021786 & BLM-A-034204
North Carolina.

SPECIMENS AND SAMPLES GATHERED AT PANTHER MOUNTAIN PROSPECT, MACON COUNTY, NORTH CAROLINA, ASSAYS VARIED AS FOLLOWS:

ZINC	1.40 to 12.60
IRON	3.55 to 50.30
COPPER	0.10 to 1.9
Silver	0.10 ounces
Gold	None

SAMPLES TAKEN FROM TRACTS COVERED BY PROSPECTING PERMIT LOUISE MUNDAY COTTER BLM-A-021786

PANTHER MOUNTAIN CORP.
KNOXVILLE, TENN.
BLM-A-021786 & BLM-A-034284

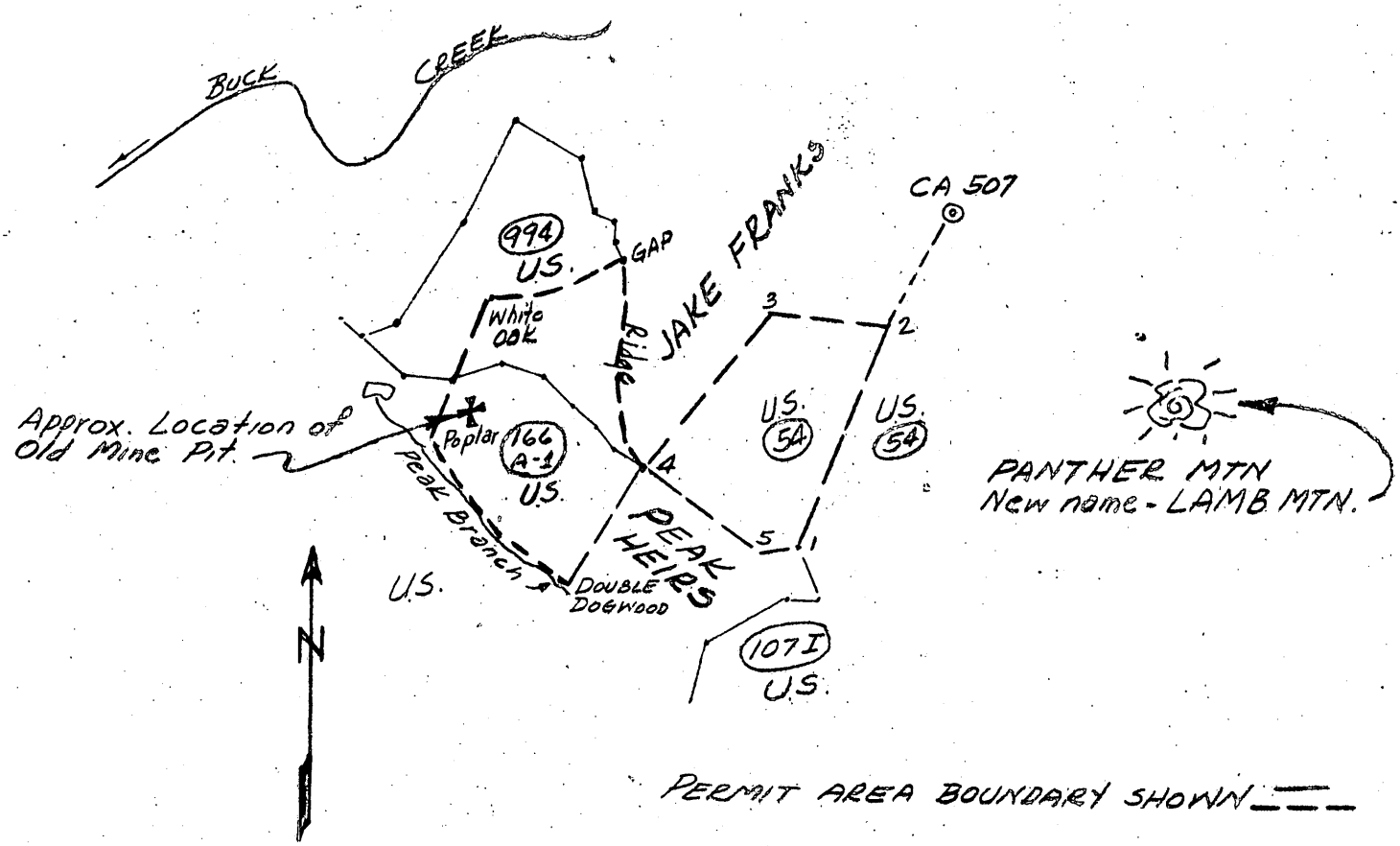
Assay results on samples taken at Panther Mountain Prospect, Macon county, North Carolina, September 17, 1950.

