Bob Weeks
Let me find the DME-A No. for this property and place in that file
Thos Davis either

T. Kiilsgaard

Br. Light Metals and
Industrial Minerals

May 23, 1963

DME A 6057

Memorandum

To: The Record

From: D. M. Larrabee

Subject: Inquiry of May 16 from Congressman John S. Monagan of Connecticut, and addressed to me personally, for information on the Roebling (pegmatite) mine in Litchfield County, Connecticut.

(This was addressed to me personally because I was teaching geology at Dartmouth College when he was an undergraduate there, and he used that connection to make it a personal contact.)

Congressman Monagan's constituents, the MAG Mining Co., applied for an $80,000 loan from the Office of Minerals Exploration in 1959 (OME-6057, beryl-mica). I examined the property, drill core splits, and "ore" samples for OME on September 22 and 23, 1959, and reported October 22, 1959, recommending denial on the bases of insufficient reserves (and potential resources), grade of ore, and some probably major problems in development and operation, as well as my estimated cost thereof. The delay in reporting was occasioned by time necessary for obtaining chemical analyses of samples.

Mr. W. R. Griswold of OME advised me that similar requests for financial assistance in the development of this mine have been received from MAG on more than one occasion since 1959, and the requests denied, and also that certain public officials have requested information on the applications.

Congressman Monagan said that an official of MAG Mining Co. told him that I had orally given company officials a favorable report at the time of examination, and therefore the company questioned the "denial" from OME. I corrected this item, informing Mr. Monagan that such was not true, that in fact I had informed them of the inadequacies of a field examination without benefit of chemical analysis (no berylometer was available to me), especially in case small, white, anhydral beryl might be present but overlooked; that other, possibly present but undetected beryllium-bearing minerals also would require analytical work; that cross sections including drill core data projected to depth would be required in estimating reserves, etc.; that the apparent size of deposit was not large; and finally discussed with them the operating problems obvious to me at that time. Therefore, my oral report was not favorable to put it mildly, and this was

understood by them at the time. I stated that a favorable oral report must have been wishful thinking on their part. Mr. Monagan was further informed that my detailed report to OME could not be released for inspection, that my final report in fact was unfavorable, but that OME made the final decision, and on numerous occasions had reversed the Field Examiner's suggested procedure. Mr. Monagan also was informed that if his constituents had new information of importance on this deposit they could re-apply to OME without prejudice. The Congressman stated that the company had no such new information.

The conversation was conducted on a friendly "semi-official" basis. Later, in a phone conversation with his secretary, it was learned that in his Washington office files the Congressman had such detailed information on the deposit as the B. J. Longyear Company's drilling report, assay reports, published U. S. Bureau of Mines milling tests, etc., thus indicating that he is unusually well informed on the interests of his constituents in the MAG Mining Co.

cc: Mr. Kiilsgaard
Mr. Griswold, OME

9-011
(Rev. May 1958)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GEOCHEMISTRY & PETROLOGY BRANCH

REPORT NO. IWS-827 FOR D. M. Larrabee DATE Oct. 19, 1959

JOB NO. 4444 PROJECT OR ORGANIZATION Geol Danforth, Maine Quad. MD 1062

LOT NO. 5006 REFER TO OTHER REPORTS See IWC-669

Quantitative spectrographic analysis of 4 pegmatites and 1 mica samples from Connecticut for beryllium.

Plates W-1472 and W-1474

Lab. No.	Field No.	Description	% Be
155152	1-R-Conn-L	Pegmatite	.24
155153	5-R-Conn-L	"	.0027
155154	2-R-Conn-L	Mica, Roebling mine, New Milford	.0016
155155	6-R-Conn-L	Pegmatite	.0010
155156	7-R-Conn-L	Pegmatite	.0007

The above results have an overall accuracy of ± 15 percent except near limits of detection where only one digit is reported.

Note: Sample Lab. No. 155155 is the same as sample Lab. No. 155151 of Job No. 4441.

By Janet D. Fletcher
Janet D. Fletcher, Analyst
Harry Bastron, Analyst & in charge

Approved William G. Schlecht
William G. Schlecht
Liaison Officer

jmb

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

NOV 6 1959

MAG Mining Corporation

New Milford, Connecticut

Re: Docket No. (OME-6057 (Beryl-Bice)
MAG Mining Corporation
Bumbling Mine
Litchfield County, Connecticut

Gentlemen:

Your application for aid in an exploration project and other information available to us in Washington concerning the above-named property have been reviewed.

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

Sincerely yours,

Frank E. Johnson

Acting Director

JWAlt/gla
11-3-59
cc to: Director's Reading File
Operating Committee
Harold Kirkham, USGS
Donald I. Eilertsen, USBM
Code 500
OME Field Team, Region V (2) w/2 cys each USGS memo
Docket November 2, 1959, and
Chron USBM memo November 3, 1959

FORM 5 5-56 60M F. & K. INC.

LEDOUX & COMPANY,
(Inc.)

ENGINEERS, CHEMISTS AND ASSAYERS

359 ALFRED AVENUE TEANECK, NEW JERSEY

E

REPORT OF ANALYSIS

No. 767072 Teaneck, N. J. July 22, 1958

Our analysis of the sample of Mineral

From MAG Mining

Marked: Samples: 115-120, 120-135, 135-140 and 140-145

DDH Hole # 3 ? and submitted to us, shows:

AFTER DRYING:

Beryllium Oxide
(BeO)

115-120 - - - - - - - - - - 0.44%

120-135 - - - - - - - - - - 0.31%

135-140 - - - - - - - - - - 0.31%

140-145 - - - - - - - - - - 0.33%

* * *

To MAG Mining

LEDOUX & COMPANY, Inc.

V C Bowden

EXTRA COPY
O. M. E.
JUL 30 1959
CODE

20M 5-58 F. & K. INC. FORM 49

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

E

REPORT OF ANALYSIS

No. 767071 Teaneck, N. J. July 22, 1958

Our analysis of the sample of Mineral

From Beryllium Corp.

Marked: Sampled: 105-110, 110-115, 115-120, 120-125, 125-130, 130-135, 135-140, and 140-145

and submitted to us, shows:

DDH # 2 ?

AFTER DRYING:

	Beryllium Oxide (BeO)
105-110	0.19%
110-115	0.72%
115-120	0.72%
120-125	0.56%
125-130	0.53%
130-135	0.58%
135-140	0.36%
140-145	0.19%

* * *

To MAG Mining

LEDOUX & COMPANY, Inc.

N C Bowden

FORM 5 5-58 60M F. & K. INC.

LEDOUX & COMPANY,
(Inc.)

ENGINEERS, CHEMISTS AND ASSAYERS

PA 359 ALFRED AVENUE TEANECK, NEW JERSEY

REPORT OF ANALYSIS

No. 767385 Teaneck, N. J. July 31, 1958

Our analysis of the sample of Mineral

From MAG Mining Company

Marked: Hole No. 1 Sample No: 105-115
118-126
135-153

and submitted to us, shows:

	#105-115	118-126	135-153
Beryllium Oxide (BeO) - - - - -	0.47%	0.22%	0.33%

* * * * *

To MAG Mining Company

LEDOUX & COMPANY, Inc.

W O Bowden

FORM B 5-50 COM F. & K. INC.

LEDOUX & COMPANY,
(Inc.)

ENGINEERS, CHEMISTS AND ASSAYERS

PA 359 ALFRED AVENUE TEANECK, NEW JERSEY

REPORT OF ANALYSIS

No. 767713

Teaneck, N. J. August 14, 1958

Our analysis of the sample of Mineral

From MAG Mining Corp.

Marked: Trench #4 Sink 2.63 Float 2.72
" #4 Sink 272 162 gr.

and submitted to us, shows:

After Drying

	Beryllium Oxide (BeO)
2.63	0.04%
272	0.04%

* * *

To MAG Mining Corp.

LEDOUX & COMPANY, Inc.

V. O. Bowden

FORM B 5-56 60M F. & K. INC.

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

REPORT OF ANALYSIS

B

No. 768526 Teaneck, N. J. Sept. 10, 1958

Our analysis of the sample of MINERAL

From MAG Mining Corp.

Marked: Cut No. 6 400 ML

and submitted to us, shows:

AFTER DRYING:

Beryllium Oxide - - - - - - - - -0.69%
(BeO)

* * *

To MAG Mining Corp.

LEDOUX & COMPANY, Inc.

A. Larkin

20M 5-56 F. & K. INC. FORM 49

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

B

REPORT OF ANALYSIS

No. 768413 A

Teaneck, N. J. September 19, 1958

Our analysis of the sample of MINERAL

From MAG Mining Co.

Marked: 1)-Trench #6 Float 263 15.25
2.75
12.50
2)-Composite Sink 2.72 BEO 675Gr
3)-Composite Sink 2.66 Float 2.72 625gr
4)-Composite Float 2.63 25 3/4
3 1/2
22.25
5)-Composite Sink 2.63 Float 2.66 1510 gr.
* 6)-Trench#6 Sink 2.66 Float 2.72 640 gr.
* 7)-Trench#6 Sink 2.72 1125 gr.
8)-Trench #6 Sink 2.63 Float 2.66

and submitted to us, shows:

AFTER DRYING:

	Beryllium Oxide (BeO)
1	-0.01%
2	-0.06%
3	-6.10%
4	-0.01%
5	-0.04%
* 6	-6.27%
* 7	-0.17%
8	-0.11%

* * *

To MAG Mining Co.
Attn: Mr. Arnell

LEDOUX & COMPANY, Inc.

A. Harkin

FORM 8 5-58 60M F. & K. INC.

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

P

REPORT OF ANALYSIS

No. 771808 Teaneck, N. J. January 15, 1959

Our analysis of the sample of PEGMATITE ORE

From Mr. G. Walker

Marked: Head Sample Order No. JE 48328
Sample Reg. 2109

and submitted to us, shows:

After drying:

Beryllium Oxide - - - - 0.28%
(BeO)

* * *

To Mag Mining Corp.

LEDOUX & COMPANY, Inc.
A J Laidin

FORM S 1-59 60M P. & K. INC.

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

P

REPORT OF ANALYSIS

No. 773435 Corrected

Teaneck, N. J. April 9, 1959

Our analysis of the sample of BERYL MATERIAL

From Mr. G.B. Walker

Marked: as below.

andsubmitted to us, shows:

Marked	After drying: BERYLLIUM OXIDE (BeO)
Test 4 #1 Beryl Cleaner Tail	0.03%
Test 4 #2 Beryl Cleaner Tail	0.09%

* * *

To MAG Mining Corporation

LEDOUX & COMPANY, Inc.

W C Bowden

FORM B 1-59 60M F. & K. INC.

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS

MS 359 ALFRED AVENUE TEANECK, NEW JERSEY

REPORT OF ANALYSIS

No. 774450 Teaneck, N. J. April 9. 1959

Our analysis of the sample of Pulp

From MAG Mining Corp.

Marked: Represents the Slime fraction from Test 4 Order No. JE-48328

and submitted tous, shows:

After Drying:

Beryllium Oxide (BeO)--------0.22%

***

To MAG Mining Corp.

LEDOUX & COMPANY, Inc.

W. A. Thornton

FORM B 1-59 60M F. & K. INC.

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

P

REPORT OF ANALYSIS

No. 773435 A

Teaneck, N. J. April 28, 1959

Our analysis of the sample of BERYL MATERIAL

From Mr. G. B. Walker

Marked: Test 4 Beryl Concentrate

and submitted to us, shows:

After drying:

Beryllium Oxide - - - - 11.45%
(BeO)

* * *

To MAG Mining Corp.

LEDOUX & COMPANY, Inc.

L. C. Coates

20M 1-59 F. & K. INC. FORM 49

LEDOUX & COMPANY,
(Inc.)
ENGINEERS, CHEMISTS AND ASSAYERS
359 ALFRED AVENUE TEANECK, NEW JERSEY

D

REPORT OF ANALYSIS

No. 768414-A Teaneck, N. J. April 29 1959

Our analysis of the sample of MINERAL

From MAG Mining Company

Marked:
1)-Trench #3 Sink 2.72
2)-Trench #VI Float 2.72 Sink 2.66
3)-Trench #II Sink 2.66 Float2.72
5)-Trench #3 Sink 2.66 Float2.72
6)-Trench #3 Sink 2.63 Float 2.66
7)-Trench #I Sink 2.63 Float 2.72
8)-Trench #VI Sink 2.72
9)-Trench #2 Sink 2.72
10)-Trench #I Float 2.68 Sink 2.65

and SUBMITTED TO us, shows:

AFTER DRYING:

	Beryllium Oxide (BeO)
1	0.18%
2	0.11%
3	0.07%
5	0.19%
6	0.006%
7	0.06%
8	0.07%
9	0.02%
10	0.006%

* * *

To MAG Mining Company,

LEDOUX & COMPANY, Inc.

M O Bowden

Chem.

0.78 % Ben C.

0.71

1 E.

7.10 % Beryl

Rocking XI

#1 "Green"

— 0.24 Be

0.66 BeO)

#5 — 0.0037 Be

0.0085 BeO

Total

Corrs av 0.41 BeO

or 6 + X #1 above

Standard Form 63
Jan. 1952

U. S. GOVERNMENT

MEMORANDUM OF CALL

Date	Time

TO— Dave

☒ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

Mr. Greg

Telephone:	Number or code	Extension
	3022	

☒ PLEASE CALL ☐ WAITING TO SEE YOU

☐ WILL CALL AGAIN ☐ WISHES AN APPOINTMENT

☐ RETURNING YOUR CALL

Left This Message: Call him back

Received by—

☆ U. S. GOVERNMENT PRINTING OFFICE: 1955 O-367995 16—65931-1

4.1

213,000 ฿

8866.00
552000
346000

2

213,000
0,70

1491,00000

3022

Call

Trey on

BRE, T

written up

.00750

.0750

TBN advice

Talk to Johnson, of OME; advise of factors involved, so that he can talk with Senator about problem.

Oct 8

Standard Form 63
Jan. 1952

U. S. GOVERNMENT

MEMORANDUM OF CALL

Date	Time

TO—

☐ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

TELEPHONE:	Number or code	Extension

☐ PLEASE CALL ☐ WAITING TO SEE YOU

☐ WILL CALL AGAIN ☐ WISHES AN APPOINTMENT

☐ RETURNING YOUR CALL

LEFT THIS MESSAGE: _____

Received by—

U. S. GOVERNMENT PRINTING OFFICE : 1957—O-412829

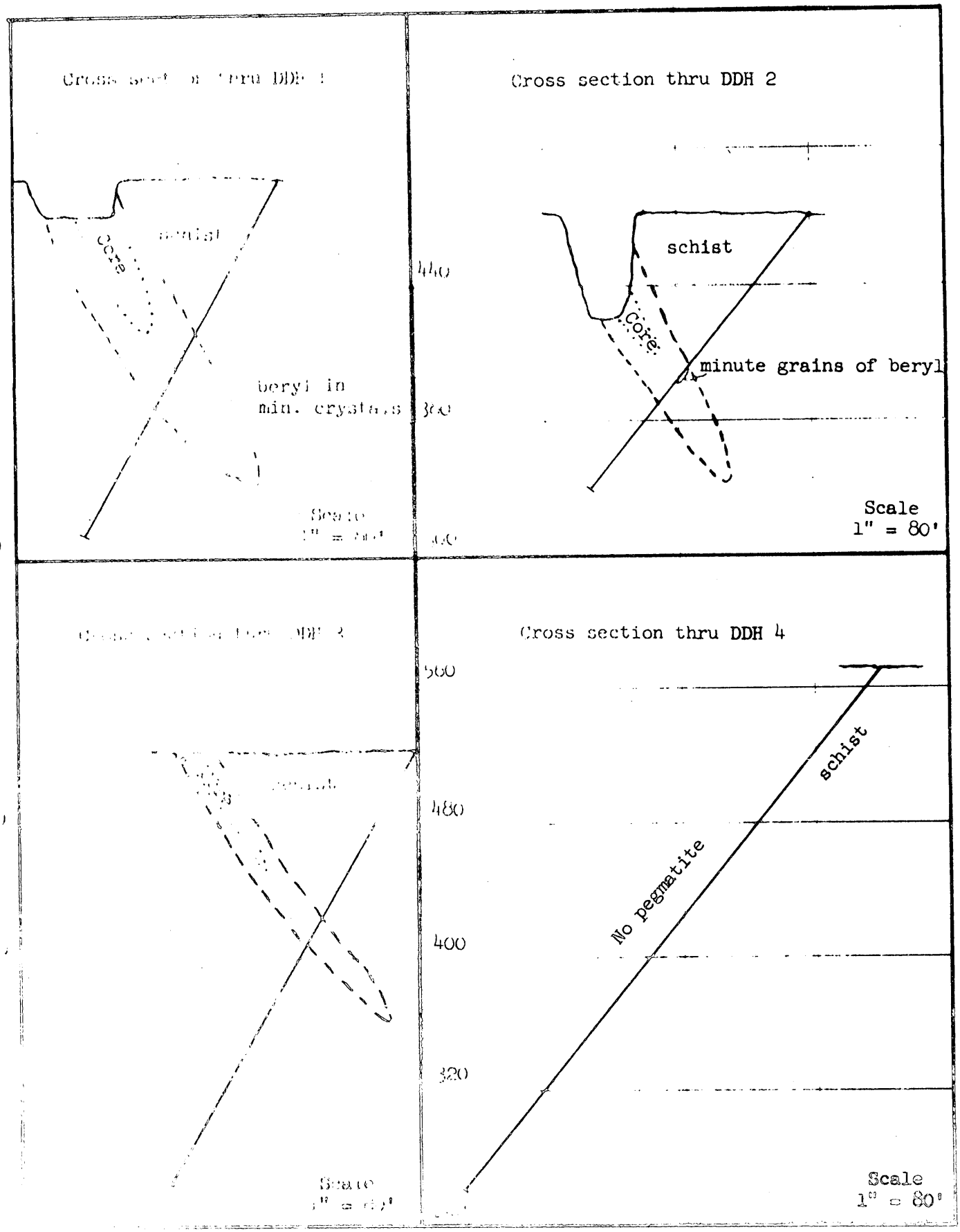


FIGURE 7. CROSS SECTIONS THROUGH TOP NEAR DIAMOND DRILL HOLES SHOWING INFERRED CROSS SECTION OF KOELLING PEGMATITE IN DRILL HOLES 1, 2, AND 4.

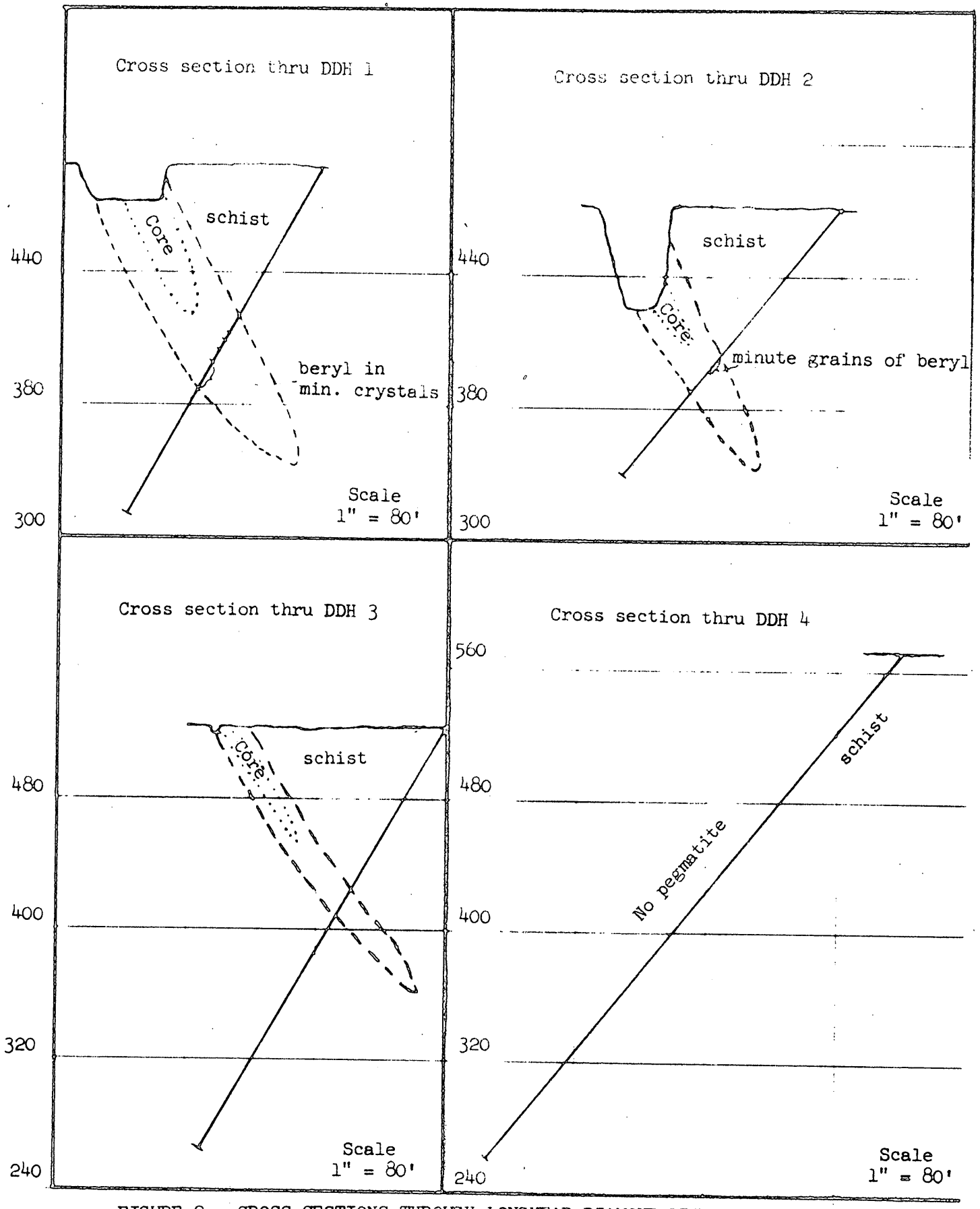


FIGURE 2. CROSS SECTIONS THROUGH LONGYEAR DIAMOND DRILL HOLES SHOWING INFERRED CROSS SECTION OF ROEBLING PEGMATITE IN DRILL HOLES 1, 2, and 3.

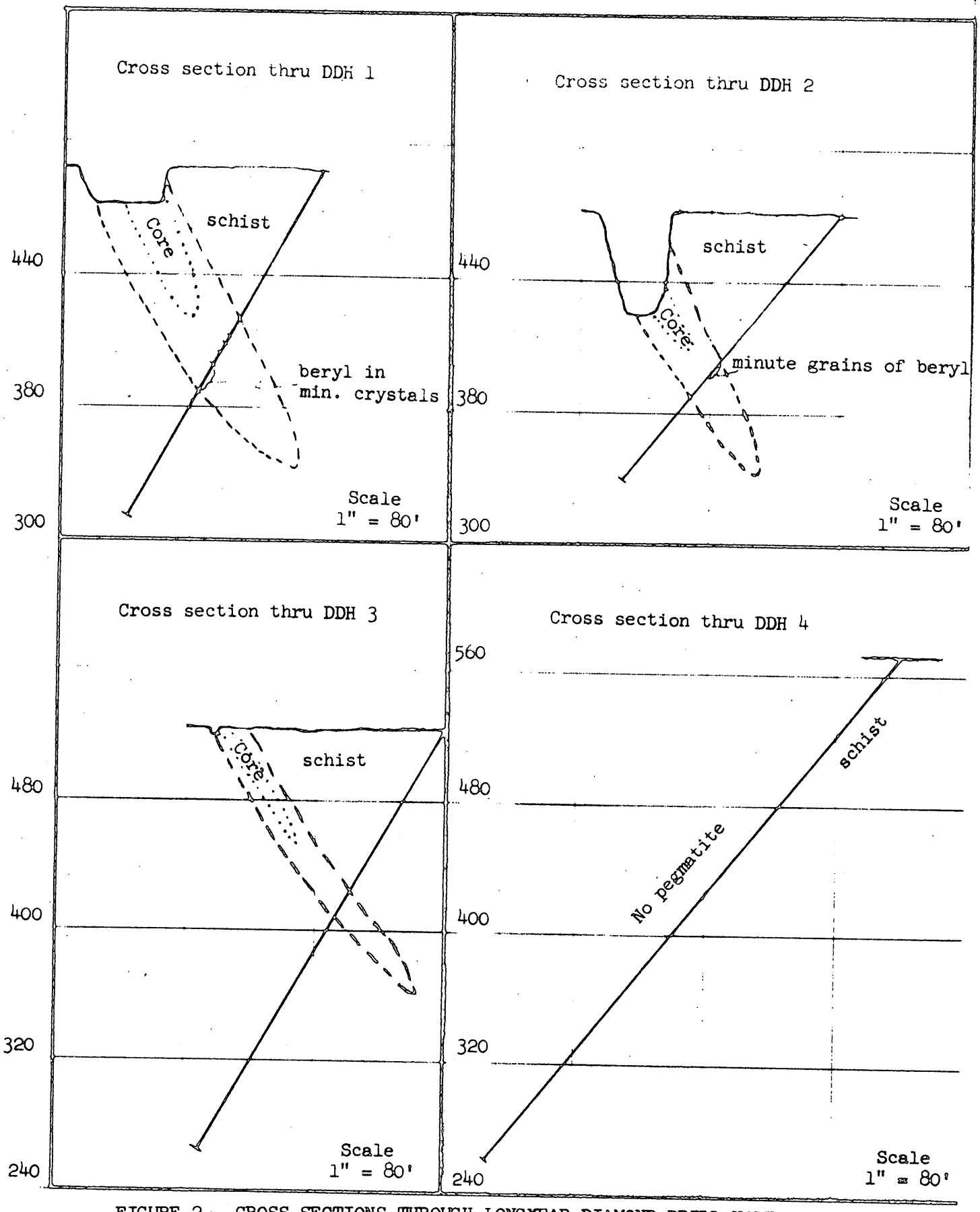
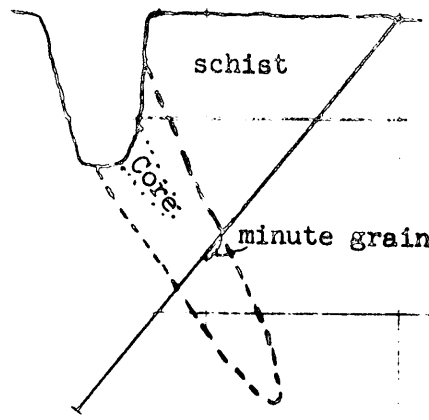


FIGURE 2. CROSS SECTIONS THROUGH LONGYEAR DIAMOND DRILL HOLES SHOWING INFERRED CROSS SECTION OF ROEBLING PEGMATITE IN DRILL HOLES 1,. 2, and 3.