Copper	2.26
Zinc	16.15
Iron	18.00
Sulphur	20.15

One vein	6.50 feet
One vein	12.00 feet
One vein	8.00 feet
Total	26.50 feet

Samples taken from tracts covered by Prospecting Permit Louise Munday Cotter BLM-A-021786.

PANTHER MOUNTAIN CORP.
KNOXVILLE, TENN.



= PROSPECTING PERMIT =

LOUISE MUNDAY COTTER, FRANKLIN, N.C.

BLM-A-021786

COPPER - IRON

PANTHER MOUNTAIN CORP.
KNOXVILLE, TENN.

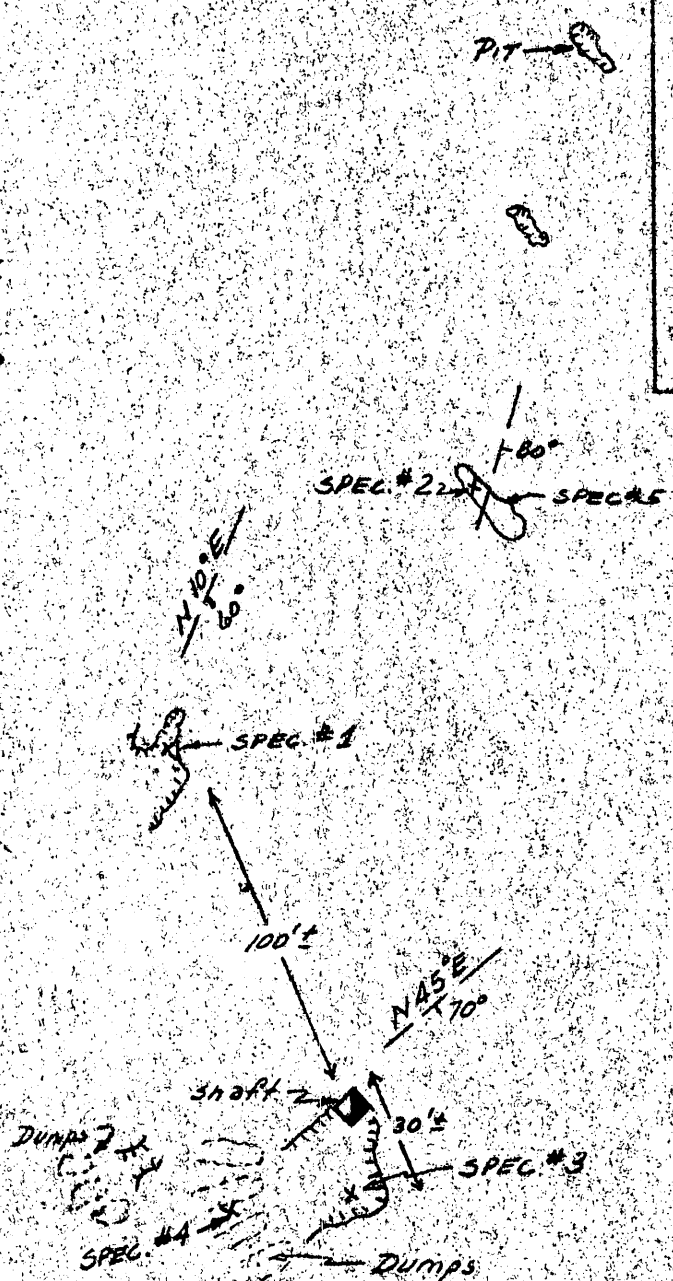
SPEC. #1: 10" SECTION OF SULPHIDE STREAK - APPEARS TO BE THE RICHEST SPOT IN MINERALIZED THICKNESS OF ± 3-4' - SOME OXIDATION
ASSAY: 0.70% ZN; 25.40% FE; 1.05% CU.

SPEC. #2: 16"-BOTTOM TRENCH - PART SULPHIDE - PART OXIDIZED WITH 5-6' LEACHED GOSSAN ABOVE
ASSAY: TRACE OF ZN; 21.70% FE; 0.40% CU.

SPEC. #3: 42"-X SECTION-BEST AND WIDEST SULPHIDE SPOT SEEN - GNEISS AND MICA SCHIST ABOVE - QUARTZ BELOW - LITTLE OR NO LEACHING OR OXIDATION
ASSAY: 8.80% ZN; 8.40% FE; 0.85% CU.

SPEC. #4: PIECES FROM DUMP - SELECTED FOR HIGHEST GRADE
ASSAY: 10.00% ZN; 11.60% FE; 0.65% CU.

SPEC. #5: SPECIMEN OF GOSSAN ± 4' ABOVE SPEC. #2 - IN TRENCH
ASSAY: TRACE OF ZN; 37.80% FE; 0.10% CU.



Report on specimens and diagram indicating work done on Panther Mountain Prospecting Permit BLM-A-021786.

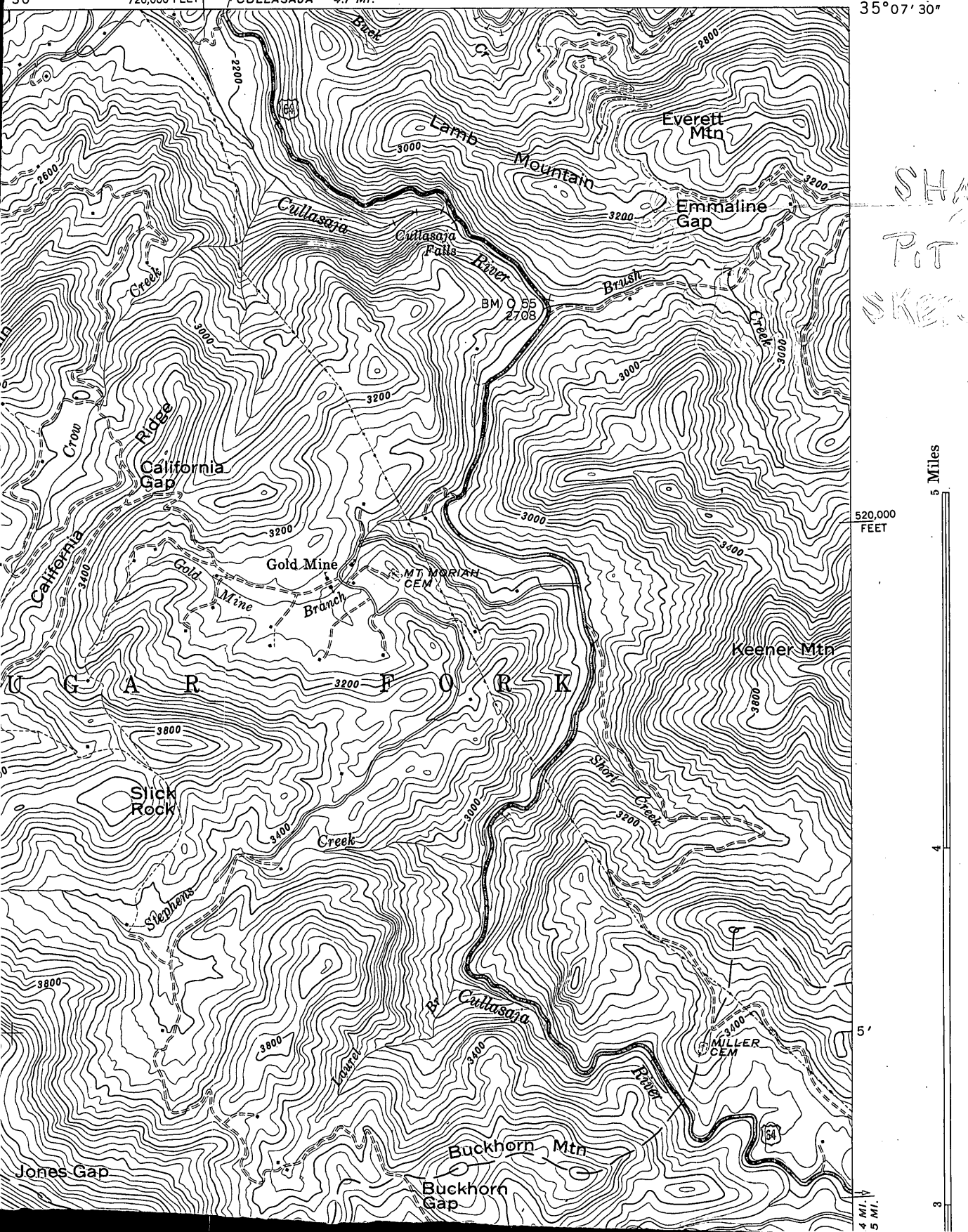
PANTHER MT. GORP.
KNOXVILLE, TENN.