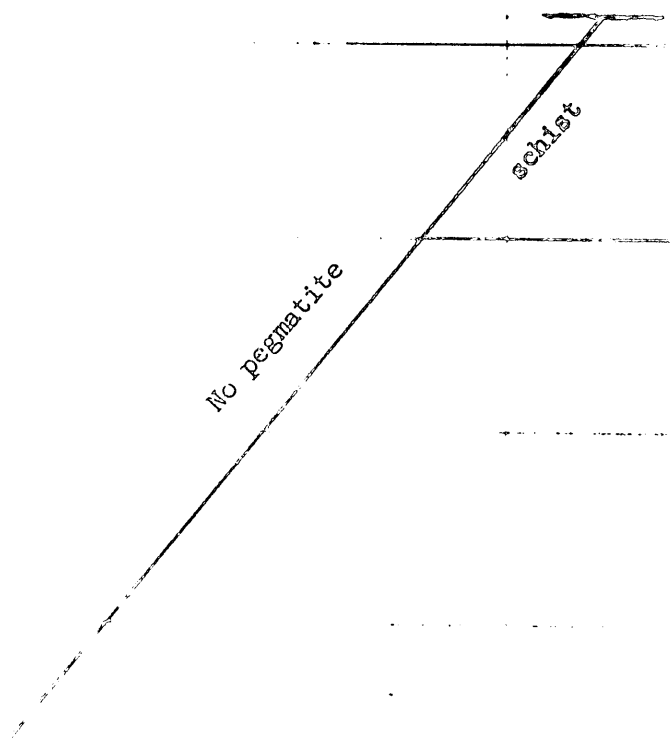
Section thru DDH 2



Scale
1" = 80'

300

Cross section thru DDH 4



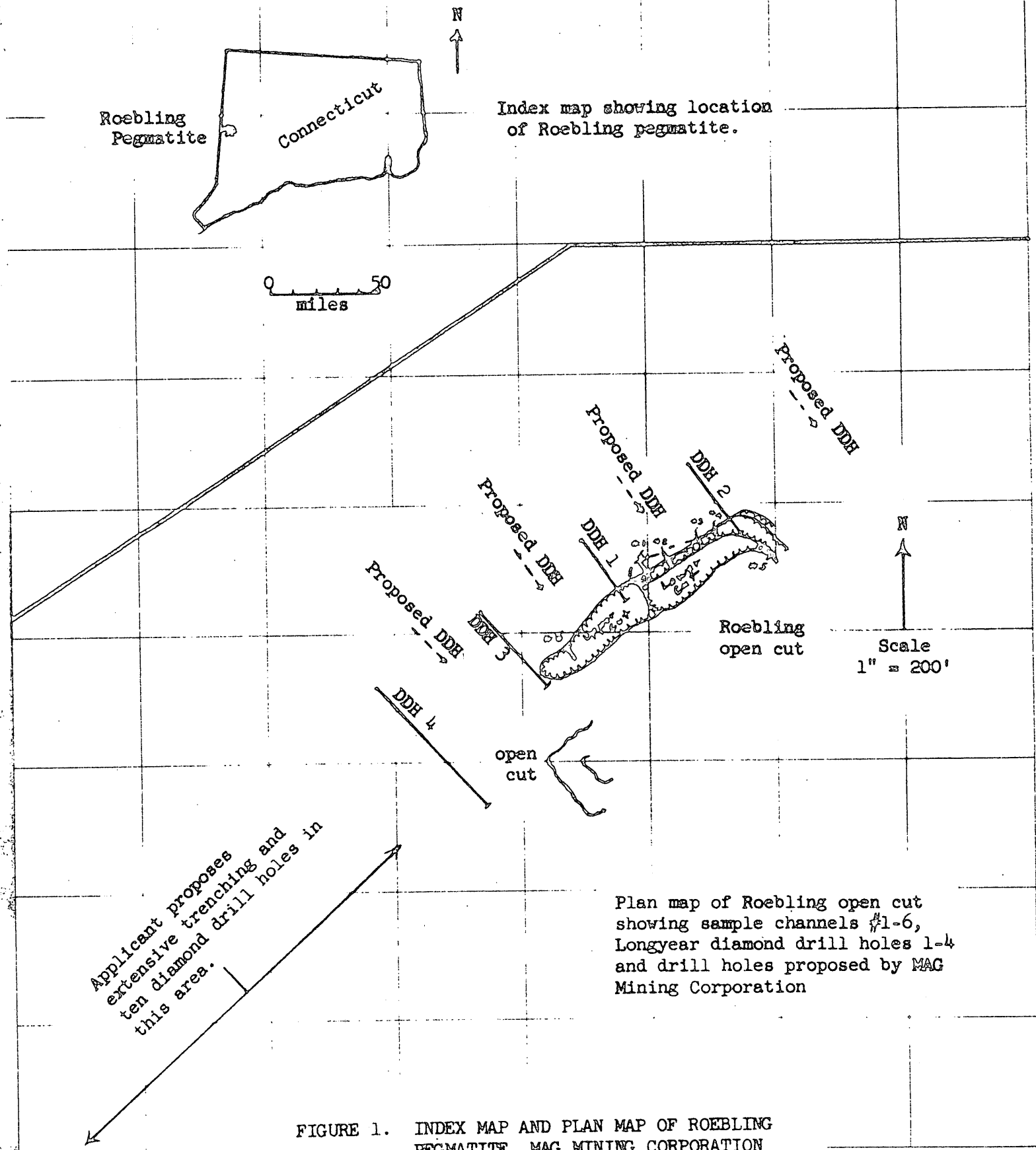


FIGURE 1. INDEX MAP AND PLAN MAP OF ROEBLING PEGMATITE, MAG MINING CORPORATION

9-011
(Rev. May 1958)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GEOCHEMISTRY & PETROLOGY BRANCH

REPORT NO.	IWC 669	FOR	D. M. Larrabee	DATE	Oct. 15, 1959
JOB NO.	4444	PROJECT OR ORGANIZATION	Mineral Deposits		
LOT NO.		REFER TO OTHER REPORTS	Memo of 10/7/59		

BeO in pegmatite from Connecticut. Sample marked
IR-Conn.-L

% BeO . . . 0.72 (Average of 0.71 and 0.73)

(Chemical method; not agreed at 0.66 %)

By MKCarron
M. K. Carron

Approved William G. Schlecht
Liaison Officer
Geochemistry and Petrology Branch

9-011
(Rev. May 1958)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GEOCHEMISTRY & PETROLOGY BRANCH

REPORT NO.	IWM-1000	FOR	David M. Larrabee	DATE	November 6, 1959
JOB NO.	4444	PROJECT OR ORGANIZATION	MD-1062		
LOT NO.	5006	REFER TO OTHER REPORTS	IWC-669 and IWS-827		

Composite of Four Sample Trenches of Pegmatite from Connecticut

Sample No.	Lab. No.
1-R-Conn-L	155152

Mineral Identification

Bulk - Rough estimate shows enough beryl to account for the .7 % of BeO present.

Content of bertrandite probably negligible.

Phenacite or chrysoberyl not found.

Heavy separates - Show much biotite, muscovite, some magnetite, garnet, apatite, and tourmaline, etc.

By Edward C. T. Chao

Edward C. T. Chao

Approved

William G. Schlecht

William G. Schlecht
Liaison Officer

bam

X-2 54

7.31 P. crude

Can DePaolo on

~~1458 Independence Station~~

#2 – 0.0016 % Be = 0.0044 BeO

#6 – 0.0010 % Be = 0.0028 "

#7 – 0.0007 % Be = 0.0019 "

specs #15%

Results from Trug on Oct 1, 59

AY

September 14, 1959

Mr. R. A. Laurence
U. S. Geological Survey
Room 11, Post Office Building
Knoxville 2, Tennessee

Re: Roebling Mine, Conn.

Dear Bob:

This application has been reviewed with Kirk, and I plan to visit the mine early next week, probably driving up on Monday, September 21, for a short examination. As you wrote Kirk, there are several weaknesses in the application.

This examination has been delayed because of my recent arrival here, with the attendant odd jobs.

Best personal regards.

Sincerely yours,

David Larrabee

cc: D. Larrabee
Lois Williams
Chron. file
Docket file
DMLarrabee/mm
G-MD-9-14-59

IN REPLY REFER TO:

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

August 27, 1959

AIR MAIL

Mr. David M. Larrabee
c/o Rideout's Camps
Danforth, Maine

Dear Dave:

You probably know that our OME (DMEA) funds this year were cut far below last year's level. We are making field examinations of the most deserving applications with our own skeleton crew and recruiting regular project geologists where it is more economical to do so. For instance, Bill Williams made three OME interim inspections this month in New Hampshire and Maine. This arrangement saved us the expense of sending someone from Washington or Knoxville. However, diversion of project geologists from their regular project work for OME examinations is to be exercised judiciously according to advice from the Branch management.

In view of the above situation, I wonder if you could arrange to examine the Roebling mine in western Connecticut on your return to Washington. Don White thought you might be returning in mid-September and I have heard that an earlier return might be planned. Whenever you return, we would certainly appreciate this examination. I phoned Bob Laurence about it this morning and he was pleased with the possibility. Your knowledge of beryl and perhaps even personal knowledge of this deposit will provide us with the best possible appraisal of the application.

note! ?

The enclosed application and related material are from our files. Of particular interest, I might point out Longyear's estimate of tonnage and grade. Isn't 0.41% BeO unusually high and shouldn't visual examination disclose the presence of so much beryl? Also note that Senator Dodd has inquired about the application. The Applicant's proposal for exploration doesn't seem adequate if the dike dips or plunges to the northwest.

yes!

Bob Laurence will receive a copy of this letter and all the data I'm sending you. The Operating Committee is referring this docket to the Field Team tomorrow. If Bob has some suggestions to offer you, he will write you next week. If you are leaving

next week, however, don't delay your trip while awaiting a letter from Bob.

Per diem expenses incurred for your examination will be paid by OME. Vehicle expense will probably be carried on your own project.

Please drop me a note whether or not you can arrange to make this examination and, if so, when you expect to do it.

You're fortunate to have missed the heat here this summer. It's been a lulu!

Best regards to Kate.

Sincerely yours,

Kirk

Harold Kirkemo

Enclosures

Form 9-094
(Feb. 1954)

U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY
Geochemistry and Petrology Branch

REQUEST FOR ANALYSIS

Check one:
☐ Samples shipped herewith
☒ Shipping instructions needed

See instructions on pad cover

Shipment No.	Bill of Lading No.
Date shipped	Shipped via

1. Project No. and Title: [illegible]

2. Branch or Organization: Min Dep OME

3. Send copies of Report of Analyses to (*Names and Addresses*): David M. Larrabee

4. Submitted by (*Print or type name and address*)
☐ USGS ☐ USGS (AEC) ☐ AEC ☐ Other:

David M. Larrabee
Mineral Deposits Branch
U. S. Geological Survey
Washington 25, D.C.

5. Collected by: [illegible]

6. Request approved by: W. A. Schaff

7. Lot No.: 5606

8. Total number of samples: 2

9. Samples are numbered
from _____ to _____
List and describe each fully on List of Samples form.

10. WORK REQUESTED

a. ☐ Radioactivity ☐ Routine—Equivalent U
☐ Other (*Specify*):

b. ☐ Chemical ☐ Standard rock analysis ☐ Rapid method ☐ T. E. ☐ Geochemical exploration
☒ Other (*Specify*):
Elements to be determined and accuracy desired: BeO 1

c. ☐ Spectrographic ☐ Qualitative ☒ Quantitative (*For specific elements only*)
☐ Semiquantitative (*Over 60 elements or only those requested*)
Elements desired: BeO

Refer to Analytical Chem *25*, 1174–79 (Aug. 53) for Discussion of Semiquantitative Spectrographic Analysis

d. ☐ Mineralogic and Petrographic examination
(*Hand pick minerals for identification*)

e. ☐ X-ray

f. ☐ Thin sections

g. ☐ Polished sections

11. Remarks: (Special grinding and reasons; describe problem and bearing of work requested on its solution; any special instructions; work requested that is not shown above; justification for accuracy requested; disposition of samples.)

12. Have descriptions or analyses been made of this or similar material from the same region?
☐ Yes ☐ No ☐ Unknown. If published give references.

13. Additional information helpful to the analyst (*Type of material, nature of impurities, mineralogic data, etc. Use List of Samples form for additional space.*)

14. If you have checked above that shipping instructions are needed, this form will be returned to you with the name and address of laboratory to which samples and request are to be sent indicated here →

Ship samples and this request to:

15. Receipt of samples for analysis will be acknowledged below. If at any time these analyses are no longer required, notify the laboratory immediately. The estimated completion date is subject to change. Refer to lot number and job number in all correspondence concerning this request.

G & P Branch	Date received	Estimated date of completion	Job No.	Signed
CSA	10/7/54	Dec 4	4444	[illegible] Sample Control

☐ See reverse side for laboratory comments about this request.

U. S. GOVERNMENT PRINTING OFFICE 16—70182-1

Acknowledgment Copy

November 12, 1959

Mr. Samuel F. Melillo
MAG Mining Corporation
New Milford, Connecticut

Dear Mr. Melillo:

Many thanks for the information on core recovery from the Roebling mine. This has been added to our files on OME 6057.

Sincerely yours,

David M. Larrabee
Geologist

cc: R. A. Laurence
D. M. Larrabee
Director's reading
Branch reading
OME
Chron. file
Docket file

DMLarrabee/mm
G-MD-11-12-59

Brewster Phones
3352
9 453

Mine Phone
New Milford, Conn
Elgin 4-3551

MAG MINING CORPORATION

BREWSTER, NEW YORK NEW MILFORD, CONN.

Beryl ● Mica ● Feldspar

Docket No. OME-6057 (Beryl-Mica)

Brewster N. Y. Nov. 3,

Attention Mr. D. M. Larrabee, Geologist

Mr. Robert A Laurence
Executive Officer
OME Field Team, Region V
Knoxville 2, Tennessee

Dear Mr Larrabee,

The following report is on the Core recovery as requested in your conversation with Mr. Arnell .

Hole # 1 Overburden to 8Feet
8'to 240 Ft complete recovery

Hole # 2 Overburden to 7'
7' to 123-6 Complete recovery
123-6 to 124-2 ~~complete~~ Soft Missing
124-2 to 1330 Complete recovery
133 to 135 Soft Missing
135 to 195 Complete Recovery
195 to 199 Missing
199 to 211 Complete Recovery

Hole # 3 Overburden to 9 feet
9 to 120 Complete recovery
120 to 133 Poor Recovery all broken pieces used for assay
133 to 300 Complete Recovery

Hole # 4 Overburden to 28 feet

28 to 86 Complete Recovery
86 to 91 No Recovery
91 to 400 Complete Recovery

Would direct any correspondence to Mag Mining Corp Brewster N. Y as we receive our mail faster at this address . Thank you kindly and we will be waiting to hear from you

Respectfully Yours
MAG Mining Corp
Brewster N. Y.

November 2, 1959

Re: OME 1057 (Beryl, Mica)
Roebling Mine
NAO Mining Corporation
Litchfield County, Conn.

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

From: Harold Kirkemo, U. S. Geological Survey

Subject: Review of examination report

I concur with the recommendation of the Field Team and the examiner that the application be denied.

Mineralized material disclosed in the open cut and in drill holes is not ore. The applicant's proposal to drill between existing holes and along possible extension of the pegmatite to the southwest is not expected to discover better grade material.

Harold Kirkemo

cc: OME (3)
D. E. Eilertsen, 3049
Director's reading
Branch reading
Chron. file
Docket file
HKirkemo/nm
G-MD-11-2-59

6057

EXTRA COPY O. M. E. RECEIVED OCT 30 1959		
DATE	INITIALS	CODE

October 28, 1959

Memorandum

To: Operating Committee, OME - Washington, D. C.

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

Subject: OME-6057 (Beryl-mica) MAG Mining Corporation, New Milford, Conn. Roebling Mine, Litchfield County, Connecticut.

Enclosed are the original and two copies of a Field Examination report by D. M. Larrabee on the subject application. Completion of the report was delayed until results of detailed laboratory examination were available.

Two significant facts are noted:

(1) Mr. Larrabee's samples and inspection of cores did not substantiate the Operator's high BeO-content figures.

(2) Mr. Larrabee's cross-sections show clearly that neither the proposed additional drilling, nor an alternative program of drilling along the strike is likely to indicate any significant tonnage of beryl or mica.

We recommend denial of the application. It appears to us that the Operator has already spent too much money on this property.

Reviewed by
OME OPERATING COMMITTEE

_____
(date)

Robert A. Laurence, Executive Officer
OME Field Team, Region V

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

RAL/zm
cc
Larrabee
Lynch-Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

OFFICE OF MINERALS EXPLORATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION V

EXTRA COPY
O. M. E.
RECEIVED OCT 30 1959

DATE	INITIALS	CODE

APPLICATION REPORT

OME-6057 (Beryl-Feldspar-Mica)
MAG Mining Corporation
Litchfield County, Connecticut

by

D. M. Larrabee
U. S. Geological Survey

October 22, 1959

Reviewed by
OME OPERATING COMMITTEE

_____
(date)

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ILLUSTRATIONS

Figure 1 . . . . Index map and plan map of Roebling pegmatite, MAG Mining Corporation

2 . . . . Cross sections through Longyear diamond drill holes showing inferred cross section of Roebling pegmatite in drill holes 1, 2, and 3

INTRODUCTION

The MAG Mining Corporation, New Milford, Connecticut, applied to the Office of Minerals Exploration in June 1959, for Government assistance to explore for beryl, mica, and feldspar at the Roebling mine near New Milford, Litchfield County, Connecticut. The company proposes a program costing about $80,125.00 and consisting of 15 diamond drill holes and extensive trenching.

A field examination, requested by the Operating Committee, was made by D. M. Larrabee, U. S. Geological Survey, on September 22 and 23, 1959. One or more of the following officials of the company accompanied Mr. Larrabee during the examination: Michael N. Arnell, President; Samuel F. Melillo, Vice President; and Theodore E. Jahn, Treasurer.

The examiner inspected the open cut and surrounding surface area, drill cores, and various samples of ore gathered by the applicant. Representative samples of ore were taken for spectrographic and chemical analyses and the general problems of exploration, development, and operation were discussed informally with company officials.

The geology of the Roebling pegmatite is described by Eugene N. Cameron and others in Pegmatite Investigations, 1944-45, in New England, 1954, U. S. Geological Survey Professional Paper No. 255, pages 11, 305-307. The geologic map and sections of the deposit

prepared by V. E. Shainin and F. H. Main for this publication adequately show the geologic details of the deposit. The map and cross sections by E. J. Longyear Company, filed with the application, supplement data in the professional paper.

SUMMARY

The field examiner estimates between 80 and 160 tons of beryl in about 213,000 tons of ore inferred from visual examination of drill cores, of the pegmatite exposed in the open cut on the Roebling pegmatite, and from chemical analyses. Estimates prepared from data submitted by the MAG Mining Corporation suggest a beryl content of 4,360 tons in 106,325 tons of ore. The examiner considers the deposit to be uneconomic for mining, hence these are resources rather than reserves.

Visual inspection of drill cores from holes drilled by E. J. Longyear Company for the MAG Mining Corporation does not substantiate the report that the chemical analyses of the drill core averaged 0.41 percent BeO (or roughly 4.1 percent beryl containing 10 percent BeO). Reliable estimates of mineral content lower than 1 percent beryl can be made by visual inspection and crystal measurements by experienced observers. The beryl content of a composite sample prepared by the company from all trench samples is 100 times greater than the assay of a composite sample of the same trench samples taken by Larrabee (0.70% BeO vs. 0.0075% BeO).

The absence of white beryl, bertrandite, and phenacite in drill core and surface samples substantiates the chemical assays which show a low content of BeO in the samples taken by Larrabee. Analyses by the Geological Survey and by the Bureau of Mines showed comparable results.

Mineralogic and structural evidence does not support the applicant's contention that the Roebling pegmatite extends to a parallel pegmatite which is exposed on the property.

The economic aspects of the deposit are not favorable considering the low content of beryl. Even with revenue from co-product mica, feldspar, and quartz, the deposit could not be operated profitably.

The applicant's diamond drill plan might better define the present resource estimate but it would not appreciably increase it because the keel of the pegmatite core is above the level of the intersections of the Longyear drill holes with the pegmatite. The keel of the pegmatite body itself is presumed to be approximately 75 feet below the drill hole intersections.

RECOMMENDATION

Denial of the application is recommended.

LOCATION, ACCESSIBILITY AND OWNERSHIP

The MMG Mining Corporation has under lease 108 acres in Merryall District about 6 miles northwest of New Milford, Litchfield

County, Connecticut.(See figure 1.) The property is easily accessible by automobile on state route 129 from New Milford.

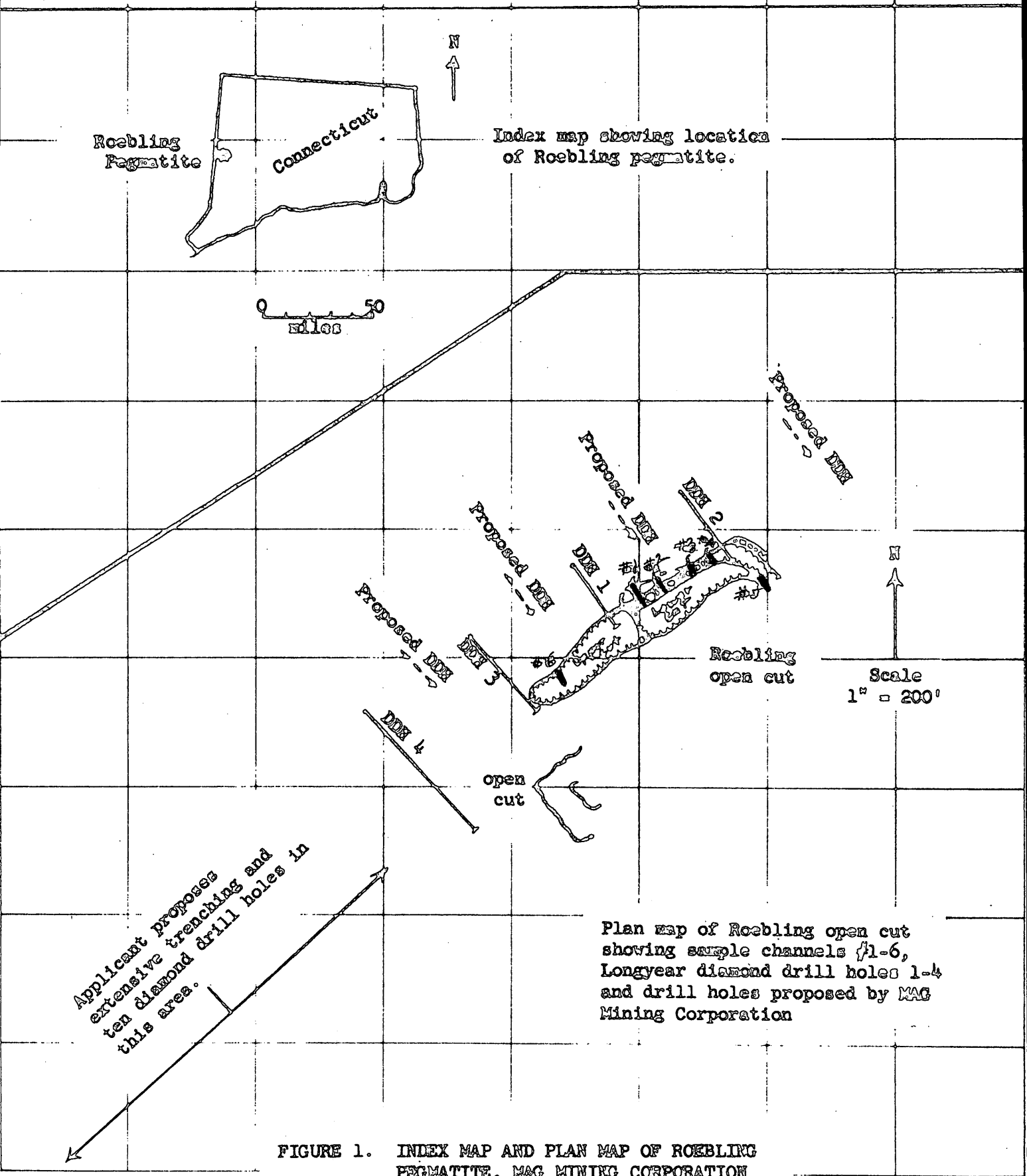
The deposit is located on a sparsely timbered hillside. Land suitable for agricultural use lies west, south and east of the deposit. Blasting might be a nuisance to nearby residences. Water for exploratory drilling purposes can be obtained from a nearby stream but this source could not supply enough water for a mill.

The applicant has a mining and mineral rights lease on the property from its owner, Henry Orzech. The lease submitted with the CME application is in effect until April 1987. Negotiations are reported underway for a new lease with more liberal terms for the lessee.

HISTORY, PRODUCTION, AND DEVELOPMENT

The Roebling mine has been operated sporadically for mica, feldspar, and gem beryl since 1880. Value of production is probably not in excess of $100,000. A brief description of operations through 1944 appears in U.S.G.S. Professional Paper 255.

Present workings consist of an open cut 420 feet long, 60 feet wide, and 60 feet deep on the Roebling pegmatite, and a smaller open cut on a pegmatite about 125 feet to the south. (See figure 1.) The open cut on the Roebling pegmatite has been developed on two levels, the Upper Cut in the south half and the Lower Cut in the north half. A large slide in the Roebling pit during the last



Plan map of Roebling open cut showing sample channels #1-6, Longyear diamond drill holes 1-4 and drill holes proposed by MAG Mining Corporation

FIGURE 1. INDEX MAP AND PLAN MAP OF ROEBLING PEGMATITE, MAG MINING CORPORATION

mining operation several years ago filled the Lower Cut two-thirds full of broken rock and debris. In 1956, the MAG Mining Corporation cleaned out the Lower Cut, cut six channels across the floor for sampling purposes, and, in 1957, contracted with E. J. Longyear Company for diamond drilling 4 holes totalling 2,086 feet. The reported total cost of clean-up, drilling and sampling operations by MAG Mining Corporation and building and equipping a small laboratory has been about $152,000. The first objective of this appraisal was to determine the possibility of developing a reserve of uranium ore. When this was shown to be uneconomic, an appraisal of the beryl reserve was undertaken. Need for financial assistance to complete the latter objective prompted the application for GSE participation.

GEOLOGY

The Roebling pegmatite is a well-zoned body enclosed in silicified quartz mica schist (Berkshire schist formation). The pegmatite strikes N.55°E. and dips 60° NW as exposed in the open cut. Four lithologic zones are recognized:

1. Border zone up to 6" thick. Fine-grained quartz, plagioclase, tourmaline, and garnet.
2. Footwall and hanging wall zones up to 3' thick consisting approximately of 60% quartz, 35% plagioclase, 5% tourmaline, biotite, garnet, etc.

3) Muscovite-perthite unit

4) Perthite-quartz core

Most of the mining has been for feldspar in the core. The recent slide in the open cut removed most of the footwall zone from the Lower Cut. Parts of the core and the hanging wall zone are exposed in the southwest end and northwest wall of the Lower Cut. The floor of the open cut is covered with muck, and the sample channels are sloughed so it is not possible to examine the core of the pegmatite in the floor of the Lower Cut. On the footwall contact of the pegmatite in the northeast end of the open cut, slickensides strike 75°W, dip vertically, and plunge 15°W. Shear planes cross the pegmatite from wall to wall; they strike 70°E and dip 35°N. Blades of biotite 3' x 2" (intergrown with muscovite in places) occur in the hanging and footwall zones of the pegmatite. They plunge parallel with the slickensides.

The lowest exposures of pegmatite are coarse-grained, cream-colored microcline-perthite and graphic granite. Perthite masses up to 6' x 8' are veined with black quartz veins striking SW and generally dipping 45°NW. Pure white, massive quartz "core" occurs in the Lower Cut about 40' from the SW end of the Lower Cut on the hanging wall side. It is only about 5' wide and 2' thick, and plunges northwest. The microcline feldspar surrounding it also appears to plunge NW. Most pegmatite of the core is blocky perthite and quartz, devoid of beryl. Most of the microcline here is flesh-colored, but in one place it is flesh-to-brown.

Many shear planes in the hanging wall zone strike NE, dip steeply to the northwest and plunge to the SW or to the NE. Gray quartz veins, 1/4" to 1/2" thick, are parallel with the shear planes suggesting that shearing accompanied late stages of consolidation of the pegmatite. Much sericite is present on the shear planes. The hanging wall pegmatite is so dirty and stained in places that small beryl crystals might have been overlooked in the examination. About in the center of the Lower Cut, a small (2' x 1') area of graphic granite occurs, associated with blocky perthite of the core. The true plunge of the pegmatite, however, could not be determined.

Euhedral, dark red garnet crystals, 1/4"-1/2" in diameter, occur with mica in stringers of smoky quartz in the hanging and footwall zones of the pegmatite.

Irregular whorls of small (1") wedge muscovite books were noted in two areas of the hanging wall pegmatite; any beryl crystals that might have been present here have been removed by mineral collectors. There is almost no visible beryl in the hanging wall zone and in the core pegmatite. This could be attributed partly to the activity of 'rock hounds', but some small crystals should remain. One apparent beryl cast, about 1' x 1', was noted in the hanging wall high above the floor of the open cut.

Much black tourmaline and biotite are associated with gray quartz and white plagioclase in blocks fallen or blasted from the

footwall and hanging wall zones at the southwest end of the Lower Cut. The footwall zone at the southwest end of the Lower Cut is about three feet thick and it is estimated to contain 60% quartz, 35% plagioclase, and 5% tourmaline, biotite, garnet, etc. Muscovite in the footwall zone is in crystals as large as 4" x 3" x 1/2", is pale ruby in color, has poor cleavage, and is wedged or badly "tied". Quartz inclusions were noted and other mineral inclusions probably are present. The few books of mica recovered by the operator were not rifted out to show defects. The muscovite is practically 100% scrap and punch. For commercial use, feldspar must be separated from quartz, garnet, tourmaline, biotite, and muscovite.

Border zone pegmatite at the footwall is 6" thick, is characterized by fine-grained plagioclase and quartz, red garnet, muscovite books less than 1/2" in diameter, and 1/2" x 1" black tourmaline. A pale green beryl crystal, 1/4" in diameter and oriented normal to the contact, was seen in the biotite-rich zone near the southwest end of the cut.

Well-developed grooves, striae, and minor rolls in the footwall of the pegmatite and in parts of the hanging wall pegmatite strike N.25°W and dip 80°SW to vertical. The rolls in the footwall schist strike N.25°W and plunge 70°NW.

All diamond drill cores (split) from the pegmatite were examined carefully for white beryl as well as for the blue-green variety. Although a few small crystals resembling white beryl were noted, later analysis proved they were feldspar. Very little beryl was

noted in the drill core--in no instance enough to support the analytical results for BeO reported by the applicant from samples of the cores. This is perplexing, as no other beryllium minerals were found upon analysis of the examiner's specimens from the drill core, or from the composite sample taken by him from all samples removed from trenches in the floor of the open cut by the operators. Most beryl recovered by the present operators is blue-green, and from 2" to 4" in diameter. Perhaps 500 pounds, partially cobbed, are on hand at the mine. This was recovered from slide material and from a minor amount of rock blasted from the hanging wall in the Lower Cut. It appears from fragments attached to the beryl crystals that most of the beryl was originally in the wall zones although some beryl is associated with material in or adjacent to the core.

TONNAGE AND GRADE ESTIMATES

Tonnage was computed by the examiner by extending the cross-section area of the pegmatite in the vertical plane of the drill holes to a depth of 50% of the distance between drill hole intersection and the surface. The cross-section area of the pegmatite at each hole was extended longitudinally half-way to the hole on each side in order to compute the volume. Little pegmatite extends east of D. D. H. #2 because the surface in this direction drops off rapidly toward the brook, but 100' was used as the length in this direction. Allowance was made for differences in elevation of the floor of the open cut at various sections.

Tonnage Calculation

Drill Hole No.	Calculation for tons	Tons
2	2,800 sq.ft. x 200' = $\frac{560,000 \text{ cu.ft.}}{12 \text{ cu.ft.}}$ =	46,666
1	7,000 sq.ft. x 200' 1,520,000 cu.ft. 50' x 50' x 50' cut = 125,000 1,395,000	
	$\frac{1,395,000 \text{ cu.ft.}}{12 \text{ cu.ft.}}$ =	116,250
3	3,000 sq.ft. x 200' $\frac{600,000 \text{ cu.ft.}}{12 \text{ cu.ft.}}$ =	50,000
	Approximate total of pegmatite resources	213,000

Calculation of BeO Content

(1) BeO using diamond drill core analyses and Larrabee pegmatite resource estimate

D.D.H. No.	Tons		Grade		BeO Content
2	46,666	x	0.34% BeO	=	158,66 Tons
1	116,250	x	0.48% BeO	=	558,00 Tons
3	50,000	X	0.34% BeO	=	170.00 Tons
				Total	886.66 Tons

If beryl here averages 10% BeO, then there must be 8,866 tons of beryl present, and the pegmatite would contain 4.1% beryl. There should be no difficulty in visually detecting this quantity of beryl but there is no visible indication here to justify this.

(2) Estimate of BeO content, using Larrabee pegmatite resources, and Larrabee composite sample (#5-H-Comm-L)

213,000 T. at 0.0075% BeO = 15.975 T. BeO
10
159.750 T. beryl or 0.07%

(3) Estimate of BeO content, using Larrabee pegmatite resources and MMG composite sample (#1-R-Conn-L)

213,000 T. at 0.70% BeO = 1,491 T. BeO
10
14,910 T. beryl or 7%

(4) Estimate of BeO content, using Longyear pegmatite resources and drill core average of 0.41% BeO

106,325 T. pegmatite at 0.41% BeO = 434.36 T. BeO or 4,360 T. beryl This would indicate 3.1% beryl.

In view of the scarcity of blue-green beryl in the drill cores, and the traces of beryl in the open pit, the examiner doubts that 160 tons of beryl remain in place; there is no visible indication that half that quantity is present.

If the examiner's estimate of 160 tons of beryl is used, then 213,000 tons of pegmatite contain an average of 0.075% beryl. This more nearly corresponds with visual examination of the pegmatite in the open pit and in the cores than is indicated by analyses, but it is higher than appears to be present.

Unpublished results of U. S. Bureau of Mines tests at College Park, Maryland, indicate 70% milling recovery of this ore, or 112 tons beryl recoverable from 160 tons of beryl. This would have a value of $44,800--not enough to justify construction of a mill estimated by Denver Equipment Company to cost $300,000. To date, beryl concentrates are not being purchased by the Government or by industry; both are buying only hand-cobbed beryl from domestic or foreign sources.

Rock removed in former operations:

Lower Cut	170' x av. 25' x 60'	= 255,000 cu. ft.	= 21,300 T.
Upper Cut	180' x av. 30' x 20'	= 108,000 cu. ft.	= 9,000 T.
		Pegmatite removed	30,300 T.

It has been estimated that a total of perhaps 10 tons of beryl has been removed, or 0.033% beryl. Except for gem beryl, most of this probably went over the dump, because there was no market for beryl prior to 1949.

If the beryl content of the entire pegmatite averaged .033%, then 213,000 tons of pegmatite would yield 70 tons of beryl. This seems to the examiner to be a more reasonable figure than any others.

The above data show wide discrepancies between analyses of drill core, analyses of cut samples, and visual inspection of the pegmatite. If assays of the drill core samples are accepted, the deposit is very rich. Visual inspection of the split core, however, does not support the chemical analyses.

Mr. Arnell, president of the company, furnished the examiner with a crushed composite sample said to be the composite of all trenches in the floor of the Lower Cut, plus 1 sample from the Upper level of the open cut, and eliminating the sample taken entirely in wall rock. Chemical analysis of this sample by the U. S. Geological Survey is 100 times higher in Be (and BeO) content than a composite taken by the examiner from the crushed rock prepared from each sample cut contributing to Mr. Arnell's composite sample. This wide divergence is not readily explained.

Sample #1-R-Conn-L, weighing about 40 pounds, was taken by the examiner from about 200 pounds stored in the MSO laboratory, said by Mr. Arnell to be the composite of all trench samples taken by him from the pegmatite in the floor of the cut (2' x 2' trenches). Most of this, therefore, is pegmatite core material, although some wall zone material was included. Spectrographic analyses by the U. S. Geological Survey indicate 0.24% Be, or 0.66% BeO. Chemical analyses of this sample averaged 0.70% BeO, which at 10% BeO would indicate 7% beryl content.

Sample #5-R-Conn-L, weighing about 40 pounds, was taken by the examiner to represent a composite. Admittedly, this was not taken under ideal conditions for the crushed 1-inch material from each of the channels (2' x 2' x 15'-30') was stacked in a bin about 5' x 5' x 2'. The sample was taken as uniformly as conditions permitted, and to avoid a "low" sample due to picking over the surface by 'rock hounds', the top 2"-4" of each cone was scraped off and discarded. Then a shovelful from each bin was taken from the open side of the bin, from bottom to top. This sample, it is believed, should at least approximate #1-R-Conn-L in BeO content, but only contained 0.0027% Be, 0.0075% BeO, or 0.075% beryl.

Examination of the split cores by the examiner revealed very little blue-green beryl, and only a few pieces of what might be white beryl. These were determined by the Geochemistry and Petrology Branch of the Geological Survey to be feldspar. Most beryl recovered

in the past, and recently (stored in oil drums at the mine) is blue-green. Mr. Arnall furnished two pieces of brown beryl which he said had been recovered from the property. This beryl resembles the brown beryl from the Strickland-Cramer mine in Connecticut, although it is a bit lighter in color.

The drill cores were split by Mr. Arnall. Mr. Eugene H. Monroe, consultant for the Longyear Company, in the beginning supervised splitting part of one core, and indicated on the core boxes where other splitting should be done. In each instance, he indicated all of the pegmatite but excluded inclusions of wall rock. He was not present when the split core was bagged and shipped for analyses. He stated the split core was sent to more than one company for analysis; this indicates that the split core was crushed by the NMG Company before shipping. Mr. Monroe reported that drill core recovery and breakage from each hole was approximately the same. In view of this, there is some question as to the reason for only two feet of pegmatite core remaining of Hole #3, representing 17 feet of hole. Mr. Arnall stated at the time of examination that the pegmatite core missing from Hole #3 was so badly broken that entire parts rather than splits were used for analysis. Split core remaining in the box is no more broken than core saved from the other holes. He promised to furnish Longyear's report on core recovery at once, but it has not been received.

CO-PRODUCTS

If the 213,000 tons of pegmatite contain 40% recoverable feldspar (microcline and plagioclase combined) then about 85,200 tons are available at $14 per ton, ground or $1,192,800 total value. In 1958, the apparent domestic consumption was 469,811 long tons, according to the U. S. Bureau of Mines (MMS No. 2947, p. 4). The difference between value of crude and ground feldspar for the same year was $5. This might represent milling cost, etc. If so, then 107,000 T. x $5 = $535,000 cost of milling. Mining costs, etc. must be added before any profit is anticipated. Profit might represent $2 per ton ground.

Mica, not abundant, is almost entirely scrap and punch. Perhaps 1,000 tons of mixed muscovite and biotite might be produced by milling the entire pegmatite. In 1957, the average value of dry-ground mica was about $50 per ton. On this basis, the mica might have a value of $50,000. To separate the biotite from the muscovite and sericite would entail additional expense, and it is believed that the increase in value of the finished product would not compensate for the additional cost of processing.

In terms of total resources, then, the pegmatite products over the tested length and depth, might have the following value:

beryl (believed by the examiner to be maximum)	$ 64,000
feldspar (blend of plagioclase and microcline perthite)	1,192,800
mica	50,000
quartz for sandpaper at $50/T. graded to specifications	53,500
Total value	$1,360,300

Quartz recovered might represent 50% of the pegmatite, or 107,000 tons. If carefully graded to sandpaper specifications, this might be worth $53,500, or if sold for sand-blasting purposes, only $5,350.

It is extremely doubtful if a mill to separate beryl, feldspar, mica and quartz from each other and from the "impurities" present could be erected for $300,000; a more realistic figure would be $700,000. It is also doubtful if the pegmatite could support a milling operation for the minerals present.

Mr. Arnell of the MMG Company stated that in his opinion the pegmatite in the Lower Cut is the same as that in the old cut to the south of the SW end of the Upper Cut, and also that it extends SW uphill. On the basis of mineralogy, mineral zoning, and structural features, it is extremely unlikely that these pegmatites are the same bodies. It is unlikely that such sharp bends in the Roebling pegmatite could take place, or that the pegmatite has been offset by faulting. Whether either or both of the pegmatites extend to the SW is a question, but drill Hole No. 4 did not indicate its continuation in that direction.

The deposit must be mined underground (from a shaft) from now on. The footwall schist is deeply weathered and soft, and strictly unsound, presenting another operating problem.

EXPLORATION

The applicant proposes drilling holes between the holes drilled by E. J. Longyear Company, two holes northeast of Longyear hole No. 2, and ten holes along the projected strike of the pegmatite to the southwest. (See figure 1.) Location of the ten holes would be determined as exploration progressed. An extensive program of trenching to the southwest is also proposed. Total estimated cost of this program is $80,125.00.

Exploratory holes drilled by E. J. Longyear Company for MAG Mining Corporation penetrated only border zone and wall zone pegmatite in penetrating the entire pegmatite. They did not cut core pegmatite material. It is evident therefore that the keel of the pegmatite core is between the floor of the open cut and the drill holes. The keel of the pegmatite body itself is presumed to be approximately 75 feet below the drill hole intersections as shown in Figure 2.

The applicant's diamond drill plan might better define the present resources estimate but not appreciably increase it.

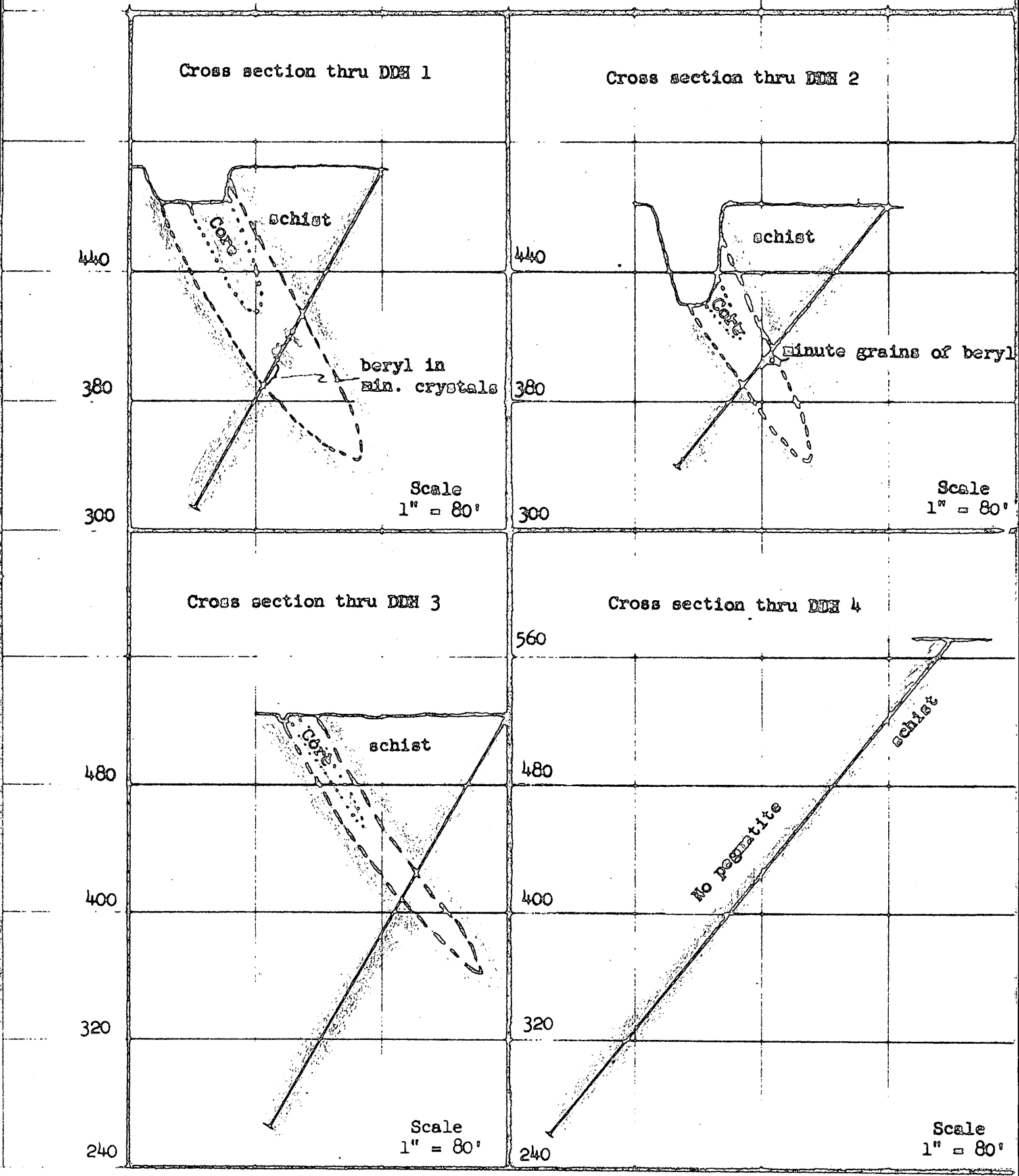


FIGURE 2. CROSS SECTIONS THROUGH LONGYEAR DIAMOND DRILL HOLES SHOWING INFERRED CROSS SECTION OF ROEBLING PEGMATITE IN DRILL HOLES 1, 2, and 3.

July 8, 1959
Re: OME 6057
Mag Mining Corp.
Roebling Mine
Litchfield Co., Conn.
Beryl, Mica, Feldspar

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

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

Subject: Review of application

The applicant requests assistance in further exploration of a large zoned pegmatite by 5 diamond drill holes, and presumedly other work, the nature of which is not set forth in the application. Three of the proposed holes would explore the lateral extensions of an area recently explored by 4 holes. Two holes would explore the possible downward extension of the pegmatite between and below the 3 holes in which intersections of beryl-bearing pegmatite were obtained. The pegmatite and pits are well described by E. N. Cameron and others in Pegmatite Investigations 1942-45, New England, U. S. Geological Survey Professional Paper 255, 1954. The applicant has had the main pit cleaned out so sampling could be done. The pegmatite which is up to 40-feet wide is exposed in the floor of an old pit, 400 feet long and 80 to 90 feet deep, from which a sizable tonnage of pegmatite was mined. Mica, feldspar and gem beryl were recovered. Charles Rufus Harte, in Connecticut's Minor Metals and her Minerals (1944) says: "One of the early, and in terms of the quality of the mica produced, most important, was the George Roebling mine at Upper Merryall, about six miles due north of New Milford. Operated between the years 1880 and 1900, it yielded much excellent mica in "books," as the masses are called, several inches across. In addition, the mine produced in the same time enough potash-feldspar to pay the expenses of operating, while the gem beryl, of which $17,000 worth was taken out in one period of four years, was "velvet."

A tonnage estimate made by the applicant based on the exposure in the pit and intersections in the 3 holes indicated the body contains over 100,000 tons of the beryl-bearing material. The proposed drill holes would explore the possible southwesterly and

northeasterly extensions of the lens and determine whether or not it extends to a greater depth than assumed in the tonnage estimate. The drill indicated tonnage might, conceivably, be increased as much as 33-1/3%.

As indicated by the assaying of 15 samples of the 3 drill cores by Ladoux and Co., the material in the lens averages 0.41% BeO. The assays range from 0.19 to 0.72% BeO. Six channel samples were taken in the floor of the pit and tested. The results of the testing are not summarized and seem not to have been used in the "0.41%" calculation.

No mention is made of the nature of the mica, if any, (and feldspar) which the cores contained. Until it is demonstrated, at least on a pilot plant scale, that the material available is 'commercial', further drilling is not warranted. As the estimated cost of the project is $75,000, work other than the 1,200 feet, plus or minus, of drilling seems contemplated, but is not detailed. Perhaps the cost of a 50-ton mill is included.

Denial of the application in its present form is recommended, but in case additional information as to the intentions of the applicants is obtained, further consideration may be warranted.

N. E. Nelson

cc: OME (3)
D. E. Eilertson, 3649
Director's reading
Branch reading
Chron. file
Docket file

NENelson/mm
G-MD-7-8-59

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

AUG 28 1959

Memorandum

To: Executive Officer, OME Field Team, Region V

From: ACTING Chairman, Operating Committee, OME

Subject: Docket No. OME-6057 (Beryl-Mica)
MAC Mining Corporation
Roebling Mine
Litchfield County, Connecticut

The cited application is referred to your office for consideration, a field examination of the property if warranted, and recommendations.

Copies of memoranda, dated June 30, 1959, by Donald E. Eilertsen, Bureau of Mines, and by H. L. Helmun, Geological Survey, dated July 8 and August 24, relating to the project, are enclosed for your information.

The Applicant's estimated costs for the work they propose to do are far too high and, if you should consider the project favorably, these costs should be carefully reviewed by the Field Team. Also, we consider that the amount of proposed work is excessive.

We are enclosing an extra copy of the application and two copies of the Applicant's letter, dated August 14, 1959, with attachments, for the use of the Field Team.