NORTH CAROLINA
(MACON COUNTY)

SCALY QUADRANGLE

167-SE

(Glenville 176-NW)

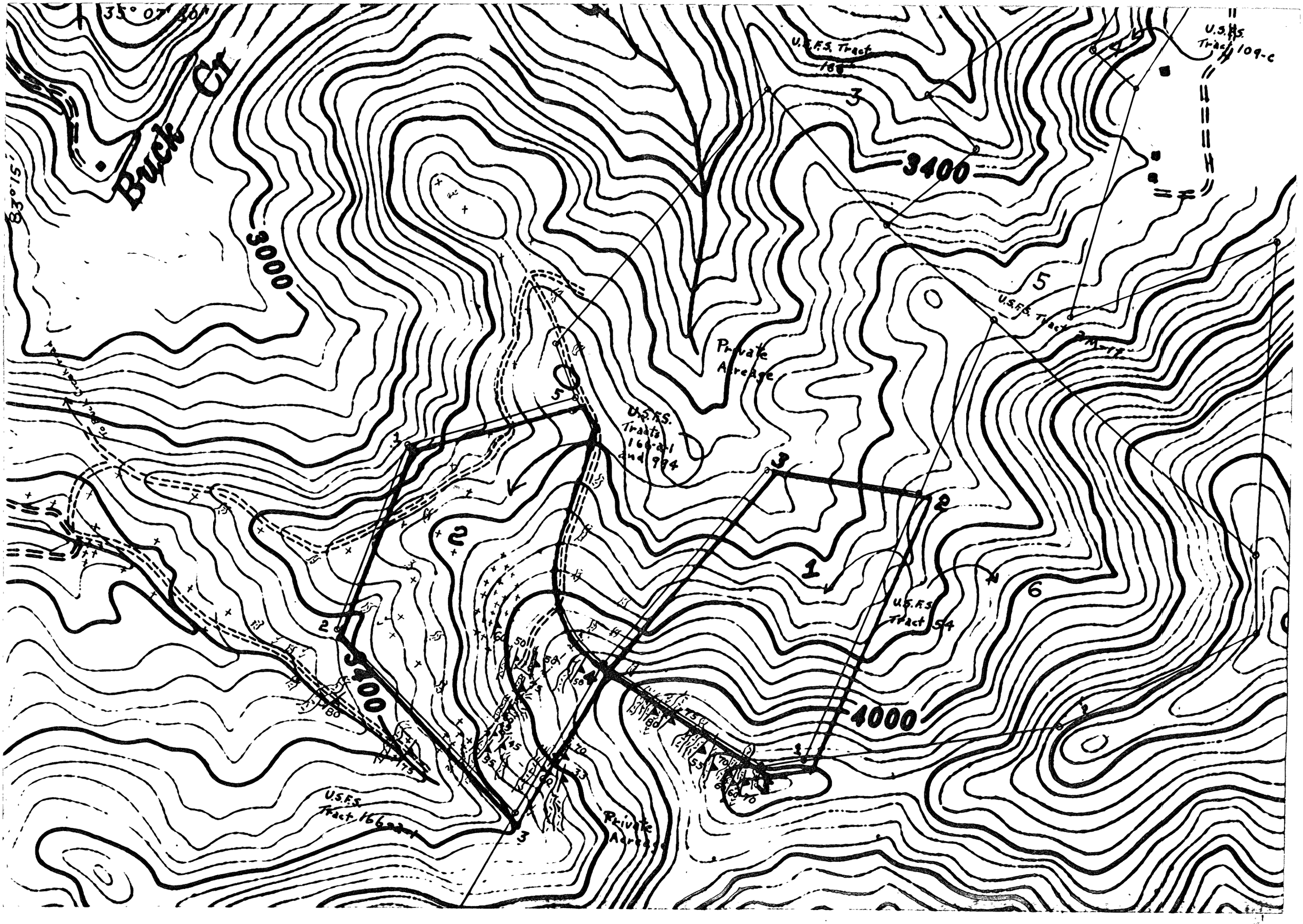


SHAW PIT ON SKETCHES

OFFICIAL BUSINESS

U. S. Bureau of Mines
420 Custom House
555 Battery Street
San Francisco 11, California

[illegible] Exploration Administration
[illegible] Building
Washington 25, D. C.



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GEOLOGIC AND PROPERTY MAP OF THE

SULLINS PROSPECT, MACON COUNTY, N.C.