W. R. Griswold

Enclosures

JWAlt/gla 8-26-59
cc to: Director's Reading File
Operating Committee
Mr. Eilertsen, USBM
Mr. Kirkemo, USGS

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

Harold Kirkemo
Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR

PREPARED FOR
OFFICE OF MINERALS EXPLORATION
APPLICATION REPORT

DOCKET NO. OME 6057

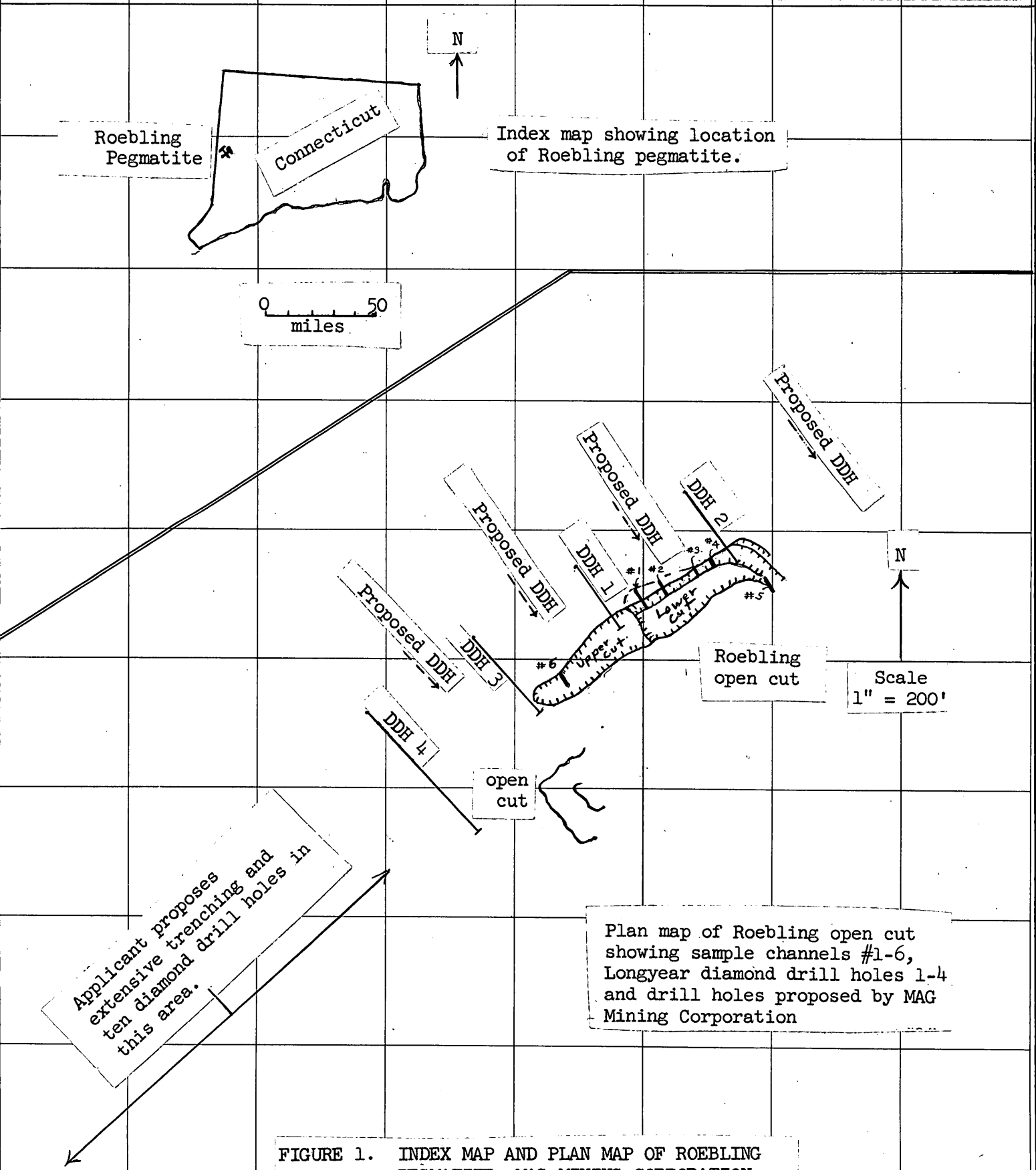


FIGURE 1. INDEX MAP AND PLAN MAP OF ROEBLING PEGMATITE, MAG MINING CORPORATION

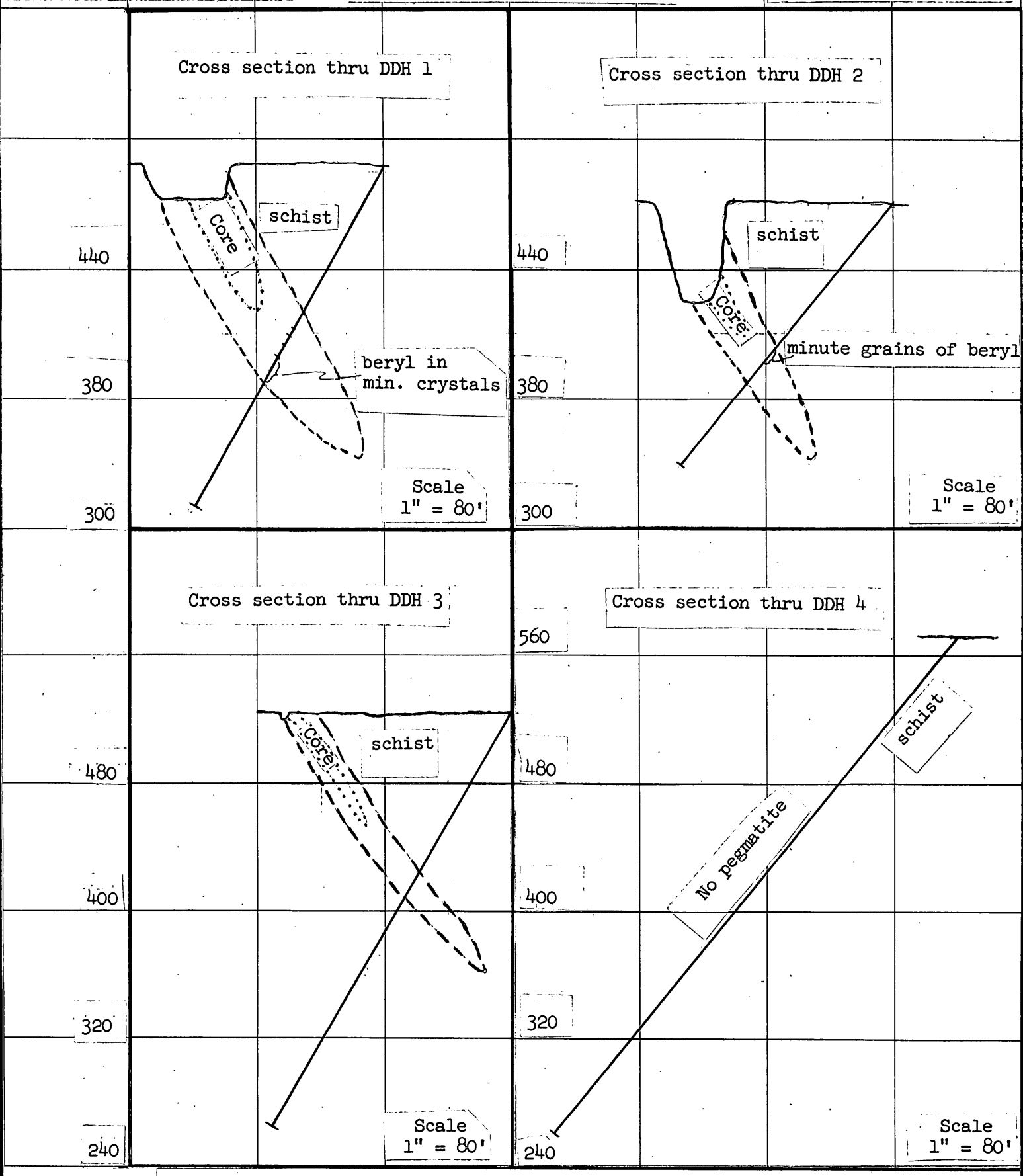


FIGURE 2. CROSS SECTIONS THROUGH LONGYEAR DIAMOND DRILL HOLES SHOWING INFERRED CROSS SECTION OF ROEBLING PEGMATITE IN DRILL HOLES 1, 2, and 3.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

September 2, 1959

Mr. Harold Kirkemo
Staff Assistant for OME
Mineral Deposits Branch
U. S. Geological Survey
Room 5224, Interior Building
Washington 25, D. C.

Re: OME-6057 (Beryl-Mica)
Mag Mining Corporation
New Milford, Connecticut
Roebling Mine
Litchfield County, Connecticut

Dear Kirk:

In view of the circumstances mentioned in your letter of August 31, the best procedure seems to be to try to get Dave to do the Roebling inspection from Washington. If Dave can't do it, then if you or Bill Williams could go, it would be a good solution to the problem. A somewhat more expensive, but otherwise satisfactory, alternative would be to send Frank Lesure from here. At any rate, I am convinced we need a field examination; the evidence in the application is inadequate for a decision to either approve or deny. I believe a modest program of drilling may be justified, but I would not want to recommend it without having an inspection of the new exposures in the open cuts.

I received a copy of the Department Emergency Manual in the mail yesterday.

Sincerely,

Robert A. Laurence
Executive Officer
OME Field Team, Region V

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Room 11, Post Office Building
Knoxville 2, Tennessee

September 1, 1959

Mr. Ambrose, U.S.B.M.
UN-4-3100
USBM milling
shows 70% recovery, ±
15% - tails
15% - in mica fractn

Mr. Harold Kirkemo
Staff Assistant for OME
Mineral Deposits Branch
U. S. Geological Survey
Room 5224, Interior Building
Washington 25, D. C.

Re: OME-6057 (Beryl-Mica)
Mag Mining Corporation
New Milford, Connecticut
Roebling Mine
Litchfield County, Connecticut

Dear Kirk:

Lewis

The Bureau of Mines review, by D. E. Eilertsen, which accompanied the Mag Mining Company file (OME-6057) contains the statement, "some flotation work on beryl-bearing rock from Roebling mine has been done by the Bureau of Mines Eastern Experiment Station, College Park, Maryland," but nothing is said about the results of these tests. Would you telephone somebody out there and see if a copy of the results can be obtained? It might be helpful to Dave in writing his report, and would also be useful to the Field Team in its review.

Sincerely,

Bob

Robert A. Laurence
Executive Officer
OME Field Team, Region V

FORM 311A 5M 1-58

E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 • CABLE LONGCO

June 3, 1959

MAG Mining Corporation
35 Main Street
Brewster, New York

Attention: Mr. Michael N. Arnell

Gentlemen:

REPORT ON ORE RESERVES OF
MAG MINING CORPORATION PROPERTY
NEW MILFORD, CONNECTICUT

We are herewith transmitting to you our reserve calculations which were developed as a result of drilling on your property during the latter part of 1957 and of the subsequent assays of the drill holes by Ledoux and Company of Teaneck, New Jersey.

It has been a pleasure to serve you, and we sincerely hope that there will be opportunities for doing so again in the future.

Yours very truly,

E. J. LONGYEAR COMPANY

Phillip L. Merritt

PLM:KA

COPY

EXTRA COPY
O. M. E.
RECEIVED JUN 26 1959
DATE INITIALS CODE

RESUME

Assignment

To calculate the tonnage and grade of beryl ore indicated by the drilling that took place on the property of MAG Mining Corporation during the latter part of 1957. The sections drilled were reported in a previous report to MAG Mining Corporation on April 8, 1958.

Summary

The tonnage of beryl ore indicated by the drilling results of Holes 1, 2, and 3 is approximately 70,883 between the pit floor (Elevation 435 feet) and the line of intersection of the assayed portion of the drill hole. The assay of these holes indicates an average content of 0.41% BeO. We believe that it is fair to assume that 50% additional ore will be found below the drill hole intersections and, therefore, the drilling would indicate 106,325 tons of ore.

To check ?

Recommendations

Provided that an economic analysis of the project indicates that the ore can be mined, milled, and sold profitably, then it is recommended that more drilling be carried out in order to firm up the ore estimates given herein, and to attempt to extend the mineralized zone particularly to the northeast along the strike of the pegmatitic dike. The initial drill holes should be placed intermediate between Holes 4 and 3, 3 and 1, and 1 and 2. A fourth hole should be located 200 feet to the northeast of Hole 2, and then an additional hole should be located 100 feet northeast of Hole 2. Additional drilling should only be planned depending upon the results obtained in these initial holes.

no. sw if any.

INTRODUCTION

A report was sent to MAQ Mining Corporation on April 8, 1958. Inasmuch as no assays were available at the time of this report, the only statement made concerning the reserves was as follows:

"Using a factor of 12 cubic feet per ton of pegmatite in place and assuming continuity of structure between drill holes, there is presently indicated a minable tonnage of feldspar-bearing rock sufficient for 4 or 5 years' operation of a 50-ton-per-day capacity processing plant." (106,325 T. ore)

Since the time of the previous report, assays on Holes 1, 2, and 3 have become available. No pegmatite was encountered in Hole 4 so hence sections of this hole were not assayed. These holes were all drilled at 200-foot intervals.

This report should be considered as a follow-up to our initial report.

ASSAYS

Assay certificates covering Holes 1, 2, and 3 were supplied to us by MAO Mining Corporation. The assaying was carried out by Ledoux and Company of Teaneck, New Jersey. We have calculated the average BeO content of the sampled sections, and the results are given in Table I.

TABLE I

115-118 schist

126-135 sch.

	Depth (In Feet)	Thickness (In Feet)	Assay (% BeO)
Hole 1	105 - 115	10	0.47 some visibly graphic assoc. with plagio.
	118 - 126	8	0.22
	135 - 153	18	0.33
		36	0.34
Hole 2	105 - 110	5	0.19
	110 - 115	5	0.72
	115 - 120	5	0.72
	120 - 125	5	0.56
	125 - 130	5	0.53
	130 - 135	5	0.58 8
	135 - 140	5	0.36
	140 - 145	5	0.19
		40	0.48
Hole 3	115 - 120	5	0.44
	120 - 135	15	0.31
	135 - 140	5	0.31
	140 - 145	5	0.33
		30	0.34

No surveying was carried out on the holes, hence it was assumed that there was no drift during the drilling operations.

ORE RESERVES

Pegmatites are variable in nature and generally speaking one cannot project mineralized zones for any great distances. In our ore reserve estimate we have applied the hole assays for 100 feet on either side of each hole on the assumption that the assays and thickness of the mineralized zone would be uniform. In order to confirm this latter assumption, additional holes would be required so as to result in a maximum drill spacing of not more than 100 feet.

In calculating the ore indicated by the initial drilling, account was taken only of the ore from the pit floor (Elevation 435 feet) to the line of intersection of the drill holes with the section of the pegmatite sampled and assayed. We then extended the ore estimate by 50% on the assumption that the ore, in the case of each drill hole, would extend that far below the drill hole intersection. No allowance was made for ore above the pit level as it seems doubtful that much, if any, could be recovered during the mining operation. In the case of the ore block estimated from Hole 1, waste separated mineralized areas, and the waste was not included in the estimates; but in the ore blocks resulting from Drill Holes 2 and 3, the core lengths assayed contained no intervening waste material, and the mineralized area was therefore calculated as one block. A factor of 12 cubic feet of ore per ton was used in all calculations. The results of our ore estimates are given in Table II.

TABLE II

ESTIMATE OF INDICATED ORE

	Short Tons	% BeO
Hole No. 1	25,311	0.34
Hole No. 2	35,781	0.48
Hole No. 3	9,791	0.34
	70,883	0.41
Add Allowance of 50% for Ore below Drill Hole Intersection	35,442	0.41 (Assumed assay)
	106,325	0.41

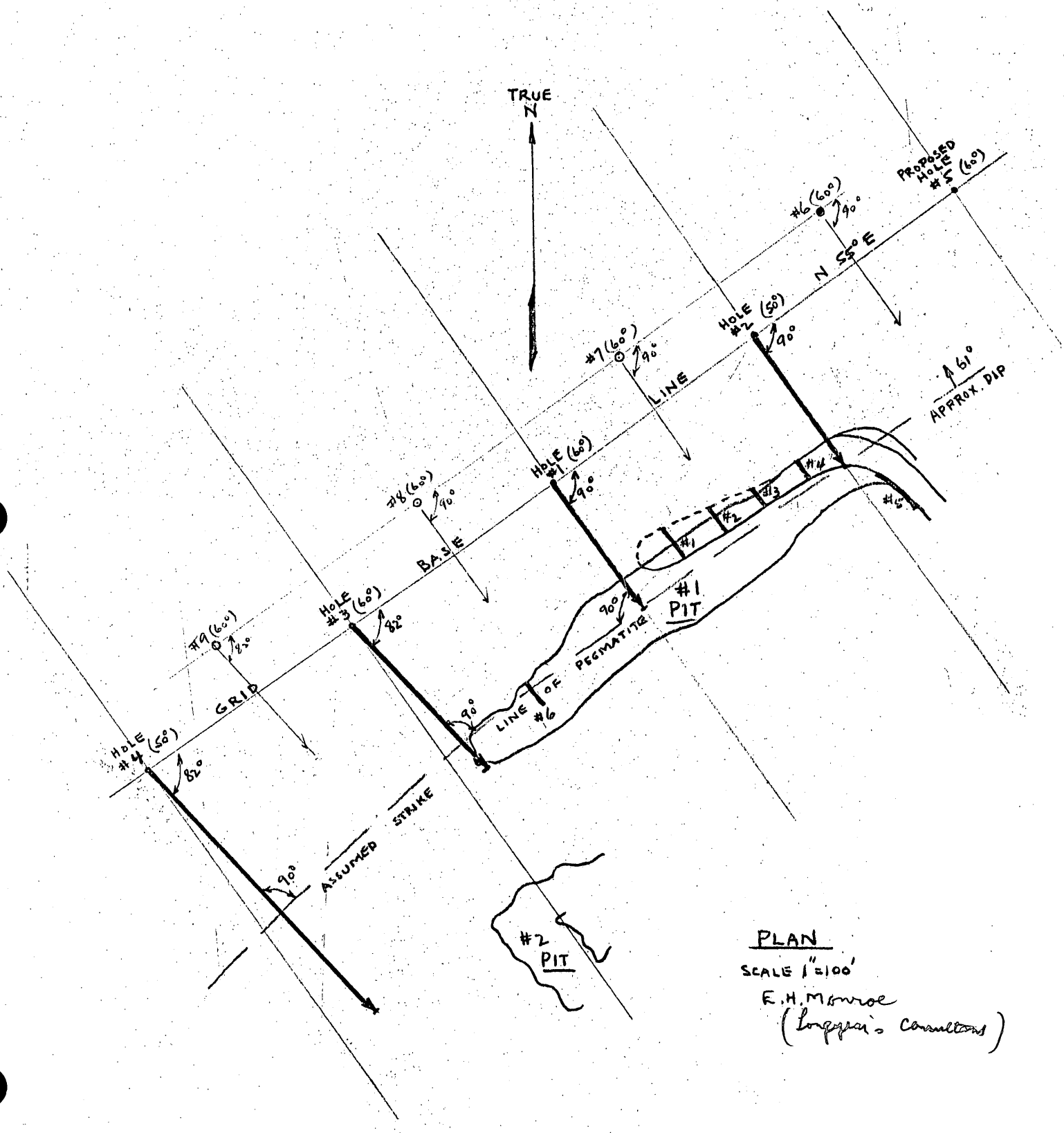
The above estimate represents the in-place tonnage and grade, and no allowance has been made for losses in pillars during mining operations. As previously stated, no allowance was made for ore above the pit elevation of 435 feet because of anticipated difficulties in recovering such ore during mining operations. If one allowed for this ore, the reserve might be increased by 30,000 to 35,000 tons.

Respectfully submitted,

E. J. LONGYEAR COMPANY

Phillip L. Merritt

June 3, 1959
New York, New York

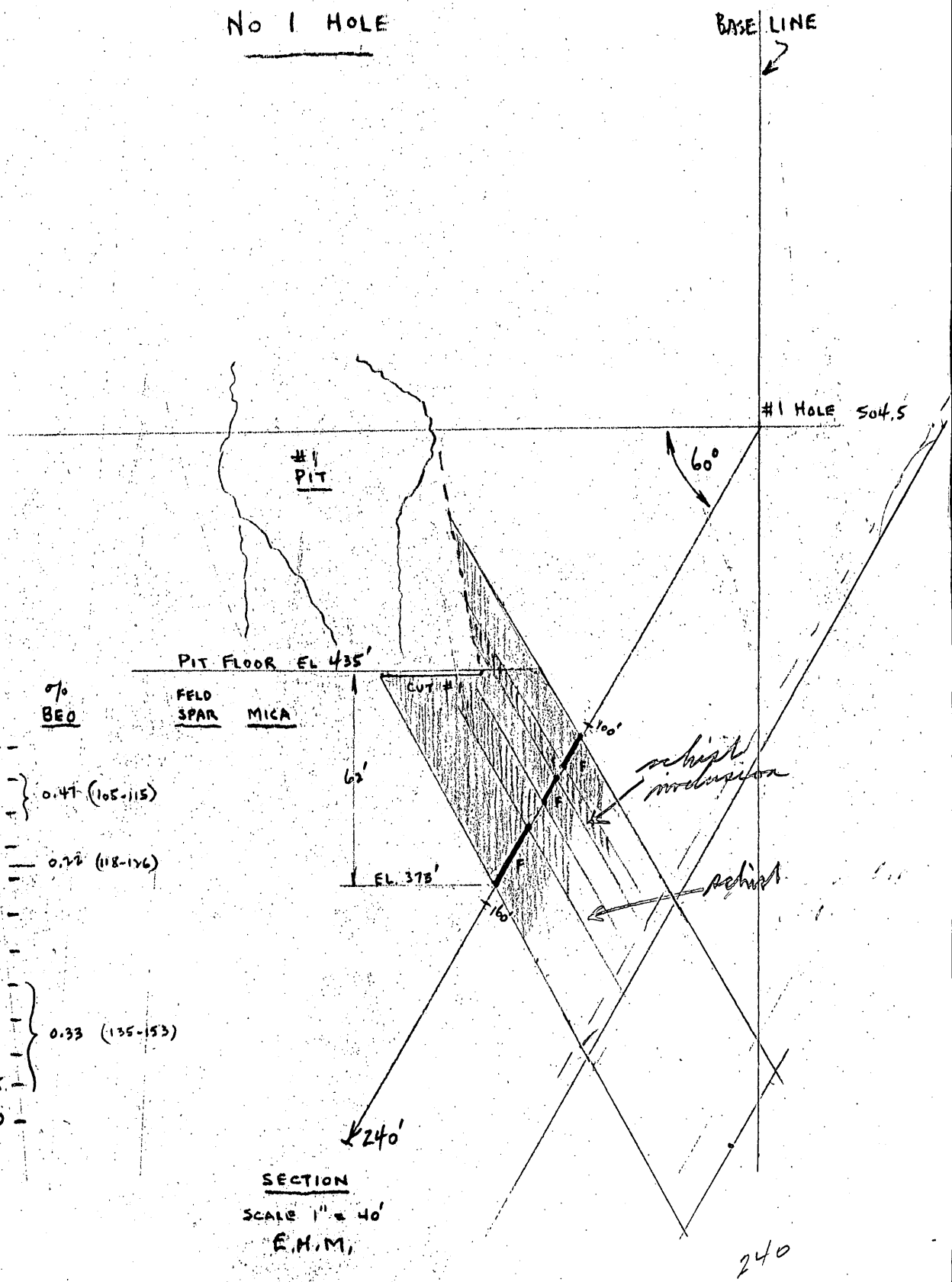


PLAN

SCALE 1" = 100'

E.H. Monroe
(Longyear's Consultants)

No 1 HOLE



ASSAY FOOTAGE	% BeO	FELD SPAR	MICA
100-105			
105-110	0.47 (105-115)		
110-115			
115-120			
118-126	0.22 (118-126)		
120-125			
125-130			
130-135			
135-140	0.33 (135-153)		
140-145			
145-150			
150-155			
155-160			

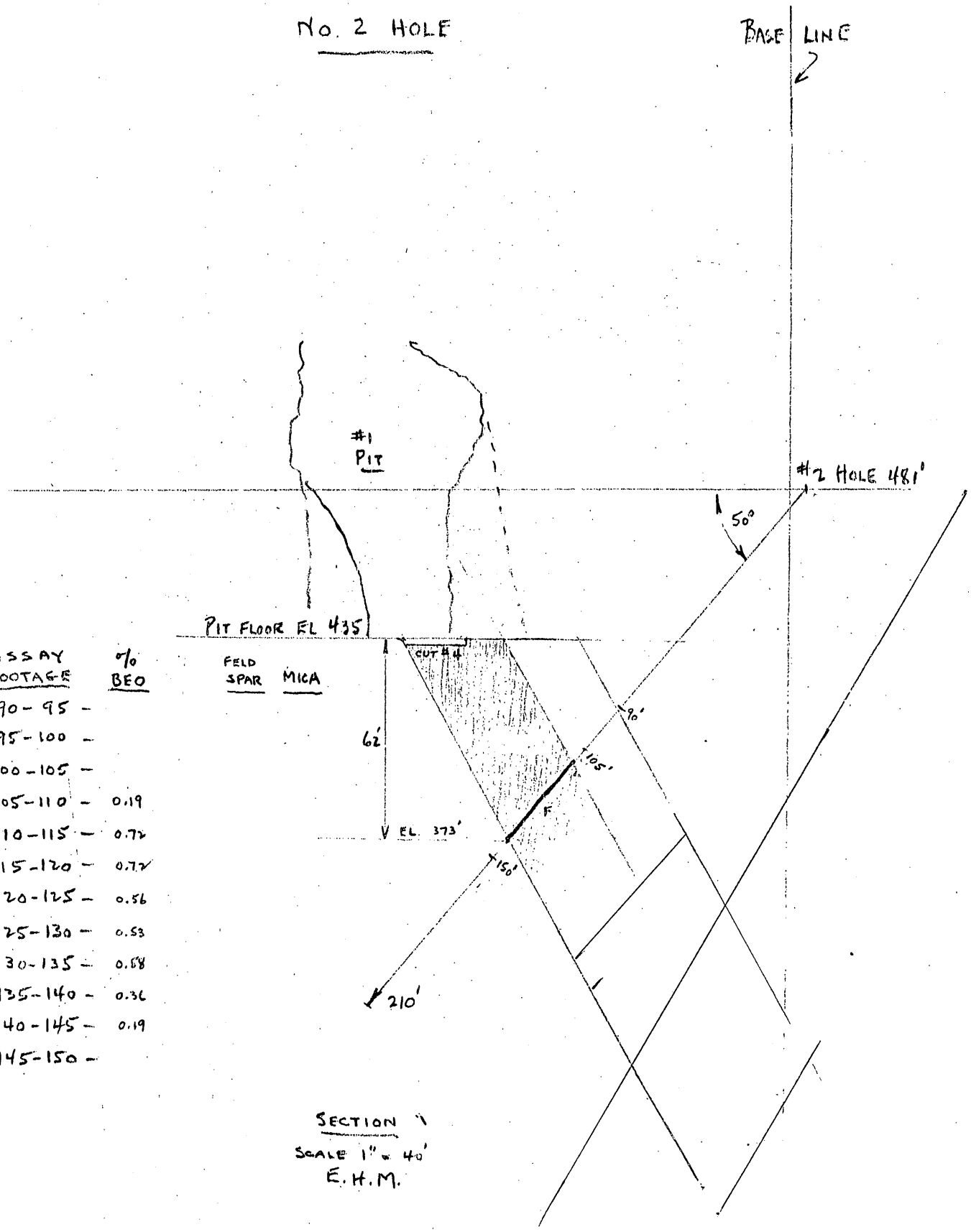
SECTION

SCALE 1" = 40'

E.H.M.

240

No. 2 HOLE



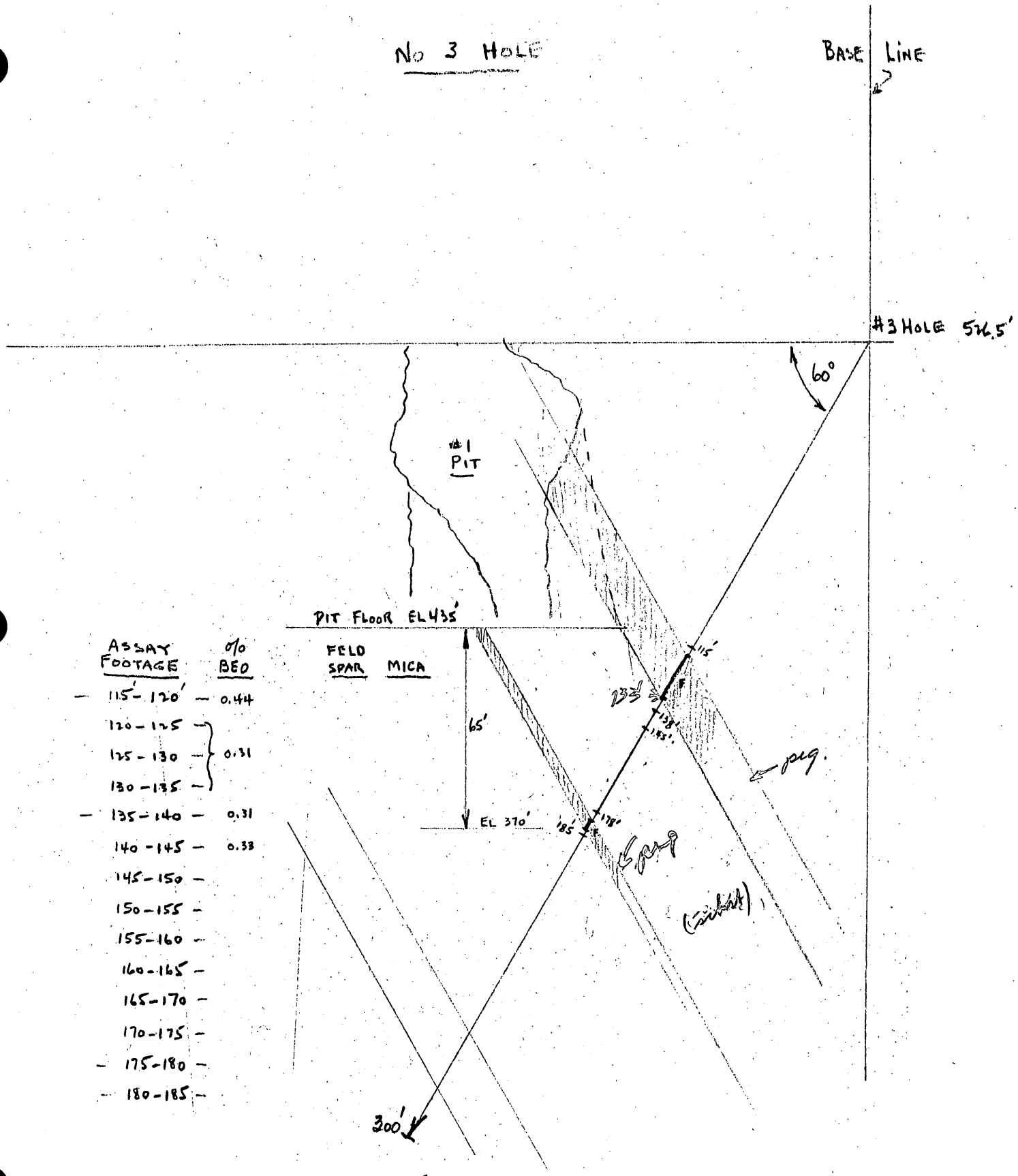
ASSAY FOOTAGE	% BEO
90-95	
95-100	
100-105	
105-110	0.19
110-115	0.72
115-120	0.72
120-125	0.56
125-130	0.53
130-135	0.58
135-140	0.36
140-145	0.19
145-150	

SECTION

SCALE 1" = 40'

E.H.M.

No 3 HOLE



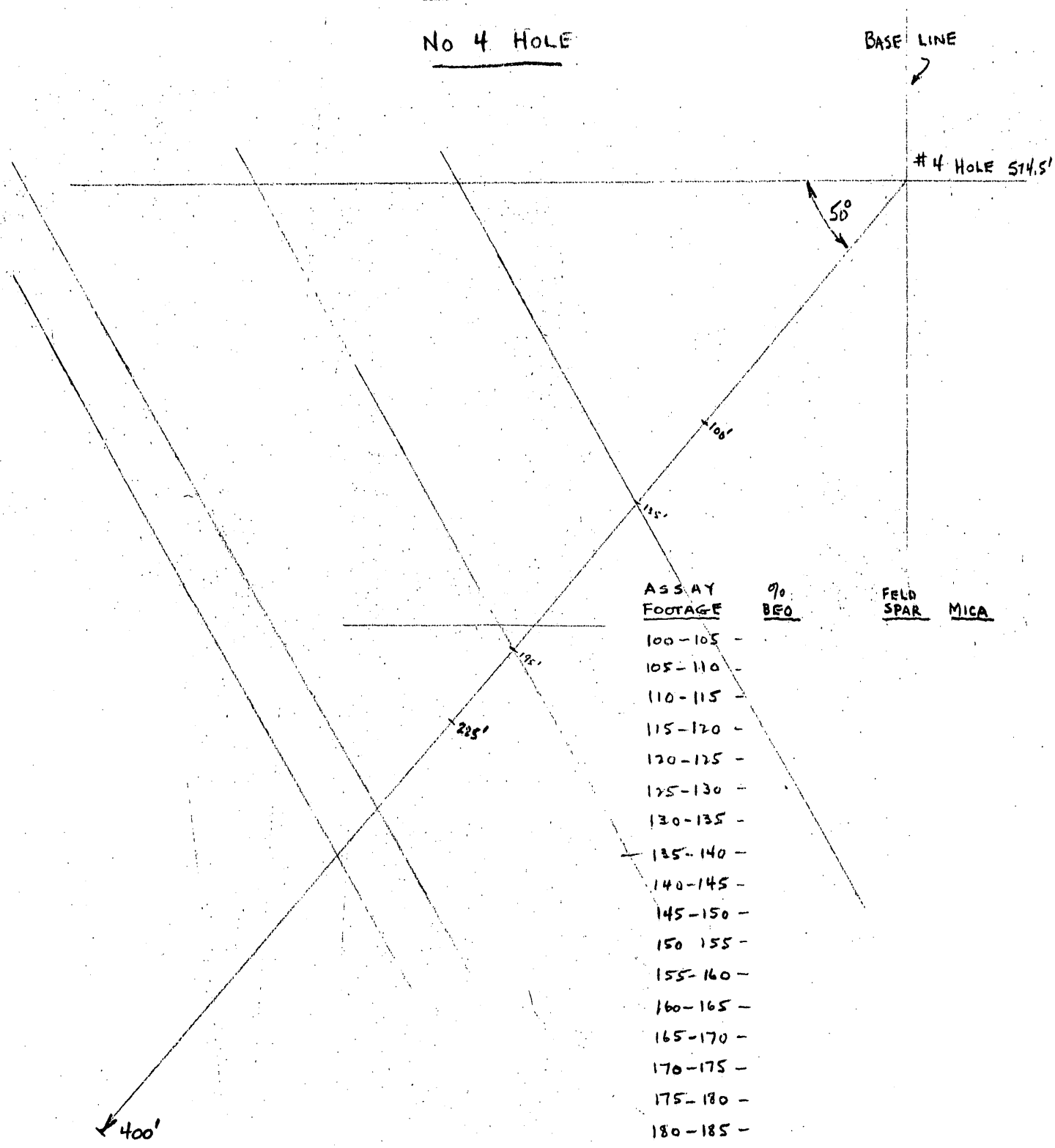
ASSAY FOOTAGE	% BEO
115'-120'	0.44
120-125	
125-130	0.31
130-135	
135-140	0.31
140-145	0.33
145-150	
150-155	
155-160	
160-165	
165-170	
170-175	
175-180	
180-185	

SECTION

SCALE 1" = 40'

E.H.M.

No 4 Hole

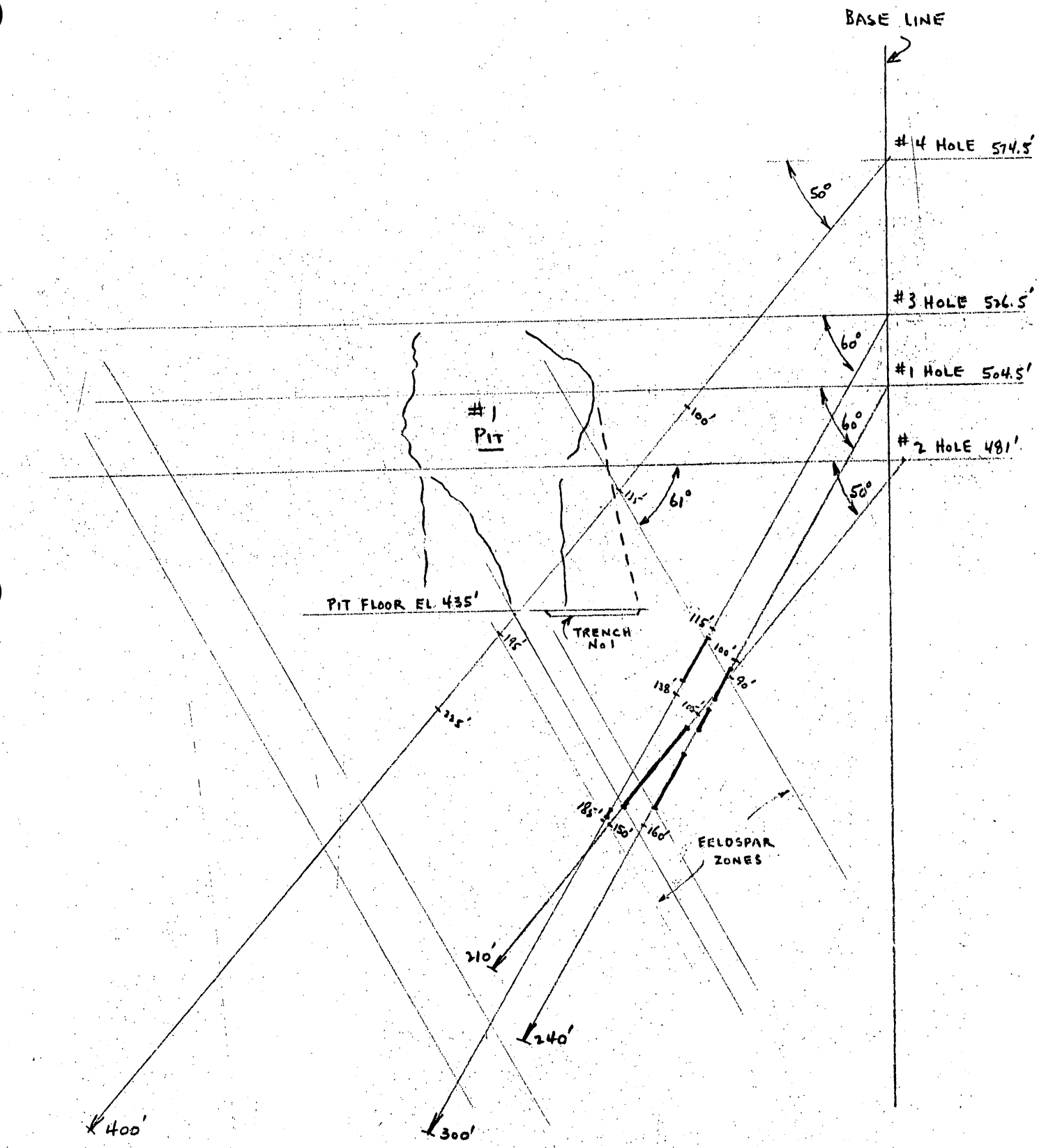


ASSAY FOOTAGE	% BEO	FELD SPAR	MICA
100-105			
105-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-150			
150 155			
155-160			
160-165			
165-170			
170-175			
175-180			
180-185			
185-190			
190-195			
195-200			
200-205			
205-210			
210-215			
215-220			
220-225			

SECTION

SCALE 1" = 40'

E.H.M.



COMPOSITE SECTION
SCALE 1" = 40'
E.H.M.

OME Form 40
Dec. 1958

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

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

O.M.E. JUN 26 1959

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

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

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

[illegible]

[illegible], [illegible]

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6057

DATE RECEIVED: 6-26-59

REGION: V

DIVISION CODE: 600

BUSINESS ORGANIZATION *(Check one)*

- INDIVIDUAL [ ]
- CORPORATION [X]
- PARTNERSHIP [ ]
- OTHER *(Specify)* [ ]

STATE IN WHICH FIRM IS ORGANIZED: [illegible]

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
[illegible]	[illegible], U.S.	President
[illegible]	[illegible], Conn.	Vice President
[illegible]	[illegible], N.Y.	Secretary
[illegible]	[illegible], Conn.	Treasurer

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: [illegible]

ESTIMATED COST OF PROJECT: $ [illegible]

PROPERTY NAME	LOCATION COUNTY	STATE
[illegible] (Forty [illegible])	[illegible]	Conn.

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

June 23, 1959
DATED

Michael M. Arnell
BY *(Signature)*

President M.C.S. Mining
TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

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

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

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

2. Applicant's Rights in Land:

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

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

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

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

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

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

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

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

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

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

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

6. Experience:

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

7. Estimate of Costs:

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

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

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

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

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

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

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

MAG MINING CORPORATION

Information required with application

1. Financial Eligibility
   a. Attached photostats of refusals from Monmont, Roosevelt and Gourd and Montgomery Enterprises.
   b. None
   c. Present shareholders

2. Applicants Rights in Land
   a. Lease copy attached. This lease is not considered satisfactory as regards term or basis and amount of royality. A much more favorable lease has been signed by the owner and is now awaiting signature by 'Original Lessee'
   b. Attached map shows property outline and position of present opening

3. Physical Description
   a. The small scale map attached outlines the present opening. Included are copies of Longyear's original report which describes the physical features of the property, the geology and the drilling completed.
   Also included are copies of Longyear's supplemental report written since assays became available.
   Included are photostats of Ledoux assay reports.

4. Accessibility of Property
   a. & b. Information given under 3 above

5. Exploration Work
   a. Additional diamond drill holes and surface trenching
   b. Minor improvement only
   c. Start work at once and expect completion in one year.

6. Experience
   This work will be under the direct supervision of the company's consultant Mr. Godfrey B. Walker, Somerset Lane, Riverside, Conn. who graduated with the degree of Engineer of Mines from Montana State School of Mines in 1926. Since that time he has been continuously engaged in mining and metallurgical operations in U.S. , Canada, most countrys in Europe and South America.
   The company's consulting geologist is Eugene H. Monroe, 3 Orchard Lane, New Canaan, Conn. who graduated with the degree of Geological Engineer from Colorado School of Mines in 1927. Since that time he has been continuously engaged in the mining industry in U.S. and Canada.

7. Estimate of costs
   a. Enclosed are two estimates for contract drilling.
   b. Consultants are both on $100 per diem basis
   c. Operating materials included in drilling contract
   d. Operating equipment for drilling included in contract. Bulldozer for trenching can be rented for $40.00 per day.
   e. Rehabilitation will be minor.
   f. None
   g. None

[redacted]

[redacted]

To: [redacted], Office of Mineral Exploration

From: [redacted], U. S. Geological Survey

Subject: Review of application

[redacted]

A [redacted] sample taken by the applicant based on the occurrence in the pit and intersected in the [redacted] holes indicated the body contains over [redacted] tons of the high-bearing material. The proposed drill holes would explore the possible continuity and

northeasterly extensions of the lens and determine whether or not it extends to a greater depth than assumed in the tonnage estimate. The drill indicated tonnage might, conceivably, be increased as much as 33-1/3%.

As indicated by the sampling of 15 samples of the 3 drill cores by Idaho and Co., the material in the lens averages 0.[illegible] Ibs. The assays range from 0.10 to 0.[illegible] Ibs. Six channel samples were taken in the floor of the pit and tested. The results of the testing are not summarized and seem not to have been used in the "0.[illegible]" calculation.

No mention is made of the nature of the mica, if any, (and feldspar) which the ores contained. Until it is demonstrated, at least on a pilot plant scale, that the material available is 'commercial', further drilling is not warranted. As the estimated cost of the project is $75,000, work other than the 1,000 feet, plus or minus, of drilling seems contemplated, but is not detailed. Perhaps the cost of a 50-ton mill is justified.

Denial of the application in the present form is recommended, but in case additional information as to the intentions of the applicants is obtained, further consideration may be warranted.

E. E. Nelson

cc: OME (3)
D. E. Eilertson, 3649
Director's reading
Branch reading
Chron. file
Docket file
NENelson/mm
G-MD-7-8-59

Mr. Kirkemo, USGS

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

JUL 23 1959

MAG Mining Corporation

New Milford, Connecticut

Re: Docket No. CMX-6057 (Beryl-Mica)
MAG Mining Corporation
Roebling Mine
Litchfield County, Connecticut

Gentlemen:

Your application for the cited property has been reviewed by the Division of Minerals of the Office of Minerals Exploration and, in order to continue processing the application, we will need the following information:

The description of your property does not define the boundaries sufficiently for our purpose. Please furnish, if possible, a detailed description of the property boundaries.

Under Item 2(a) of your application you state that a new lease has been signed by the owner and is now awaiting signature by the original lessee. We will need a true copy of this lease and also five executed copies of Lien and Subordination Agreements. Six copies of this form are enclosed, one to be retained by the owner of the property.

A statement of the amount of work you desire to do is necessary, with detailed costs of this work and the estimated total cost of the work. In your application you show an estimated project cost of $75,000.00, but your map shows only five holes to be drilled, with no cost detail given. We must have a thorough outline of the work contemplated, with properly detailed costs pertaining to each work phase, estimated rates of advance, etc. Please carefully review Item 7 of the application and give us a proper cost breakdown as outlined therein.

We also desire three bids for proposed work of diamond drilling. Only two were submitted; hence, please provide one additional, if possible.

The copies of letters from private sources of credit submitted with your application do not comply with the instructions given in Item 1(a) of the application form (MXE Form 40). Please

refer to the instructions and supply us with copies of letters to your bank of account and any other bank or other private source of funds and copies of their replies to your requests for a loan. These letters should show payment dates of loan funds, what collateral you offered, if any; also the terms requested, such as the length of time the loan is needed and method of repayment. Also required is a financial statement of the corporation showing net worth, assets, and liabilities, and the names of the five largest stockholders with equity of each.

The requested information is essential in processing your application and should be submitted to this office at your earliest convenience.

Sincerely yours,

(signed) FRANK E. JOHNSON,

Acting Director

Enclosure:

JWAlt/WEBriswold/JWalt/gla 7-23-59
cc to: Director's Reading File
Mr. Kitsmo, WSSE
Mr. Kilertson, WSSE
SBA Field Team, Region V (2)
Docket
Chron

Excerpt from E. J. Longyear's original report dated April 8, 1958 written before assays but included here to supply physical and geological data.

INTRODUCTION

Location

The company property presently comprises 108 acres, located approximately 6 miles northwest of the town of New Milford, Connecticut. It is reached via Route 129 and West Meeting House Road from New Milford.

Accessibility and Transportation

The property is easily accessible by good highways and hard surfaced roads from all cities and industrial centers in the northeast.

The New Haven Railroad serves New Milford with regular passenger and freight service. Truck lines provide service direct to the mine.

History

During 1956 and 1957 the MAG Mining Corporation, comprised of ten shareholders, acquired the land and reopened two mining pits on a pegmatite dike structure that was formerly mined for mica, feldspar, and gem beryl mainly between 1880 and 1900. The property has been generally known as the Roebling Mine. Since early day operations, the mine has not been worked, except for occasional hand cobbing operations by a few individuals for the recovery of beryl.

E. N. Cameron of the United States Geological Survey examined the mine in December 1942 and V. E. Shainin and F. H. Main mapped it in November 1944. Their report and map are contained in U.S.G.S. Professional Paper No. 255. Cameron's report in 1945 is quoted under "Geology", page 4, in this report.

Current Operations

The present owners became interested in the property on finding that the pegmatite formations contained radioactive minerals. Primary uranium minerals are not uncommon in pegmatites. All granites are radioactive to a small degree, which is generally due to thorium and uranium minerals or potassium

contained in the feldspar of the rock. During the past year the Company's efforts have been directed to determining the amount and uniformity of uranium mineralization contained in the dike rocks, and if it can be economically recovered along with marketable products of beryl, feldspar and mica.

A small combined office-laboratory building has been constructed at the mine, with electric power, water, and heating services. Laboratory equiptment includes small sampling, crushing, and grinding units, and ionization leaching equiptment, by which U_3O_8 yellowcake has been produced from the dike rock on a laboratory scale.

Numerous chemical assay results from picked samples taken by Company personnel at various locations in the pits substantiate the presence of U_3O_8 in the rock in minor quantity.

On advice of the Company's consulting engineer, Mr. Godfrey B. Walker, (one digging engineer formerly with Kerr-McGee Oil Ind. Co.) of Greenwich, Connecticut, the old pit workings were thoroughly cleaned out and 6 channel sample trenches, 2 feet wide by 2 feet deep, were cut across the bottom of No. 1 pit at various intervals normal to the strike of the dike (see pit map). The material from each trench was separately crushed to 3/4 inch size and stored in individual bins. Each sample was then carefully quartered down to a suitable poundage to provide a representative sample for laboratory test work and assaying. The Denver Equiptment Company was selected to conduct the test work. A report of the results of their work on the separation and recovery of beryl, feldspar, mica, and U_3O_8 should be available early in 1958.

To further determine the uniformity of U_3O_8 and other minerals of the pegmatite, also its persistance in width, depth, and lateral extent, the Company commissioned K. J. Longyear Company in October 1957 to drill and core four 50 to 60 degree (AX) angle holes. These holes varied in angle depth as follows:

No. 1 Hole	240 Feet	60° from Horizontal
No. 2 Hole	210 Feet	50° from Horizontal
No. 3 Hole	300 Feet	60° from Horizontal
No. 4 Hole	400 Feet	50° from Horizontal

They were spaced 200 feet apart along a base survey line parallel to the strike of the dike from the hangingwall side of No. 1 pit (see map for location, direction, and angle of holes).

The following footages of cores from each hole were split in a 5 interval in order to obtain samples for qualitative and quantitave determinations. We understand that MAG Mining Corporation sent the samples for analyses, but we have not been advised as to the complete assay results obtained.

	Footages	No. 5 ft. Samples
No. 1 Hole	100 to 160	12
No. 2 Hole	90 to 150	12
No. 3 Hole	115 to 185	14
No. 4 Hole	100 to 225	25
		63

Geology

E. N. Cameron, in 1945, reports in US.G.S. Professional Paper 255 regarding the Roebling Mine as follows:

"The workings consist of two opencuts, from one of which a short underground crosscut and drift have been run. The No. 1 quarry is 420 feet long and 60 feet in maximum width and depth. It is covered by vegetation and partly backfilled. The No. 2 quarry is 90 feet long, 40 feet wide and 20 feet deep.

"Five pegmatite sheets or lenses have been mined. The bodies dip moderately to steeply northwest and are enclosed in silicified quartz mica schist (Berkshire schist). The schist has been injected with narrow pegmatites. Contact metamorphism has produced abundant subhedral metacysts of garnet and tourmaline in the schist adjacent to the contacts with pegmatite.

"The No. 1 quarry is in a pegmatite body that averages 30 feet in thickness, strikes N55°E, and dips 60° NW. Sterrett states that it is reported to be thinner near the bottom f the cut than at the surface. The small part of the pegmatite exposed in 1944 consisted of three lithologic units:

1. Border zone, lying adjacent to the wall rock contact.
2. Perthite-quartz zone, lying inside the border zone.
3. Muscovite-perthite unit, poorly exposed near the center of pegmatite.

The border zone is 3 to 10 inches thick and consists of fine-grained quartz, plagioclase, perthite, muscovite, and tourmaline. Locally the zone is rich in strongly ruled muscovite books ½ to 1 inch in diameter. Tourmaline occurs in subhedral needles from ¼ inch to 3 inches long, oriented normal to the contact.

"The perthite-quartz zone consists essentially of perthite and quartz with subordinate amounts of plagioclase and accessory muscovite, beryl, biotite, garnet, and tourmaline. Quartz occurs in coarse milky masses as much as 25 feet long, and also as granular (grain size ¼ inch) fillings of tension fractures in coarse perthite. The fractures are 5 feet in average length and are 3 to 5 inches wide; many have about the same altitude as the steeply dipping faults and joints. Perthite occurs in large anhedral crystals as much as 10 feet long. In the eastern part of the north wall, the zone is richest in massive perthite toward the center of the pegmatite, and this suggests the presence of a perthite core. Locally, the perthite is veined and partly replaced with granular milky quartz, deformed muscovite and pink-red garnet. Graphic granite is fairly common. Muscovite books 3 inches in diameter occur in small quantities associated with milky quartz masses of equal size. There is no evidence of concentration of sheet-bearing mica adjacent to either wall. Beryl occurs in pale greenish-white, short, subhedral prisms, 3 inches in average length and 2 inches in average diameter. Beryl may be a common accessory, but exposures are insufficient to indicate the beryl content. A 300-pound block of quartz

and plagioclase found in the backfill contains at least 8 percent beryl. Sterrett states that "the best mica and feldspar are reported to have come from the northeast half of the opencut, and the best beryl from the southest half." He adds that "many crystals of beryl, some of them more than a foot in diameter" have been found and that "in 4 years $17,000 worth of gem beryl is reported to have been sold."

"The muscovite-perthite unit consists chiefly of scrap muscovite. Perthite and granular quartz are also present, and garnet is an accessory mineral. The exposed part of the unit is 20 to 25 feet in diameter and lies roughly halfway between the walls of the pegmatite. Its form, altitue and relation to the zones is unknown. Diversely oriented scrap muscovite books for 70 to 90 per cent of the total volume. They average 1 inch in diameter but range from 1/8 to 6 inches across.

"Several joints and faults cut the pegmatite in the north wall of the No.1 quarry. The displacements along the faults could not be determined but probably are not great. Both faults and joints in general, strike N 40°E and dip 55 to 70° NW.

"Four pegmatites are exposed in the No. 2 quarry. They strike N 40°E and dip to the north at moderate to steep angles. Probably the two northernmost pegmatites are roots of a single pegmatite which lays directly above the present topographic surface. Out crops on the southwestern side of the quarry indicate a similar relationship between the two southernmost pegmatites.

" The No. 2 quarry pegmatites range from 5 to 20 feet in thickness and consist essentially of quartz and perthite with various amounts of muscovite, plagioclase, and accessory biotite, and tourmaline, garnet, and beryl. Small biotite and muscovite books occur as fracture fillings in joints cutting pegmatite A.

"There are three types of mica deposits in the No. 2 quarry: pod, wall-zone and disseminated. Pegmatite A Has a concentration of books as much as 1 foot in diameter, associated with pods of anhedral quartz that lie within 3 feet of the hangingwall. Pegmatite B exhibits a lean book mica-bearing zone composed of quartz, plagioclase and muscovite. This zone is about 1 foot thick along the hangingwall, and the books are 3 to 4 inch in average diameter. Pegmatites C and D

are disseminated mica deposits.