Scale 1 inch = 500 Feet

Contour Interval 40 Feet

LEGEND

Property Line

Access Road

Prospect Workings

Massive Granite

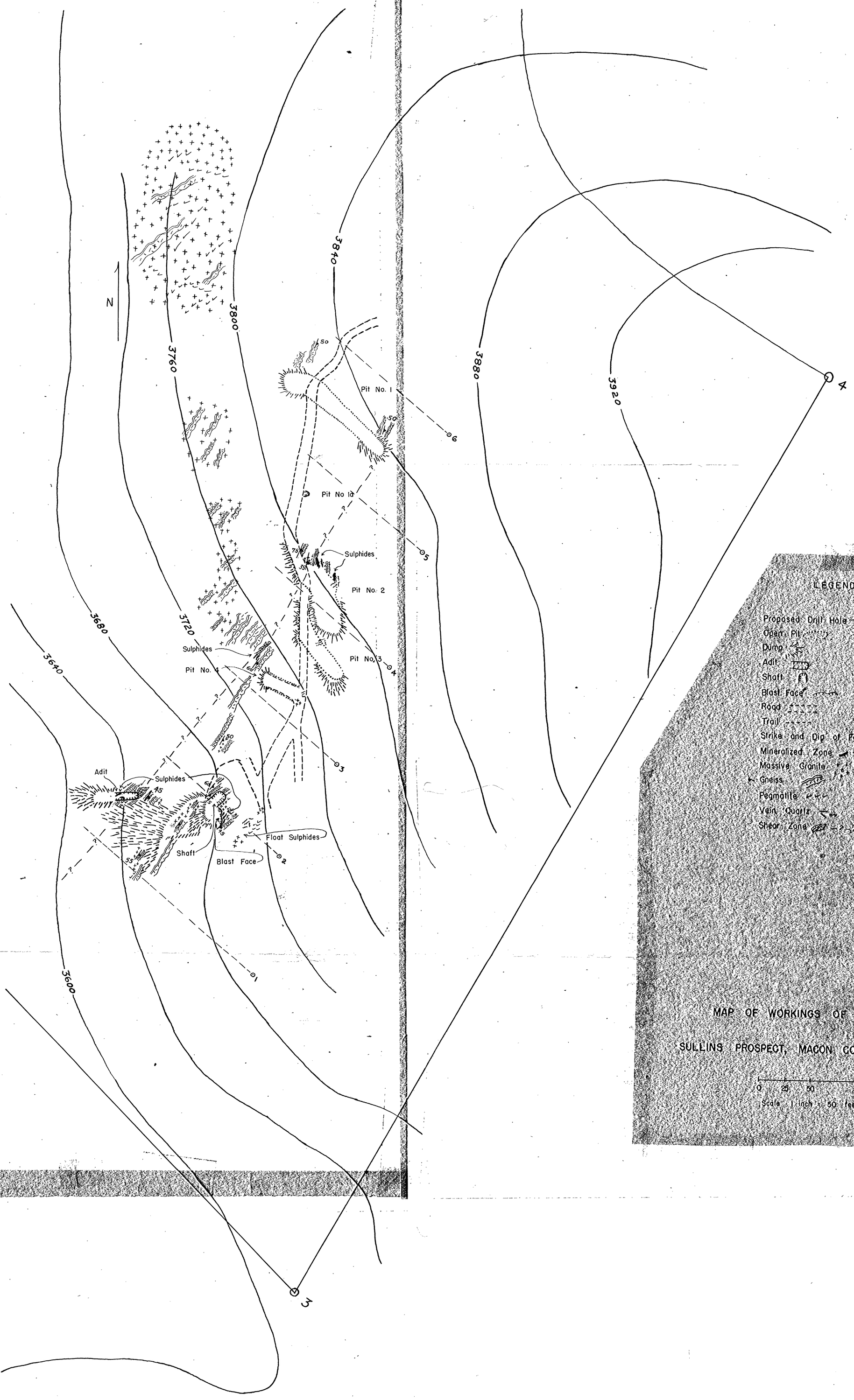
Gneiss

Pegmatite

Shear Zone

Vein Quartz

Strike and Dip of Foliation 30


N
3600
3640
3680
3720
3760
3800
3840
3880
3920
Adit
Sulphides
Shaft
Blast Face
Float Sulphides
Pit No. 4
Sulphides
Pit No. 2
Sulphides
Pit No. 1a
Pit No. 1
Pit No. 3
1
2
3
4
5
6
LEGEND
Proposed Drill Hole
Open Pit
Dump
Adit
Shaft
Blast Face
Road
Trail
Strike and Dip of Foliation
Mineralized Zone
Massive Granite
Gneiss
Pegmatite
Vein Quartz
Shear Zone
MAP OF WORKINGS OF THE
SULLINS PROSPECT, MACON COUNTY, N.C.
0 25 50 100
Scale 1 inch = 50 feet