"Mica books from both quarries are green to pale ruby in color. More than 90 percent of the books examined showed effects of extreme deformation. Tangle-sheet, herringbone, wedge-structure, "A" structure, warping, cross-fracturing, reeving and ruling are common defects. Sterrett wrote that clear sheets several inches across were recovered from early operations in the No. 1 cut. Cyril Ulman, in 1944, soon abandoned his operation in pegmatites A and D in the No. 2 quarry, because the percentage of recoverable sheet mica in the mine-run product was extremely low. Present exposures in the No. 1 cut are inadequate for a satisfactory evaluation of the pegmatite."

We have found the geology and mineralization of these several pegmatite dikes to be essentially as described above, by E. N. Cameron, and mapped by V. E. Shainin and F. H. Main.

Dikes have been defined as long narrow bodies of igneous rock, filling fissures in older rock, into which it has entered in molten condition. Large bodies cool slowly and are porphyritic or granitoid. The size and shape influence the texture of the component rock, which often embraces all varieties of igneous rock.

During recent years geologic studies have shown that mineral distribution and structure of pegmatites are largely systematic and are not as erratic in distribution or irregularly disseminated as previously believed. Some geologists use the term homogeneous and heterogeneous, others unzoned and zoned for similar types in differentiating component mineral distribution or segregation as to mineralogy and/or texture of the dike rock.

Zoned pegmatites containing rich concentrations of industrial minerals can generally be selectively mined and more profitably operated to meet changing market demands than other types.

Industrial minerals in a zoned pegmatite are usually concentrated in fairly well defined zones, and therefore the internal structure must be well understood before it is possible to determine the feasibility of selective mining. Other

than actual mining penetration of the pegmatite drill cores are the best means of determing structure and mineral concentration of such dikes.

What mining and drilling that has been done at this property reveals a lenticular pegmatite of zoned structure, concordant with the foliation of the country rock and with a plunge essentially parallel to the plunge of the linear structure of the enclosing schist. Concordant pegmatites have a variety of shapes, but more are irregularly lenticular. Some are multiple intrusives consisting of several individual lenses separated by discontinuous schist parting such as in No. 2 quarry.

Brewster Phones
9-3352
9-6531

Mine Phone
New Milford, Conn.
Elgin 4-3551

EXTRA COPY
O. M. E.
RECEIVED AUG 19 1959

DATE	INITIALS	CODE

MAG MINING CORPORATION

BREWSTER, NEW YORK NEW MILFORD, CONN.

Beryl ● Mica ● Feldspar

August 11, 1959

Mr. Frank E. Johnson, Acting Director
United States Department of the Interior
Office of Minerals Exploration
Washington 25, D.C.

Re: Docket No. OME-6057 (Beryl*Mica)

Dear Mr. Johnson:

In reference to your letter of July 23, 1959 requesting additional information relative to our application for financial assistance in mineral exploration, the following we hope will fulfill the necessary requirements to expedite the processing of the application.

We are enclosing 4 copies of a map showing the perimeter lines of the mining property; a legal description of which is contained in the copies of the lease sent to you with the application forms. This lease is recorded in the Land Records of the Town of New Milford, Conn., in volume 131, page 316 and dated August 19, 1957. This information is noted on the lien and subordination agreements also herewith enclosed.

In reference to the new lease referred to in our application and in your letter of July 23, please be advised that for the purpose of our application, we wish to go forward on the basis of the original lease as submitted by us and recorded in the New Milford, Conn. land records in Vol. 131, page 316 dated August 19, 1957, as stated above.

Mention was made of a new lease in the light of a sincere desire on our part for full disclosure and cooperation with the OME. The nature of that lease which has not been executed as yet is merely an endeavor on our part to improve the terms for the Corporation in so far as the extent of participation of the owner and the original lessee is concerned. It will in no way have any adverse effect on our present lease, nor affect in any way our rights to operate on the property described.

You can be sure that full compliance with the requirements of the OME for full disclosure of any and all new circumstances surrounding the operations of the MAG MINING CORPORATION will be met if and when they occur. Let us reemphasize the fact that negotiations being carried on relative to the new lease mentioned pertain only to such matters as would be of a beneficial nature resulting in the enhancement of the financial arrangements as stipulated in our present lease. Such negotiations do not, in any way, jeopardize MAG MINING CORPORATION'S interests as described in our present lease.

Mr. Frank E. Johnson, Acting Director
United States Department of the Interior

Regarding your request for more detailed information relative to the project costs covering the entire amount in our application, our engineer and geologist have prepared a more detailed statement of propesed work and a breakdown of the cost of same. Four copies of each statement are enclosed.

In regard to your request that we submit a bid from a third drilling company, if possible, it is our understanding that there is no other capable drilling concern available to us in our area of operation. Reference to the two bids submitted we are sure will reveal the lowest possible prices for which such work could be performed by any reputable concern in the business.

The next item you refer to in your letter of July 23 is relative to letters from local banking institutions. On this subject we hope the following information will explain why we were unable to obtain such letters and, therefore, why we were forced to resort to private sources; the letters of refusal from these sources we submitted with our application.

When we first sought major financing, we approached several banking institutions in this area in a more or less informal manner to determine what method of approach would be required. We were informed verbally that a formal application would have to be submitted but that no application would be accepted unless supported by the individual endorsement of each of the principals in the corporation.

Upon receiving your letter of July 23, 1959, we again approached these banking institutions and asked if they would at least give us a letter stating their position so that we could use these letters for the purpose of our application to OME. Our answer from each institution was substantially the same. They were positively unable to put anything of that nature on their letterheads unless an application was reviewed by their board of directors. In order for their board of directors to do this, of course, would require an application containing the provision of personal endorsement of the principals of the corporation. As MAG MINING CORPORATION is a corporation operating as such, you can see the impracticality of complying with the bank's requirements; hence our efforts to obtain private capital as evidenced by the letters of refusal submitted with our application.

We sincerely hope in the light of the foregoing information, the affidavits from the private sources mentioned will cover the requirements for the purpose of the application.

To complete the information you asked for, we are enclosing 4 copies of our financial statement prepared by a certified public accountant and 4 copies of a list of the five largest stockholders and the equities of each in the corporation.

Mr. Frank E. Johnson, Acting Director
United States Department of the Interior

We hope the foregoing will prove satisfactory and thereby help in the successful completion of our application and you can be sure your kind cooperation in this matter is greatly appreciated.

Sincerely yours,

MAG MINING CORPORATION

Raymond J. James

Raymond J. James
Director

RJJ:a

CC - The Honorable Thomas E. Dodd
Mr. George Gildea
Mr. Godfrey B. Walker, M. E.

Brewster Phones
9-3352
9-6531

Mine Phone
New Milford, Conn.
Elgin 4-3551

MAG MINING CORPORATION

BREWSTER, NEW YORK NEW MILFORD, CONN.

Beryl ● Mica ● Feldspar

August 14, 1959

Re: Docket No. OME-6057 (Beryl-Mica)

Authorized Capitalization:-

3,000,000 shares after issuance of 2 shares for each 1 held April, 1959.

Following is a list of the names of the five largest stockholders and their equities in the MAG MINING CORPORATION.

Samuel F. Melillo	Danbury, Conn.	472,500	shares
Michael N. Arnell	Brewster, N.Y.	465,000	"
Theodore E. Jahn	Danbury, Conn.	210,645	"
Joseph Genovese	Brewster, N. Y.	210,000	"
Harold D. Van Houten, Sr.	Danbury, Conn.	195,645	"

EXHIBIT "A"

MAG MINING CORPORATION

BALANCE SHEET - MARCH 31, 1959

ASSETS

Mining Properties and Property Interests

To Finders for Services	$38 000 00	
To Purchase of Leasehold	6 000 00	
To General Stockholders for Services	700 00	
		$44 700 00

FIXED ASSETS

	Cost	Reserve	Net
Buildings	$ 4 256 14	$ 816 00	$ 3 440 14
Mining Equipment	1 784 55	342 00	1 442 55
	$ 6 040 69	$ 1 158 00	

Total Fixed Assets, Net	4 882 69
Cash on Deposit	391 78
Option - T. Leseynski	100 00
Deferred Incorporation Expense	182 60
TOTAL ASSETS	$50 257 07

LIABILITIES AND STOCKHOLDERS EQUITY

LIABILITIES

Accounts Payable and Accrued Expenses	$ 623 06	
Loans Payable	650 00	
Total Liabilities		$ 1 273 06

STOCKHOLDERS EQUITY

*Capital Stock Issued at $.10 Par Value			
To Finders for Services	380,000 shares	$38 000 00	
To General Stockholders for Services	7,000 shares	700 00	
To General Stockholders for Cash	256,800 shares	25 680 00	
	643,800	$64 380 00	
Capital Surplus			
Excess Received from General Stockholders over Par Value		34 620 02	
Operating Deficit March 31, 1959		(50 016 01)	
			48 984 01
TOTAL LIABILITIES AND STOCKHOLDERS EQUITY			$50 257 07

*Note: A stock dividend has been declared of two additional shares for each one outstanding.

EXHIBIT "B"

MAG MINING CORPORATION

STATEMENT OF OPERATIONS FOR THE YEAR ENDED

MARCH 31, 1959

Income		$ - --
Mining and Exploration Costs and Expenses		
Supervision	$ 3 450 00	
Contract Labor	732 05	
Consultation, Engineering and Core Drilling	2 813 67	
Rent	1 200 00	
Mining Supplies	358 61	
Assay	1 084 39	
Insurance	138 61	
Electricity	87 28	
Office Supplies and Expense	247 34	
Accounting Services	200 00	
Travel	590 04	
Miscellaneous Taxes	159 18	
Depreciation Expense	604 00	
Incorporation Expense Deductible	59 15	
Miscellaneous Expense	66 60	
Total Expenses		11 790 92
Net Operating Loss for the Year		($11 790 92)
Operating Deficit April 1, 1958		(38 225 09)
Operating Deficit March 31, 1959		($50 016 01)

MAG MINING CORPORATION

Re: Docket # OME 6057 - (Beryl & Mica)

5. Exploration Work

The old open cut workings have been cleaned out and six channel samples have been cut from wall to wall in the floor of the pit. Four diamond drill holes have been put down at 200' centers. This limited exploration has established a substantial tonnage of pegmatite containing commercial quanities of feldspar, beryl and mica. Additional exploration is required to increase the reserve so that development capital can be obtained on a favorable basis.

It is proposed to spot additional holes midway between existing holes plus two holes NE of present hole #2. It is then proposed to drill 10 additional holes along the strike of the dike to the SW. The present trenchs are all in the pit. An extensive program of trenching to the SW will supplement the drilling and permit wider drill hole spacing.

The work proposed could be started immediately and barring unforseen delays should be completed in 90 days.

MAG MINING CORPORATION

Re: Docket # QME 6057 (Beryl * Mica)

7. Estimate of Costs

a.	Independent diamond drilling contract	
	15 300 ' AX holes @ $5.15 /ft.	$23,175.00
	120 core boxes @ $4.00	480.00
	Incidentals	1,500.00
	Total Drilling	$25,155.00
b.	Supervision $750.00 / month	2,250.00
	Consultants (2) $1000.00 per month	3,000.00
	Skilled labor 6 @ $25.00 / day	11,610.00
	Common labor 6 @ $18.00 / day	8,360.00
		25,220.00
	The services of the above people are available	
c.	Operating Supplies	
	Dynamite	2,000.00
	Gasoline	2,000.00
	Hand Tools	1,250.00
	Power	1,500.00
		6,750.00
d.	Equipment Rental	
	Bull doxer, truck, endloader, compressor and jack hammers $200.00 / day for 90 days	18,000.00
e.	Rehabilation	
	None	
f.	New Buildings	
	None	
g.	Miscellaneous	
	Analytical work	3,000.00
	Pay roll taxes, compensation insurance etc.	2,000.00
		5,000.00
	Grand total	$80,125.00

August 24, 1959
Re: GSE 6097
Big Mining Corp.
Rumbling Mine
Litchfield Co., Conn.

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

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

Subject: Review of revised application

In response to a request from your office, a breakdown of the cost estimate, (75,000), submitted with the application has been received. The revised estimate is (60,105), of which an undue proportion is for supervision, operating supplies and equipment rental, items not immediately necessary.

If there is reason for thinking the value of the eligible minerals in the pegmatitic material plus the value of the feldspar will sustain an operation, five, possibly six or seven drill holes are warranted. That is numbers 5, 6, 7, 8, and in case No. 5 shows pegmatite, another hole or so further northwest of No. 5. As hole No. 3 shows less pegmatite than Nos. 1 and 2 and No. 4 is blank, holes to the southwest of No. 4 are not now warranted.

Referral of the application to the Field Team is recommended.

E. R. Nelson

cc: GSE (3)
D. E. Hilertson, 3649
Director's reading
Branch reading
Chron. file
Docket file
ERNelson/mm
6-MD-8-24-59

NEWMONT MINING CORPORATION
300 PARK AVENUE
NEW YORK 22, N.Y.

March 31, 1959

Mr. M. N. Arnell
MAG Mining Corporation
35 Main Street
Brewster, New York

Re: Beryllium Property
New Milford, Connecticut.

Dear Mr. Arnell:

We have reviewed the data you left with us on the above captioned property. We do not feel that the work you have done so far has developed the property sufficiently to warrant our further interest. If, however, you are successful in demonstrating the extension of this beryllium bearing pegmatite beyond the presently defined limits, we would be pleased to discuss this again.

We are returning herewith the file you left with us for review.

Thank you very much.

Yours very truly,

Robert J. Searls

RJS:dl

Enclosure

cc: Mr. L. J. Bechaud, Jr.

ROOSEVELT & GOURD
37 WALL STREET
NEW YORK 5, N. Y.

F. JAMES ROOSEVELT
MICHAEL GOURD
MILORAD I. CHOUMENKOVITCH

TELEPHONE
WHITEHALL 4-6162

January 23, 1959

Mr. Michael Arnell, President
MAG Mining Corporation
35 Main Street
Brewster, New York

Dear Mr. Arnell:

Please excuse my delay in acknowledging receipt of your geologists reports, assays and financial statement.

At the moment my partners who handle private financing are out of the country, but I expect they will be in a position to make a decision on this matter in about two weeks.

Again let me apologize for not giving you an answer sooner.

Sincerely yours,

Feb 6

Michael Gourd

MG:pm

ROOSEVELT & GOURD
37 WALL STREET
NEW YORK 5, N. Y.

P. JAMES ROOSEVELT
MICHAEL GOURD
MILORAD I. CHOUMENKOVITCH

TELEPHONE
WHitehall 4-6162

February 9, 1959

Mr. Michael Arnell
MAG Mining Corporation
25 Main Street
Brewster, New York

Dear Mr. Arnell:

I am returning the information on MAG Mining that you provided for our consideration. We appreciated the opportunity of reviewing the situation and were impressed by the quality of the presentation.

After appraising the possibilities of private financing we concluded that development of the New Milford property best lent itself to a working arrangement with an experienced mining outfit. This, of course, may not satisfy all of your capital requirements but would facilitate financing.

We would appreciate being posted on developments and would welcome an opportunity to be of help.

Very truly yours,

Michael Gourd

MG:pm
Enc.

R. H. MONTGOMERY ENTERPRISES INC.

MANAGEMENT CONSULTANTS

WOODBRIDGE, CONN.

JANUARY 31, 1959

MR. THEADORE E. JAHN, TREASURER,
MAG MINING CORPORATION,
35 MAIN STREET,
BREWSTER, NEW YORK

DEAR TED:

THANK YOU FOR THE INFORMATION ON MAG MINING CORPORATION. WE ARE PRESENTLY EVALUATING THIS MATERIAL WITH QUALIFIED ENGINEERS TO ESTABLISH A COMMON GROUND OF UNDERSTANDING.

WE WILL CONTACT YOU WHEN OUR INVESTIGATIONS ARE COMPLETE.

MAY I THANK YOU AND MIKE FOR YOUR VERY THOROUGH PRESENTATION AND INTERESTING MORNING. MY BEST TO YOU BOTH.

SINCERELY,

R. H. MONTGOMERY ENTERPRISES, INC.

R. H. MONTGOMERY, JR., PRESIDENT

RHM JR/RGK

R. H. MONTGOMERY ENTERPRISES INC.

MANAGEMENT CONSULTANTS

WOODBRIDGE, CONN.

MARCH 9, 1959

MR. THEODORE E. JAHN, TREASURER
MAG MINING CORPORATION
35 MAIN STREET
BREWSTER, NEW YORK

DEAR TED:

SORRY TO HAVE NEGLECTED YOU SO LONG, BUT THE MEN INVOLVED COULD NOT BE RUSHED.

THEY HAVE FINALLY CONTACTED ME REGARDING THEIR INTEREST IN MAG MINING.

AT THE PRESENT TIME AND WITH CONDITIONS AS THEY FIND THEM THEY HAVE DECIDED THAT FOR THE PRESENT THE MONEY THAT IS AVAILABLE SHOULD BE PUT INTO OTHER THAN A MINING VENTURE. THEY WISH ME TO CONVEY TO YOU THEIR LACK OF KNOWLEDGE IN THIS FIELD HAD AGREAT DEAL TO DO WITH THIS DECISION.

WE ARE SORRY THAT THE ANSEWER WAS NOT WHAT I HAD HOPED FOR AND THAT THERE HAS BEEN SUCH A DELAY IN ANSEWERING YOU.

SINCERELY

R.H.MONTGOMERY JR.

EXTRA COPY
O. M. E.
RECEIVED JUN 26 1959

DATE	INITIALS	CODE

SPRAGUE & HENWOOD, Inc.
Contractors for DIAMOND DRILLING
MINERAL EXPLORATION • SOIL SAMPLING • PRESSURE GROUTING

EXECUTIVE OFFICES & PLANT
221 WEST OLIVE STREET
SCRANTON, PENNSYLVANIA
Telephone Diamond 4-8507

May 20, 1959

M. A. G. Mining Company
35 Main Street
Brewster, New YOrk

RE: Drilling near,
New Milford, Connecticut

ATTN: Mr. Micheal Arnell

Gentlemen: -

WEare pleased to quote you on a minimum of 1,000 feet of core drilling, to be done near New Milford, Connecticut. We understand that the holes are to run from 250 to 350 feet in depth. The angles of these holes are to be from 50 to 70 degrees. We are prepared to perform the work for the following prices: -

Item 1 - Mobilization and De-Mobilization of drilling equipment, moving to the job and returning at the completion of the work lump sum ----------$300.0

Item 2 - For drilling AX holes, recovering a core of 1-1/8" in diameter -$5.15 per Lineal Foot

Item 3 - For any core Boxes furnished by us for cores which you wish to perserve - $4.00

For the above prices we will furnish complete drilling equipment and experienced personnel to do the above work.

You are to obtain and furnish to us permission for free ingress and egress to your property.

It is understood that you will make a deposit of a sufficient sum of money in escrow to cover the estimated cost of the above work any you will furnish us a letter from the bank showing the amount of deposit in escrow that has been made.

If the above is acceptable we are prepared to start this work promptly.

We are enclosing this letter in duplicate and if the above is acceptable to you, please sign one copy of this letter and return it to us and this will be used as a contract between us

We wish to thank you for the opportunity of quoting you on this work.

Very truly yours,
SPRAGUE & HENWOOD, INC.

CW:bjs

ACCEPTED _____

BY _____

DATE _____

Claude Welcome Jr.
Claude Welcome
Contract Representative

Longyear
E. J. LONGYEAR COMPANY
General Offices, 76 South 8th St.
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 9-7631 • CABLE LONGCO

June 5, 1959

MAG Mining Company
35 Main Street
Brewster, New York

Attention: Mr. Michael N. Arnell

SUPPLEMENTARY EXPLORATORY DRILLING PROGRAM NEAR NEW MILFORD, CONNECTICUT

Gentlemen:

1. Based on information obtained from experience gained in drilling the same general area in 1957, we are pleased to submit below revised proposal to cover your supplemental diamond core drilling in the vicinity of New Milford, Connecticut.

2. We understand that the drilling locations are accessible to truck or trailer-mounted equipment; that water is available within 1000 feet of any drill location; that the work as now planned will consist of a minimum of three to four holes, with a total minimum footage of 1000 feet; and that these holes will be drilled at an angle of not less than 45 degrees from the horizontal. We further understand that the depth of overburden will not exceed ten feet; and that AX-size core is desired.

3. For this work we propose to furnish one trailer-mounted Longyear diamond core drill with the necessary accessory equipment required to accomplish the work as now planned. We further propose to operate the drill on a single shift basis, six days per week.

4. We will carry public liability insurance covering personal injury and property damage, and Workmen's Compensation insurance, and also, all-risk insurance on the drilling equipment protecting against loss by theft, fire, flood, land-slides and other similar hazards.

We will also assume and pay any and all Old Age Benefit, Unemployment and Social Security taxes and contributions imposed by federal or state authorities.

Certificates showing the coverage referred to will be furnished upon request.

5. Based upon the conditions as outlined above, we are pleased to quote as follows:

a) Overburden drilling in vertical or angle holes with minimum inclination of 45° measured from the horizontal.....$5.25 per ft.

b) Diamond core drilling in vertical or angle holes as specified above -

BX-size (seating of casing in ledge).....$ 5.25 per ft.
AX-size.....$ 4.25 per ft.

c) Reaming for casing, if necessary -

AX-size hole to receive AX casing.....$ 2.25 per ft.

d) Delays for your convenience or for which you are responsible.....$ 8.00 per hour

e) Cementing, waiting for cement to set, and drilling out cement.....$ 8.00 per hour, plus cost of materials used.

f) Core Boxes - if supplied by us.....$ 3.00 each

g) Mobilization and demobilization of personnel and drilling equipment.....$425.00 Lump Sum

6. It is understood and agreed that you will prepay the mobilization and demobilization expenses and the first 1000 feet of drilling. We estimate that the amount required to cover this work will be $4,800.00. In the event that more than 1000 feet of drilling is required, it is understood and agreed that you will deposit with us additional funds in sufficient amount to cover any such extra work.

7. Drill cores will be turned over to your representative at the drilling site in receptacles furnished by you, or by us under paragraph 5. f) above.

8. Invoices covering the work performed will be prepared promptly following the first of each month.

9. We understand that you desire to start this work shortly, and we would be prepared to mobilize the equipment promptly after receipt of official notice to proceed. We appreciate the opportunity to work with you again, and assure you that it is our desire and intention to complete this additional work to your entire satisfaction. If our proposal is found acceptable, we shall appreciate it if you would forward to us at your earliest convenience an executed copy of this proposal together with your check in the amount of $4,800.00.

Sincerely,

E. J. LONGYEAR COMPANY

V.N.Burnhart

Vice President and General Manager

V.N.Burnhart:bal

ACCEPTED:

MAG MINING COMPANY

By:_____

Date:_____

AGREEMENT

THIS AGREEMENT, made this 16th day of April, 1957, by and between HENRY ORZECH of the Town of New Milford, County of Litchfield, State of Connecticut, hereinafter called the "Owner"; HOWARD J. HEWITT of #142 Carroll Street, Patterson, New Jersey, hereinafter called the "Original Lessee"; and MICHAEL ARNELL and SAMUEL MELILLO of Brewster, New York co-partners, hereinafter called the"Company";

WITNESSETH:

WHEREAS, HENRY ORZECH, the owner, did by an instrument in writing, dated March 25th, 1955, grant and convey unto HOWARD J. HEWITT, Original Lessee, all of the mining and mineral rights in and to lands described as follows, to wit:

> Parcel A "All that certain tract of land situated in Merryall District, Town of New Milford, County of Litchfield and State of Connecticut, consisting of a portion of the farm owned by the parties of the first part, hereinafter and commonly designated as the woodland area, bounded and described as follows:
>
> Beginning at a point of an old road commonly referred to as the Old Mica Road, which point is at a bar way; thence running South along the property owned by Sumner Wiel, approximately 500 feet, more or less; thence West along the property of said Wiel and the property of the Grantors herein to a stake which is in the Southwestern corner of said woodlot; thence North along the portion of the woodland to stonewall fence which is the Northwestern corner of the woodlot, and continuing in a Northerly direction across the pasture land to the Northern side of the Old Mica Road; thence East along the Northern side of said Road to the place or point of beginning, consisting of eight (8) acres, more or less, and including a small brook."
>
> "Two certain pieces or parcels of land situated in said Town of New Milford, at Merryall, so called, bounded and described now or formerly as follows:
>
> FIRST PIECE: Northerly by land of Adam Mechatek and Paul Plack;
>
> Easterly by land of Edgar A. Peet, by land of Anton Gawel, and by land of Gabriel Smyrski;
>
> Southerly by land of Frank Perlowski and by the Merryall Cemetery, so called, near the former site of the Meeting House; and

a.w.l

Westerly by highway;

Containing about eighty-five (85) acres, more or less, with a dwelling house and other buildings thereon standing.

SECOND PIECE: Northerly by highway;

Easterly by land of said Edgar A. Peet, formerly land of Henry B. Bostwick;
Southerly by land of said Peet and the first piece; and
Westerly by said first piece;

Containing about eight and one-fourth (8¼) acres, more or less."

WHEREAS, the Owner and Original Lessee are desirous of terminating said original lease and granting a new lease to the Company,

NOW, THEREFORE, in consideration of the sum of ONE ($1.00) DOLLAR, each to the other in hand paid, and the mutual covenants, conditions and obligations as hereinafter expresses and set forth, the parties hereto do hereby agree as follows:

(1) The owner warrants that he is the sole owner of the premises hereinbefore described, in fee simple absolute, and has the sole exclusive right to convey the rights and privileges herein granted.

(2) That there are no state or municipal laws eliminating or restricting the operation to be performed under the terms of this agreement.

(3) That said Owner and Original Lessee hereby grant and convey unto the said Company, its heirs, executors, administrators, successors or assigns, the sole right and privilege of entering in and upon the lands hereinbefore described forthe purpose of searching and prospecting and mining and removing mica, beryl, garnet, precious and semi-precious stones and gems, mineral specimens, mines, minerals, and mineral substances, stone and any other substance capable of being mined

and marketed, for a term of thirty (30) years from December 1st, 1956, and to use any and all means of exploration, mining methods, equipment and installations necessary or feasible for said prospecting and mining prosesses.

(4) The Company may also erect and operate any mill, plant, and all other types of installations and equipment that may be necessary or feasible in carrying on its prospecting and mining operations.

(5) It is hereby reserved to the Owner the right to remove trees, till the soil, and carry on such other farming operations on said premises as shall not interfere with or hinder said mining operations.

(D) It is agreed that said mining operations shall not extend beyond the eight (8) acres, upon which the mine pit is presently located, until November, 1957, except for exploratory core drilling. Should said core drilling cause any damage to the Owner's crops, it is understood and agreed that a reasonable amount shall be paid to compensate the owner for any loss that may occur.

(6) The Company covenants and agrees to bear the entire expense involved in said prospecting, developing, exploitation and mining of said property as above set forth, and hold the Owner, and Original Lessee free from any obligation or liability arising from or as the result of said work, and to save and hold said parties harmless from any costs, suits or damages that they may be compelled to pay on account of said operations, and to carry adequate liability and wor mens compensation or public liability insurance in order to meet said obligations.

(7) The Company shall have the use of the water from the brook, upon said premises hereinbefore described, and shall be permitted to lay pipe lines, construct buildings, roads, sluices and drains, or any other apparatus that may be

necessary for the sucessful and economical development of the property, and set up and operate such machinery, crusher, grinders consentration mills, dryers and every other type of equipment that may be necessary for the proper operation of said work.

(8) The Company shall be permitted to remove from said premises any and all buildings, machinery or apparatus or other equipment placed upon the same under this agreement at any time they may elect to do so during the term of this lease, or within six (6) months from the termination of this lease, or any renewal or extension thereof.

(9) If there is now, or shall at any time be, any outstanding interest in said land or said minerals not owned by the Owner, the royalties and payments hereinafter provided to be made shall be proportionately reduced.

(10) The Owner warrants and agrees to defend the title to the lands herein described, and agrees that the Company shall have the right at any time to redeem for the said Owner by payment, of any mortgages, taxes or other liens on the above described lands in the event of default of payment by the said Owner, and be subrogated to the rights of the holder thereof.

In consideration of the foregoing, the Company agrees to pay to the Owner and Original Lessee, the following rentals and royalties:

(a) To the Owner, $100.00 per month in advance, commencing with April 1st, 1957, and on the first day of each and every month thereafter for the term of this agreement, or Seven and One-Half (7½%) per cent of the gross sales of all products produced and marketed whichever shall be the greater sum.

(b) To the Original Lessee $50.00 per month for each and every month that the mine is in operation or 2½% per cent of the gross sales of all products produced and marketed, whichever shall be the greater sum, ~~but in any event, not more~~

(c) The Company agrees to prospect and exploit the products and minerals of said premises with due diligence, and should operations be delayed or curtailed for a period in excess of one (1) year, the Owner shall have the option of terminating this agreement by notifying the Company in writing, by registered mail addressed to Box 275, Brewster, New York, of the intention thereof, and the Company shall forthwith forfeit all rights under this agreement.

In such event, the Company shall remove all of their equipment and apparatus from the property within six (6) months of notice of termination, and shall pay to the Owner the sum of ONE HUNDRED ($100.00) DOLLARS per month for each and every month said equipment remains on the premises, as a rental charge.

This Agreement shall be binding upon the parties hereto, and upon the respective heirs, executors, administrators, successors or assigns.

Accurate books of account shall be kept and shall be open to reasonable inspection.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

Signed, sealed
and delivered
in the presence of:

Henry Orzech L.S.
HENRY ORZECH, Owner

Howard J. Hewitt L.S.
HOWARD J. HEWITT, Original Lessee

Michael Arnell L.S.
MICHAEL ARNELL, Company

Samuel J. Melillo L.S.
SAMUEL MELILLO, Company

STATE OF CONNECTICUT)
:SS. April 24, 1957
COUNTY OF LITCHFIELD)

Personally appeared HENRY ORZECH ~~and HOWARD J. HEWITT~~, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

Henry Orzech
Commissioner of Superior Court

STATE OF CONNECTICUT)
:SS. April 26, 1957
COUNTY OF LITCHFIELD)

Personally appeared HOWARD J. HEWITT, MICHAEL ARNELL and SAMUEL MELILLO, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

Joseph C. Genovese

JOSEPH C. GENOVESE
Notary Public in the State of New York
Residing in Putnam County
Putnam County Clerk's No. 27
Commission Expires March 30, 1959

"ASSIGNMENT"

KNOW ALL MEN BY THESE PRESENTS, That We, MICHAEL ARNELL of 35 Main Street, Brewster, New York and SAMUEL F. MELILLO of Griffing Avenue, Danbury, Connecticut, individually and as co-partners,

IN CONSIDERATION of the sum of Ten ($10.00) Dollars, and other valuable considerations to us in hand paid, the receipt whereof is hereby acknowledged,

DO HEREBY sell, assign, transfer, set over and convey to MAG MINING CORP., P.O. Box 275, Brewster, New York, its sucessors and assigns, the within grant and lease.

TO HAVE AND TO HOLD the same forever, subject, nevertheless, to the conditions therein contained.

IN WITNESS WHEREOF, the said Assignors have hereunto set their hands and seals, this 26th day of April, 1957.

In the presence of:

Michael Arnell L.S.
Michael Arnell

Samuel F. Melillo L.S.
Samuel F. Melillo

STATE OF CONNECTICUT)
:SS
COUNTY OF LITCHFIELD)

April 26th, 1957

Personally appeared MICHAEL ARNELL and SAMUEL F. MELILLO, signers and sealers of the foregoing instrument, and acknowledged the same to be their free act and deed before me.

JOSEPH C. GENOVESE
Notary Public in the State of New York
Residing in Putnam County
Putnam County Clerk's No. 27
Commission Expires March 30, 1957

EXTRA COPY
O. M. E.
RECEIVED JUN 20 [illegible]

DATE	INITIALS	

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Area: 5,009 sq. mi.
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MASSACHUSETTS
Population: 4,86_,000 (1957 Estimate)
Area: 8,257 sq. miles
Capital: Boston
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Bridgewater, 5400 ... D-10
Briggsville, 300 ... A-3
Brimfield, 800 ... C-6
Brockton, 62500 ... D-9
Brookfield, 1200 ... C-6
Brookline, 57000 ... C-9
Brookville, 2200 ... C-9
Bryantville, 500 ... D-10
Buzzards Bay, 1459 ... E-11
Byfield, 600 ... A-10
■Cambridge, 103500 ... B-9
Canton, 10128 ... C-9
Carver, 400 ... D-10
Caryville, 500 ... C-8
Cataumet, 300 ... E-11
Centerville, 544 ... E-11
Central Village, 500 ... F-9
Chaffinville, 3500 ... C-7
Charlemont, 500 ... A-4
Charlton City, 750 ... C-7
Chartley, 500 ... D-9
Chatham, 1600 ... E-12
Chelmsford, 2400 ... B-8
Chelsea, 37000 ... B-9
Cherry Valley, 1600 ... C-7
Cheshire, 1050 ... B-3
Chester, 950 ... C-4
Chicopee, 55000 ... C-5
Clarksburg, 600 ... A-3
Clinton, 12754 ... B-7
Cochituate, 3200 ... C-8
Cohasset, 6200 ... C-10
Collinsville, 1200 ... A-8
Concord, 3000 ... B-8
Conway, 600 ... B-4
Cotuit, 850 ... E-11
Dalton, 5574 ... B-3
Danvers, 18185 ... B-10
Dartmouth, 700 ... F-10
■Dedham, 22300 ... C-9
Deerfield, 500 ... B-5
Dennis, 550 ... E-12
Dennis Port, 1080 ... E-12
Dighton, 850 ... E-9
Dodge, 450 ... C-7
Douglas, 397 ... D-7
Dover, 1400 ... C-9
Dracut, 7800 ... A-9
Dudley, 500 ... D-7
Duxbury, 1000 ... D-11
E. Braintree, 7348 ... C-10
E. Brewster, 350 ... E-12
E. Bridgewater, 3000 ... D-10
E. Brookfield, 727 ... C-6
E. Douglas, 1846 ... D-7
E. Falmouth, 1405 ... F-11
E. Foxboro, 950 ... D-9
E. Freetown, 800 ... E-10
Easthampton, 11698 ... C-4
E. Harwich, 500 ... E-12
E. Lee, 400 ... C-3
E. Longmeadow, 7857 ... D-5
E. Mattapoisett, 400 ... E-10
E. Northfield, 716 ... A-5
Easton, 600 ... D-9
Eastondale, 600 ... D-9
E. Pepperell, 1200 ... A-8
E. Templeton, 1050 ... B-6
E. Walpole, 2300 ... C-9
E. Wareham, 1200 ... E-11
E. Whatley, 400 ... B-5
■Edgartown, 1300 ... F-11
Erving, 500 ... B-5
Essex, 700 ... A-10
Everett, 44900 ... B-9
Fairhaven, 13376 ... E-10
Fairlawn, 400 ... C-7
■Fall River, 104000 ... E-9
Falmouth, 3400 ... F-11
Farnumsville, 1000 ... C-7
Feeding Hills, 900 ... D-4
Fisherville, 3000 ... C-7
■Fitchburg, 43000 ... B-7
Forge Village, 1115 ... B-8
Foxboro, 6500 ... D-9
Framingham, 32500 ... C-8
Franklin, 6000 ... D-8
Gardner, 20200 ... B-7
Georgetown, 2100 ... A-10
Gilbertville, 1039 ... C-6
Gill, 400 ... A-5
Gleasondale, 319 ... B-8
Gloucester, 26200 ... A-10
Grafton, 2200 ... C-7
Graniteville, 677 ... B-8
Granville, 400 ... C-4
Great Barrington, 4300 ... D-2
■Greenfield, 18059 ... A-5
Griswoldville, 630 ... A-4
Groton ... B-8
Groveland, 1600 ... A-9
Hadley, 970 ... C-5
Halifax, 600 ... D-10
Hamilton, 600 ... A-10
Hanover, 800 ... C-10
Hanson, 800 ... D-10
Harding, 200 ... C-9
Harwich, 800 ... E-12
Harwich Port, 940 ... E-12
Hatfield, 1400 ... B-5
Haverhill, 45000 ... A-9
Hayden Rowe, 600 ... C-8
Haydenville, 750 ... B-4
Hingham, 10500 ... C-10
Hinsdale, 990 ... B-3
Holbrook, 4000 ... C-9
Holden, 2200 ... C-7
Holliston, 2300 ... C-8
Holyoke, 53000 ... C-5
Hopedale, 3773 ... C-8
Hopkinton, 2300 ... C-8
Housatonic, 1700 ... C-2
Hubbardston, 450 ... B-6
Hudson, 8904 ... B-8
Hull, 5824 ... C-10
Huntington, 900 ... C-4
Hyannis, 4235 ... E-12
Ipswich, 6000 ... A-10
Island Cr., 200 ... D-10
Islington, 2600 ... C-9
Jefferson, 1300 ... B-7
Kingston, 2100 ... D-10
Lancaster, 750 ... B-7
Lanesboro, 700 ... B-3
■Lawrence, 75000 ... A-9
Lee, 3000 ... C-3
Leicester, 2400 ... C-7
Lenox, 1604 ... B-3
Lenox Dale, 562 ... C-3
Leominster, 24900 ... B-7
Lexington, 23500 ... B-9
Lincoln, 1700 ... B-9
Linwood, 1000 ... D-8
Littleton, 700 ... B-8
Littleton Common, 1300 ... B-8
Longmeadow, 8482 ... D-5
■Lowell, 93500 ... A-9
Ludlow, 8000 ... C-5
Lunenburg, 2000 ... B-7
Lynn, 99000 ... B-10
Lynnfield, 3900 ... B-9
Malden, 59500 ... B-9
Manchaug, 929 ... D-7
Manchester, 2800 ... B-10
Manomet, 800 ... D-11
Mansfield, 6300 ... D-9
Marblehead, 15908 ... B-10
Marion, 2100 ... E-10
Marlboro, 17200 ... C-8
Marshfield, 1500 ... D-10
Marstons Mills, 550 ... E-11
Martins Pond, 1109 ... B-9
Mattapoisett, 1600 ... E-10
Maynard, 7253 ... B-8
Medfield, 2100 ... C-9
Medford, 65500 ... B-9
Medway, 1400 ... C-8
Melrose, 29700 ... B-9
Mendon, 900 ... D-8
Merino Village, 3118 ... D-7
Merrimac, 1800 ... A-9
Methuen, 27000 ... A-9
Middleboro, 7500 ... D-10
Middleton, 1800 ... B-9
Milford, 15622 ... C-8
Milbury, 7800 ... C-7
Millers Falls, 1134 ... B-5
Millerville, 1703 ... D-8
Millis, 1400 ... C-8
Millville, 1583 ... D-8
Milton, 24400 ... C-9
Monponsett, 500 ... D-10
Monson, 2600 ... D-6
Montague, 700 ... B-5
Montague City, 400 ... B-5
Monument Beach, 400 ... E-11
Morningdale, 400 ... C-7
Mt. Hernon, 600 ... A-5
Nagog, 600 ... B-8
Nahant, 3231 ... B-10
■Nantucket, 3100 ... G-12
Natick, 27800 ... C-8
Needham, 23000 ... C-9
■New Bedford, 105000 ... E-10
Newburyport, 14700 ... A-10
Newton, 87500 ... C-9
N. Abington, 4900 ... C-10
North Adams, 21500 ... A-3
N. Amherst, 885 ... B-5
■Northampton, 28800 ... B-4
N. Andover, 9362 ... A-9
N. Attleboro, 13069 ... D-9
N. Bellingham, 495 ... C-8
N. Billerica, 3500 ... B-9
Northboro, 2900 ... C-8
Northbridge, 2100 ... C-8
N. Brookfield, 2700 ... C-6
N. Carver, 360 ... D-10
N. Chelmsford, 3800 ... A-8
N. Dartmouth, 4000 ... E-10
N. Dighton, 862 ... E-9
N. Easton, 4100 ... D-9
N. Falmouth, 500 ... E-11
Northfield, 800 ... A-5
N. Grafton, 2600 ... C-7
N. Hanover, 300 ... C-10
N. Hatfield, 450 ... B-5
N. Lancaster, 500 ... B-7
N. Monson, 400 ... C-6
N. Oxford, 1700 ... C-7
N. Reading, 6083 ... B-9
N. Scituate, 1500 ... C-10
N. Uxbridge, 2200 ... D-8
N. Wilbraham, 1300 ... C-5
N. Wilmington, 472 ... B-9
N. Worcester, 500 ... C-7
Norton, 1700 ... D-9
Norwell, 800 ... C-10
Norwood, 22000 ... C-9
Nutting Lake, 1600 ... B-9
Oak Bluffs, 1564 ... F-11
Oakdale, 325 ... B-7
Ocean Gr., 1200 ... E-9
Onset, 2000 ... E-11
Orange, 4300 ... A-6
Orleans, 1100 ... E-12
Osterville, 1003 ... E-11
Otter River, 498 ... B-6
Oxford, 4500 ... C-7
Palmer, 3800 ... C-5
Paxton, 800 ... C-7
Peabody, 28000 ... B-10
Pelham, 100 ... B-5
Pembroke, 1300 ... D-10
Pepperell, 500 ... A-8
Perrins, 443 ... D-9
Pigeon Cove, 1050 ... A-11
Pinehurst, 3600 ... B-9
■Pittsfield, 55700 ... B-3
Plainville, 2557 ... D-9
Pleasant Valley ... A-9
■Plymouth, 11000 ... D-11
Plympton, 300 ... D-10
Pocasset, 365 ... E-11
Princeton, 150 ... B-7
Provincetown, 3415 ... D-12
Quincy, 85000 ... C-10
Randolph, 13539 ... C-9
Raynham, 600 ... D-9
Reading, 16440 ... B-9
Revere, 40000 ... B-9
Richmond, 400 ... B-2
Riverdale, 300 ... C-8
Rivermoor, 225 ... C-10
River Pines, 1000 ... B-9
Rochdale, 2000 ... C-7
Rock, 300 ... E-10
Rockland, 10516 ... C-10
Rockport, 3300 ... A-11
Rockville, 300 ... C-8
Rowley, 1000 ... A-10
Royalston, 200 ... A-6
Russell, 400 ... C-4
Rutland, 1700 ... B-7
Sagamore, 987 ... E-11
■Salem, 39700 ... B-10
Salisbury, 1000 ... A-10
Sandersdale ... D-6
Sandhills, 900 ... C-10
Sandwich, 1100 ... E-11
Saugus, 18489 ... B-9
Saundersville, 650 ... C-7
Saxonville ... C-8
Scituate, 1800 ... C-10
Seekonk, 7290 ... E-9
Sharon, 7814 ... C-9
Sharon Hts ... D-9
Shawsheen Village, 2600 ... A-9
Sheffield, 700 ... D-2
Shelburne, 60 ... B-4
Shelburne Falls, 2364 ... B-4
Sheldonville, 450 ... D-8
Sherborn, 450 ... C-8
Shirley, 1200 ... B-8
Shrewsbury, 13103 ... C-7
Silver Lake, 3200 ... B-9
Somerset, 10646 ... E-9
Somerset Center ... E-9
Somerville, 96000 ... B-9
S. Acton, 1700 ... B-8
S. Ashburnham, 1000 ... A-7
S. Athol, 500 ... B-6
S. Barre, 900 ... B-6
S. Bellingham, 2300 ... D-8
S. Braintree 3500 ... C-10
Southbridge, 17271 ... D-6
S. Carver, 300 ... E-10
S. Chelmsford, 1200 ... B-8
S. Dartmouth, 6000 ... F-10
S. Deerfield, 1418 ... B-5
S. Dennis, 300 ... E-12
S. Duxbury, 1000 ... D-10
S. Easton, 795 ... D-9
S. Essex, 700 ... A-10
S. Groveland, 700 ... A-9
S. Hadley, 5000 ... C-5
S. Hadley Falls, 3100 ... C-5
S. Hamilton, 2000 ... B-10
S. Hanover, 500 ... D-10
S. Hingham, 545 ... C-10
S. Lancaster, 1462 ... B-7
S. Lee, 500 ... C-3
S. Lincoln, 525 ... B-9
S. Monson, 750 ... D-6
S. Natick, 600 ... C-9
S. Royalston, 350 ... A-6
S. Sudbury, 1800 ... C-8
S. Walpole, 700 ... D-9
S. Wareham, 445 ... E-10
S. Weymouth, 4500 ... C-10
Southwick, 1600 ... D-4
S. Yarmouth, 1400 ... E-12
Spencer, 6400 ... C-7
■Springfield, 167000 ... D-5
Sterling, 700 ... B-7
Stockbridge, 850 ... C-3
Stoneham, 15817 ... B-9
Stoneville ... C-7
Stoughton, 13754 ... C-9
Stow, 900 ... B-8
Sudbury, 500 ... B-8
Sunderland, 600 ... B-5
Sutton, 500 ... C-7
Swampscott, 13070 ... B-10
Swansea, 1000 ... E-9
■Taunton, 41600 ... D-9
Teaticket, 387 ... F-11
Templeton, 1000 ... B-6
Tewksbury, 2400 ... A-9
Thompson Island, 350 ... C-10
Thorndike, 850 ... C-5
Three Rivers, 2359 ... C-5
Townsend, 1100 ... A-7
Truro, 400 ... D-12
Turners Falls, 5700 ... B-5
Tyngsboro, 800 ... A-8
Upton, 1400 ... C-8
Uxbridge, 3300 ... D-8
Vineyard Haven, 2163 ... F-11
Wakefield, 22600 ... B-9
Walpole, 6000 ... C-9
Waltham, 50800 ... B-9
Wamesit, 406 ... A-9
Waquoit, 336 ... F-11
Ware, 6400 ... C-6
Wareham, 2500 ... E-10
Wareham Center ... E-10
Warren, 1600 ... C-6
Watertown, 39300 ... B-9
Waterville, 300 ... A-6
Wayland, 2000 ... B-8
Webster, 13934 ... D-7
Wellesley, 24000 ... C-9
Wellfleet, 850 ... D-12
Wenham, 1600 ... B-10
W. Acton, 1400 ... B-8
W. Auburn, 700 ... C-7
W. Barnstable, 575 ... E-11
Westboro, 5500 ... C-8
W. Boxford, 300 ... A-9
W. Boylston, 2000 ... B-7
W. Bridgewater, 2000 ... D-9
W. Brookfield, 1400 ... C-6
W. Chelmsford, 300 ... A-8
W. Concord, 2000 ... B-8
W. Dennis, 500 ... E-12
W. Duxbury, 300 ... D-10
W. Falmouth, 362 ... F-11
Westfield, 22200 ... C-4
Westford, 700 ... B-8
W. Groton, 600 ... B-8
W. Hanover, 950 ... C-10
West Harwich, 300 ... E-12
W. Mansfield, 565 ... D-9
W. Medway, 1625 ... C-8
W. Millbury, 300 ... C-7
Westminster, 1100 ... B-7
W. Newbury, 750 ... A-10
Weston, 2500 ... B-9
W. Pelham, 600 ... B-5
Westport, 600 ... F-9
W. Springfield, 23500 ... D-5
W. Stockbridge, 800 ... C-2
W. Townsend, 900 ... A-7
W. Upton, 1100 ... C-8
W. Warren, 1244 ... C-6
Westwood, 5800 ... C-9
W. Yarmouth, 1600 ... E-12
Whitinsville, 6200 ... D-8
Whitman, 9345 ... D-10
Wilbraham, 1100 ... C-5
Wilkinsonville, 564 ... C-7
Williamsburg, 900 ... B-4
Williamstown, 6000 ... A-3
Wilmington, 1900 ... B-9
Winchendon, 4400 ... A-6
Winchester, 18126 ... B-9
Winthrop, 19000 ... B-10
Woburn, 27000 ... B-9
Woods Hole, 817 ... F-11
■Worcester, 202000 ... C-7
Woronoco, 450 ... C-4
Wrentham, 1400 ... D-9
Yarmouth, 750 ... E-12

RHODE ISLAND
Population: 862,000 (1957 Estimate)
Area: 1,214 sq. miles
Capital: Providence
CITIES & TOWNS
■ County Seats

Albion, 400 ... D-8
Allenton, 500 ... F-8
Alton, 300 ... F-7
Anthony, 1800 ... E-8
Ashaway, 1100 ... F-7
Ashton, 550 ... D-8
Barrington, 8700 ... E-9
Bradford, 1350 ... F-7
Bridgeton ... D-7
■Bristol, 11994 ... E-9
Carolina, 450 ... F-8
Central Falls, 20200 ... D-8
Chepachet, 800 ... D-8
Coventry, 3400 ... E-8
Cranston, 65500 ... E-8
■E. Greenwich, 6600 ... E-8
E. Providence, 39000 ... E-8
Esmond, 2500 ... D-8
Exeter, 250 ... F-8
Forestdale, 400 ... D-8
Georgiaville, 1400 ... D-8
Glendale, 300 ... D-8
Greenville, 3200 ... D-8
Hamilton, 600 ... F-8
Harmony, 950 ... D-8
Harrisville, 1200 ... D-7
Hope, 500 ... E-8
Hope Valley, 1000 ... F-7
Island Park, 1200 ... E-9
Jamestown, 2000 ... F-9
Kingston, 2600 ... F-8
La Fayette, 800 ... F-8
Lonsdale, 2800 ... D-8
Manville, 3600 ... D-8
Mapleville, 650 ... D-8
Middletown, 10100 ... F-9
Narragansett, 2000 ... F-8
Nasonville, 600 ... D-8
■Newport, 37000 ... F-9
N. Providence, 17200 ... E-8
N. Tiverton, 2200 ... E-9
Oakland, 450 ... D-8
Pascoag, 2500 ... D-7
Pawtucket, 82500 ... D-8
Peace Dale, 2200 ... F-8
Pt. Judith, 200 ... G-8
■Providence, 221000 ... E-8
Quonochontaug, 50 ... G-7
Riverside, 6600 ... E-8
Saunderstown, 300 ... F-8
Saylesville, 3200 ... D-8
Shannock, 375 ... F-8
Slatersville, 2000 ... D-8
Slocums, 100 ... F-8
Smithfield ... D-8
Spragueville, 400 ... D-8
Stillwater, 75 ... D-8
Tiogue Lake ... E-8
Tiverton, 2000 ... E-9
Tiverton Four Corners, 250 ... F-9
Union Village, 1500 ... D-8
Valley Falls, 8800 ... D-8
Wakefield, 3800 ... F-8
Warren, 6800 ... E-9
Warwick, 58500 ... E-8
W. Barrington, 3800 ... E-9
Westerly, 10000 ... F-7
W. Kingston, 350 ... F-8
W. Warwick, 21900 ... E-8
Wickford, 4000 ... F-8
Woonsocket, 47000 ... D-8
Wyoming, 350 ... F-7

PRINCIPAL RADIO STATIONS

City	Call Letters	Chain	Kilo-cycles	City	Call Letters	Chain	Kilo-cycles
Albany, N.Y.	WROW	C	590	New York, N.Y.	WABC	A	770
Albany, N.Y.	WPTR		1540	New York, N.Y.	WRCA	N	660
Boston, Mass.	WHDH		850	New York, N.Y.	WOR	M	710
Boston, Mass.	WBZ		1030	Providence, R.I.	WEAN	M	790
Boston, Mass.	WCOP		1150	Providence, R.I.	WJAR	N	920
Boston, Mass.	WEEI	C	590	Providence, R.I.	WPRO	C	630
Boston, Mass.	WNAC	M	680	Providence, R.I.	WHIM		1110
Bridgeport, Conn.	WICC		600	Schenectady, N.Y.	WGY	N	810
Fall River, Mass.	WSAR		1480	Springfield, Mass.	WBZA		1030
Hartford, Conn.	WDRC	C	1360	Springfield, Mass.	WHYN	C	560
Hartford, Conn.	WPOP	A, M	1410	Springfield, Mass.	WSPR		1270
Hartford, Conn.	WTIC	N	1080	Waterbury, Conn.	WATR	A	1320
Lawrence, Mass.	WCCM		800	Waterbury, Conn.	WBRY	C	1590
New Haven, Conn.	WELI		960	Worcester, Mass.	WAAB	A, M, N	1440
New York, N.Y.	WCBS	C	880	Worcester, Mass.	WORC		1310
				Worcester, Mass.	WTAG	C	580

Chain Affiliation: A-American, C-Columbia, M-Mutual, N-National.

How to find distances between cities in this table
Follow down the vertical column under the name which is first in alphabetical order until it intersects the horizontal column opposite the second name. This figure is the approximate distance in miles between the two cities. For example, the distance between Boston, Mass. and Hartford, Conn. is 102 miles.

	Albany, N.Y.	Barnstable, Mass.	Boston, Mass.	Brattleboro, Vt.	Bridgeport, Conn.	Brockton, Mass.	Canaan, Conn.	Danbury, Conn.	Fall River, Mass.	Fitchburg, Mass.	Gloucester, Mass.	Greenfield, Mass.	Hartford, Conn.	Haverhill, Mass.	Lawrence, Mass.	Lowell, Mass.	Nashua, N.H.	New Bedford, Mass.	Newburyport, Mass.	New Haven, Conn.	New London, Conn.	Newport, R.I.	New York, N.Y.	North Adams, Mass.	Northampton, Mass.	Pittsfield, Mass.	Plymouth, Mass.	Providence, R.I.	Provincetown, Mass.	Salem, Mass.	Springfield, Mass.	Stamford, Conn.	Waterbury, Conn.	Willimantic, Conn.	Woonsocket, R.I.
Barnstable, Mass.	235
Boston, Mass.	177	70
Brattleboro, Vt.	79	169	99
Bridgeport, Conn.	128	186	156	138
Brockton, Mass.	188	57	21	118	149
Canaan, Conn.	60	182	145	106	68	145
Danbury, Conn.	111	196	159	138	27	159	51
Fall River, Mass.	185	56	51	125	136	31	132	146
Fitchburg, Mass.	132	118	48	52	140	63	127	144	81
Gloucester, Mass.	204	102	32	119	188	53	177	191	83	72
Greenfield, Mass.	82	163	98	21	115	110	86	117	116	50	122
Hartford, Conn.	103	139	102	82	54	102	43	57	89	87	134	61
Haverhill, Mass.	175	103	33	96	180	54	170	184	84	50	30	100	127
Lawrence, Mass.	166	97	27	87	170	48	160	174	78	40	34	90	117	10
Lowell, Mass.	155	96	26	76	159	47	149	163	75	29	43	79	106	21	11
Nashua, N.H.	151	109	39	72	163	59	153	167	86	28	54	78	110	24	21	14
New Bedford, Mass.	198	43	54	138	149	33	145	159	13	94	86	129	102	87	81	80	92
Newburyport, Mass.	189	106	36	110	192	57	181	195	87	64	24	114	141	14	24	35	38	90
New Haven, Conn.	119	169	139	119	19	132	59	33	119	123	171	98	37	163	153	142	146	132	175
New London, Conn.	147	120	95	123	71	83	87	85	70	100	127	102	44	128	122	116	123	83	131	52
Newport, R.I.	195	71	70	135	119	50	139	131	19	91	102	126	99	103	97	92	101	28	106	100	48
New York, N.Y.	146	247	217	197	61	210	117	66	197	201	249	176	115	241	231	220	224	210	253	80	132	180
North Adams, Mass.	45	200	135	51	122	147	54	105	156	87	159	37	85	137	127	116	117	163	151	113	128	163	166
Northampton, Mass.	80	162	97	41	97	108	68	97	112	67	129	20	41	117	107	96	95	125	131	78	84	122	156	44
Pittsfield, Mass.	37	198	140	73	100	151	32	83	148	104	172	54	70	154	144	133	132	161	168	91	114	158	144	22	43
Plymouth, Mass.	210	34	36	135	163	23	159	173	36	84	68	132	116	69	63	62	75	39	72	146	97	55	224	169	130	173
Providence, R.I.	167	68	43	107	118	31	114	128	18	63	75	98	71	76	70	64	73	31	79	101	52	28	179	135	94	130	45
Provincetown, Mass.	281	46	116	215	232	103	228	242	102	164	148	209	185	149	143	142	155	89	152	215	166	117	293	246	207	245	80	115
Salem, Mass.	183	85	15	104	171	36	160	174	66	57	17	107	117	23	20	28	41	69	22	154	110	85	232	144	112	155	51	58	131
Springfield, Mass.	91	144	89	59	80	97	59	83	94	68	121	38	26	114	104	93	96	107	125	63	66	104	141	62	18	56	120	76	190	104
Stamford, Conn.	131	208	178	158	22	171	82	31	158	162	210	137	76	202	192	181	185	171	214	41	93	141	39	136	117	114	185	140	254	193	102
Waterbury, Conn.	98	166	129	108	30	129	38	30	116	114	161	87	27	154	144	133	137	129	165	21	62	101	91	102	67	70	143	98	212	144	53	52
Willimantic, Conn.	131	114	89	94	72	77	71	83	64	78	121	73	28	118	108	97	101	77	125	55	29	74	133	103	59	95	91	46	160	104	41	94	53
Woonsocket, R.I.	161	82	37	93	126	35	116	130	32	49	69	84	73	71	61	50	59	45	73	109	66	42	187	121	82	124	53	14	128	52	70	148	100	54
Worcester, Mass.	136	105	41	67	116	52	106	120	58	24	73	58	63	64	54	43	47	71	77	99	76	68	177	95	56	99	74	40	151	56	50	138	90	54	26

5600

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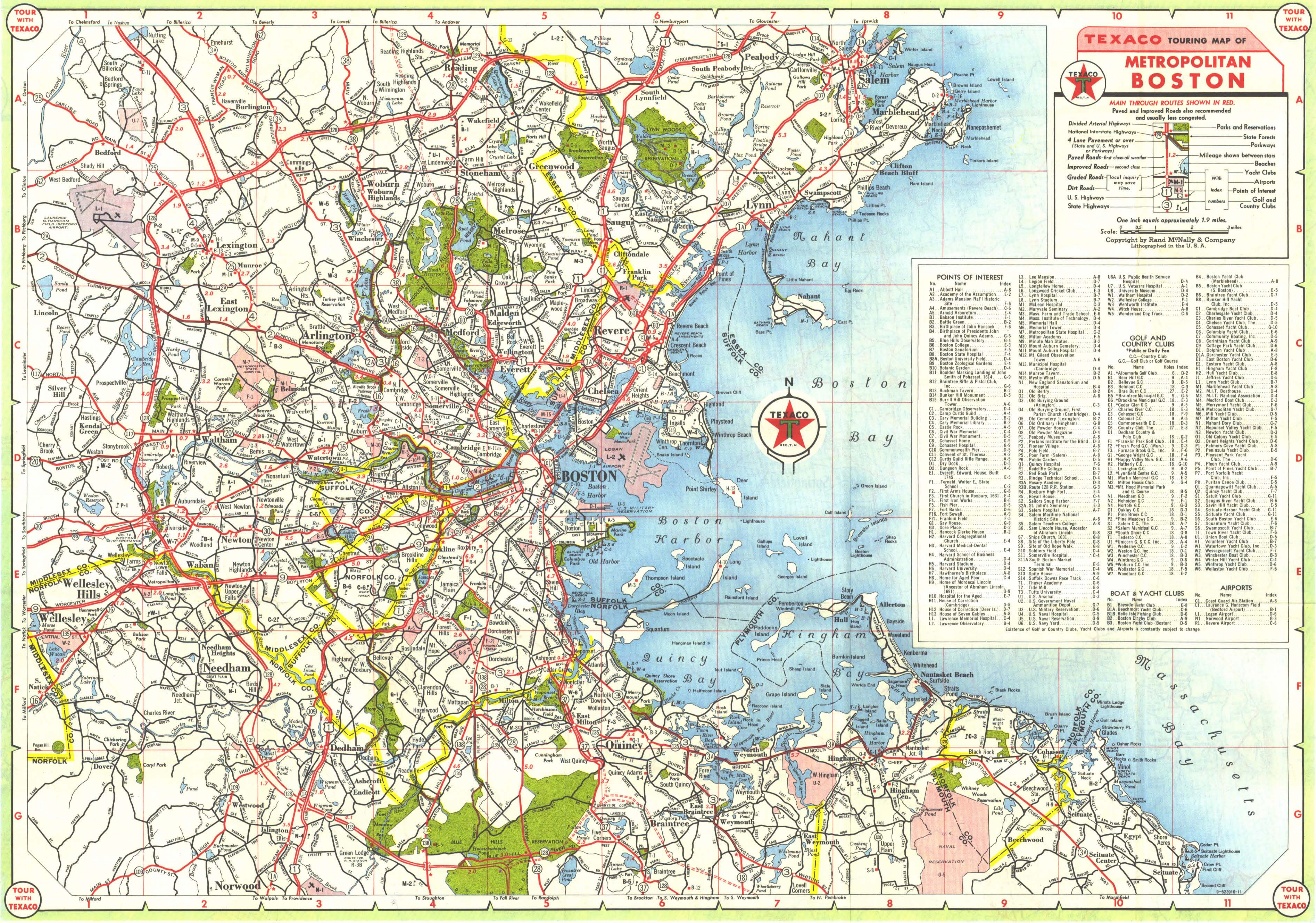
RHODE ISLAND

CONNECTICUT
MASSACHUSETTS
RHODE ISLAND

TOUR WITH TEXACO

TEXACO
REG. T. M.



TEXACO TOURING MAP OF METROPOLITAN BOSTON

MAIN THROUGH ROUTES SHOWN IN RED.
Paved and Improved Roads also recommended and usually less congested.

Divided Arterial Highways — Parks and Reservations
National Interstate Highways — State Forests
4 Lane Pavement or over (State and U. S. Highways or Parkways) — Parkways
Paved Roads-first class-all weather — Mileage shown between stars
Improved Roads—second class — Beaches
Graded Roads / Dirt Roads (local inquiry may save time.) — With index numbers: Yacht Clubs, Airports, Points of Interest, Golf and Country Clubs
U. S. Highways
State Highways

One inch equals approximately 1.9 miles.
Scale: 0 0.5 1 2 3 miles

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POINTS OF INTEREST

No.	Name	Index
A1	Abbott Hall	A-8
A2	Academy of the Assumption	E-2
A3	Adams Mansion Nat'l Historic Site	F-6
A4	Amusements (Revere Beach)	C-6
A5	Arnold Arboretum	E-4
B1	Babson Institute	E-1
B2	Battle Green	B-2
B3	Birthplace of John Hancock	F-6
B4	Birthplace of Presidents John and John Quincy Adams	G-6
B5	Blue Hills Observatory	G-4
B6	Boston College	E-3
B7	Boston Sanatorium	F-5
B8	Boston State Hospital	F-4
B8A	Boston University Field	D-4
B9	Boston Zoological Gardens	E-4
B10	Botanic Garden	D-4
B11	Boulder Marking Landing of John Smith of Pohasset, 1614	G-9
B12	Braintree Rifle & Pistol Club, Inc	G-6
B13	Buckman Tavern	B-2
B14	Bunker Hill Monument	D-5
B15	Burrill Hill Observation Tower	A-6
C1	Cambridge Observatory	D-4
C2	Camp Curtis Guild	A-4
C3	Cary Memorial Building	B-2
C4	Cary Memorial Library	B-2
C5	Castle Rock	A-5
C6	Civil War Memorial	C-4
C7	Civil War Monument	D-5
C8	Cohasset Home	G-9
C9	Cohasset Hospital	G-9
C10	Commonwealth Pier	D-5
C11	Convent of St. Theresa	A-2
C12	Curtis Guild Rifle Range	A-5
D1	Dry Dock	D-5
D2	Dungoon Rock	A-6
E1	Everett, Edward, House, Built 1745	E-5
F1	Fernald, Walter E., State School	C-2
F2	First Arms House	G-8
F3	First Church in Roxbury, 1631	E-4
F4	First Iron Works	B-6
F5	Fish Pier	D-5
F7	Fort Banks	D-6
F16	Fort Sewall	A-9
F21	Franklin Field	F-5
G1	Gay House	G-8
G3	Gore Place	D-2
H1	Hancock Clarke House	B-2
H2	Harvard Congregational Church	E-4
H3	Harvard Medical-Dental School	E-4
H4	Harvard School of Business Administration	D-4
H5	Harvard Stadium	D-4
H6	Harvard University	D-4
H7	Hawthorne's Birthplace	A-8
H8	Home for Aged Poor	C-4
H9	Home of Mordecai Lincoln (Ancestor of Abraham Lincoln, 1691)	G-9
H10	Hospital for the Aged	E-7
H11	House of Correction (Cambridge)	D-5
H12	House of Correction (Deer Is.)	D-7
H13	House of Seven Gables	A-8
L1	Lawrence Memorial Hospital	C-4
L2	Lawrence Observatory	B-4
L3	Lee Mansion	A-8
L4	Legion Field	G-7
L5	Longfellow Home	D-4
L6	Longwood Cricket Club	E-3
L7	Lynn Hospital	B-7
L8	Lynn Stadium	B-7
M1	McLean Hospital	C-3
M2	Maryvale Seminary	A-2
M3	Mass. Farm and Trade School	E-6
M4	Mass. Institute of Technology	D-4
M5	Memorial Hall	D-4
M6	Memorial Tower	D-4
M7	Metropolitan State Hospital	C-2
M8	Milton Academy	F-5
M9	Minute Man Statue	B-2
M10	Mount Auburn Cemetery	D-4
M11	Mount Auburn Hospital	D-4
M12	Mt. Gilead Observation Tower	A-6
M13	Municipal Hospital (Cambridge)	D-4
M14	Munroe Tavern	B-2
M15	Mystic Wharf	D-5
N1	New England Sanatorium and Hospital	B-4
O1	Old Belfry	B-2
O2	Old Brig	A-8
O3	Old Burying Ground (Arlington)	C-3
O4	Old Burying Ground, First Parish Church (Cambridge)	D-4
O5	Old Cemetery (Lexington)	B-2
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O7	Old Powder House	C-4
O8	Old Powder Magazine	D-4
P1	Peabody Museum	A-8
P2	Perkins Institute for the Blind	D-3
P3	Pioneer Village	A-8
P4	Polo Field	G-2
P5	Poor Farm (Salem)	A-8
P6	Public Garden	D-5
Q1	Quincy Hospital	F-6
R1	Radcliffe College	D-4
R2	Red Rock Park	B-7
R3	Rindge Technical School	D-4
R3A	Rosary Academy	D-3
R3B	Route 128 R.R. Station	G-3
R4	Roxbury High Fort	E-4
R5	Royall House	C-4
S2	Sailors Snug Harbor	F-7
S2A	St. John's Seminary	E-3
S3	Salem Hospital	A-7
S4	Salem Maritime National Historic Site	A-8
S5	Salem Teachers College	A-8
S6	Sam Lincoln House, Ancestor of Abraham Lincoln	G-8
S7	Ships Church, 1631	G-8
S8	Site of the Liberty Pole	G-8
S9	Site of Old Rope Walk	G-8
S10	Soldiers Field	D-4
S11	Somerville Hospital	C-4
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S12	Spanish War Memorial	D-4
S13	Spite House	A-9
S14	Suffolk Downs Race Track	C-6
T1	Thayer Academy	G-6
T2	Tide Mill	G-8
T3	Tufts University	C-4
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U2	U.S. Government Naval Ammunition Depot	G-7
U3	U.S. Military Reservation	D-6
U4	U.S. Naval Hospital	C-5
U5	U.S. Naval Reservation	G-9
U6	U.S. Navy Yard	D-5
U6A	U.S. Public Health Service Hospital	D-4
U7	U.S. Veterans Hospital	A-1
U8	University Museum	D-4
W1	Waltham Hospital	D-2
W2	Wellesley College	F-1
W3	Wentworth Institute	E-4
W4	Witch House	A-8
W5	Wonderland Dog Track	C-6

GOLF AND COUNTRY CLUBS

*Public or Daily Fee
C.C.—Country Club
G.C.—Golf Club or Golf Course

No.	Name	Holes	Index
A1	*Albemarle Golf Club	6	D-2
B1	Bear Hill G.C	9	A-4
B2	Bellevue G.C	9	B-5
B3	Belmont C.C	18	C-3
B4	Brae Burn C.C	27	E-2
B5	*Braintree Municipal G.C	9	G-6
B6	*Brookline Municipal G.C	18	E-3
C1	*Cedar Glen G.C	9	A-5
C2	Charles River C.C	18	E-3
C3	Cohasset G.C	18	F-9
C4	Colonial C.C	9	A-5
C5	Commonwealth C.C	18	D-3
C6	Country Club, The	27	E-3
D1	Dedham Country & Polo Club	18	G-2
F1	*Franklin Park Golf Club	18	E-4
F2	*Fresh Pond G.C. (Mun.)	9	D-3
F3	Furnace Brook G.C., Inc	9	F-6
G1	*George Wright G.C	18	F-4
H1	*Happy Valley Mun. G.C	18	A-6
H2	Hatherly C.C	18	G-10
L1	Lexington G.C	9	B-2
L2	*Lynnfield Center G.C	9	A-5
M1	Martin Memorial G.C	18	E-2
M2	Milton Hoosic Club	9	G-4
M3	*Mt. Hood Memorial Park and G. Course	18	B-5
N1	Needham G.C	9	F-2
N2	Nehoiden G.C	9	F-1
N4	Norfolk G.C	9	G-3
O1	Oakley C.C	18	D-3
P1	Pine Brook C.C	18	D-1
P2	*Pine Meadows C.C	9	B-2
S1	Salem C.C., The	18	A-7
S2	*Salem Municipal G.C	9	A-7
S3	*South Shore C.C	18	G-8
T1	Tedesco C.C	18	A-8
U1	*Unicorn G. & C.C. Inc	18	A-4
W1	Wellesley C.C	9	E-2
W2	Weston G.C. Inc	18	D-1
W3	Winchester C.C	18	B-3
W4	Winthrop G.C	9	D-6
W5	*Woburn C.C. Inc	9	B-3
W6	Wollaston G.C	18	F-5
W7	Woodland G.C	18	E-2

BOAT & YACHT CLUBS

No.	Name	Index
B1	Bayside Yacht Club	E-8
B1A	Beachmont Yacht Club	C-6
B1B	Belle Isle Fishing Club	D-6
B2	Boston Dinghy Club	A-9
B3	Boston Yacht Club (Boston)	D-5
B4	Boston Yacht Club (Marblehead)	A-8
B5	Boston Yacht Club (S. Boston)	E-5
B6	Braintree Yacht Club	G-7
B8	Bunker Hill Yacht Club, Inc	D-5
C1	Cambridge Boat Club	D-4
C2	Charlesgate Yacht Club	D-4
C3	Charles River Yacht Club	D-5
C4	Chelsea Yacht Club, The	D-5
C5	Cohasset Yacht Club	G-10
C6	Columbia Yacht Club	E-6
C7	Community Boating, Inc	D-5
C8	Corinthian Yacht Club	A-9
C9	Cottage Park Yacht Club	D-6
D1	Dolphin Yacht Club	A-8
D1A	Dorchester Yacht Club	E-5
E1	East Boston Yacht Club	D-6
E2	Eastern Yacht Club	A-8
H1	Hingham Yacht Club	F-8
H2	Hull Yacht Club	E-8
J1	Jeffries Yacht Club	D-5
L1	Lynn Yacht Club	B-7
M1	Marblehead Yacht Club	A-8
M2	M.I.T. Boathouse	D-4
M3	M.I.T. Nautical Association	D-4
M4	Medford Boat Club	C-3
M5	Merrymont Yacht Club	F-6
M5A	Metropolitan Yacht Club	G-7
M6	Mill Yacht Club	D-5
M7	Milton Yacht Club	F-5
N1	Nahant Dory Club	C-7
N2	Neponset Valley Yacht Club	F-5
N3	Newton Yacht Club	D-3
O1	Old Colony Yacht Club	E-5
O2	Orient Heights Yacht Club	D-6
P1	Palmers Cove Yacht Club	A-8
P2	Peninsula Yacht Club	E-5
P3	Pleasant Park Yacht Club, The	D-6
P4	Pleon Yacht Club	A-9
P5	Point of Pines Yacht Club	B-7
P7	Port Norfolk Yacht Club, Inc	F-5
P8	Puritan Canoe Club	E-5
Q1	Quannapowitt Yacht Club	A-5
Q2	Quincy Yacht Club	F-7
S1	Satuit Yacht Club	G-11
S2	Saugus River Yacht Club	B-6
S3	Savin Hill Yacht Club	E-5
S4	Scituate Harbor Yacht Club	G-11
S5	Scituate Yacht Club	G-11
S6	South Boston Yacht Club	E-6
S7	Squantum Yacht Club	F-6
S8	Swampscott Yacht Club	B-7
T1	Town River Yacht Club	F-6
U1	Union Boat Club	D-5
V1	Volunteer Yacht Club	B-7
W1	Watertown Yacht Club, Inc	D-3
W2	Wessagussett Yacht Club	F-7
W3	Winchester Boat Club	B-3
W4	Winter Hill Yacht Club	C-4
W5	Winthrop Yacht Club	D-6
W6	Wollaston Yacht Club	F-6

AIRPORTS

No.	Name	Index
C1	Coast Guard Air Station	A-8
L1	Laurence G. Hanscom Field (Bedford Airport)	B-1
L1	Logan Airport	D-6
N1	Norwood Airport	G-3
R1	Revere Airport	C-6

Existence of Golf or Country Clubs, Yacht Clubs and Airports is constantly subject to change

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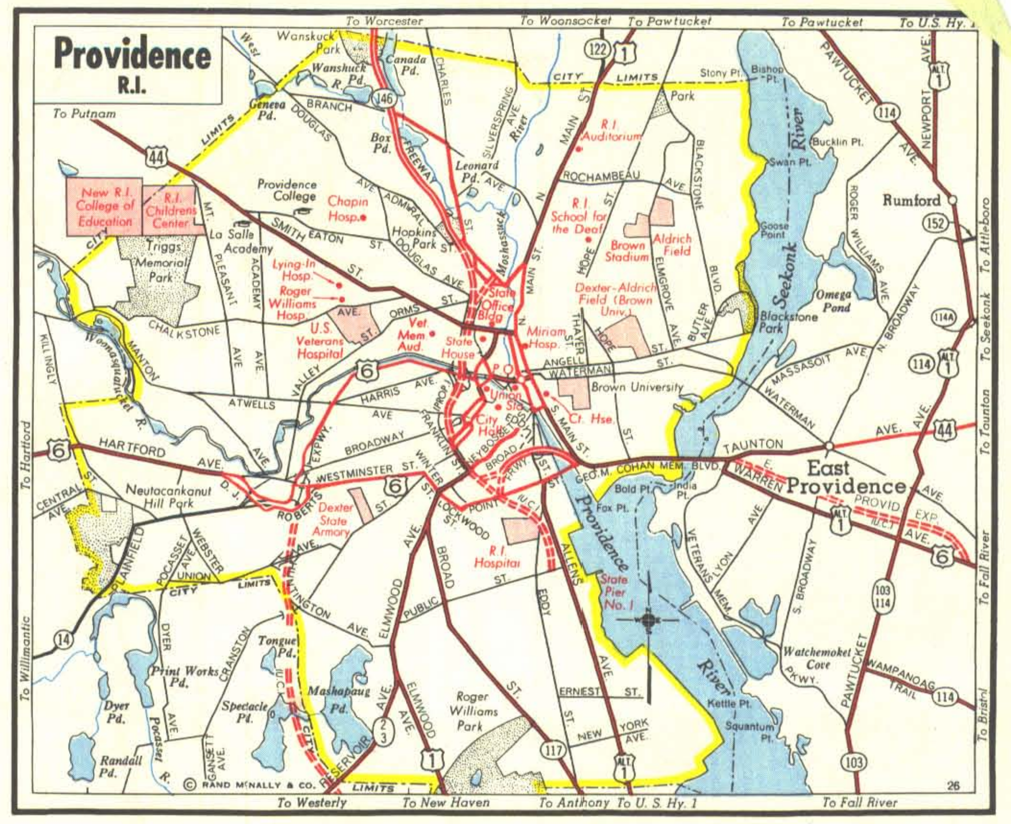

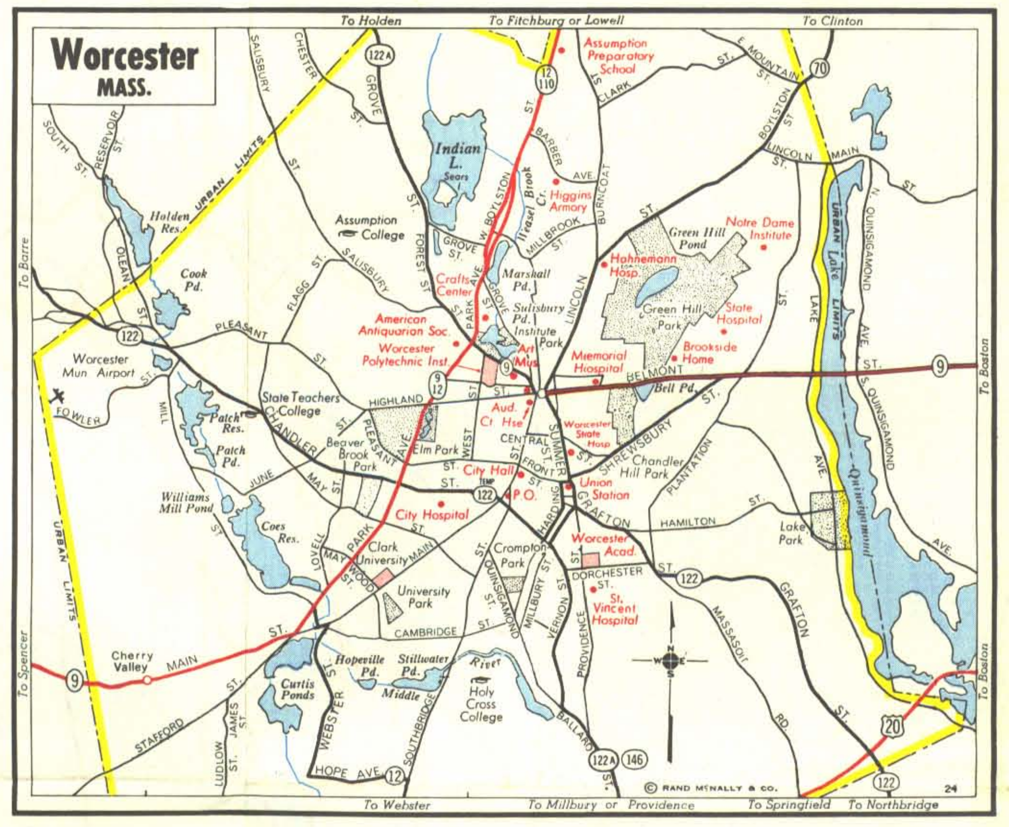

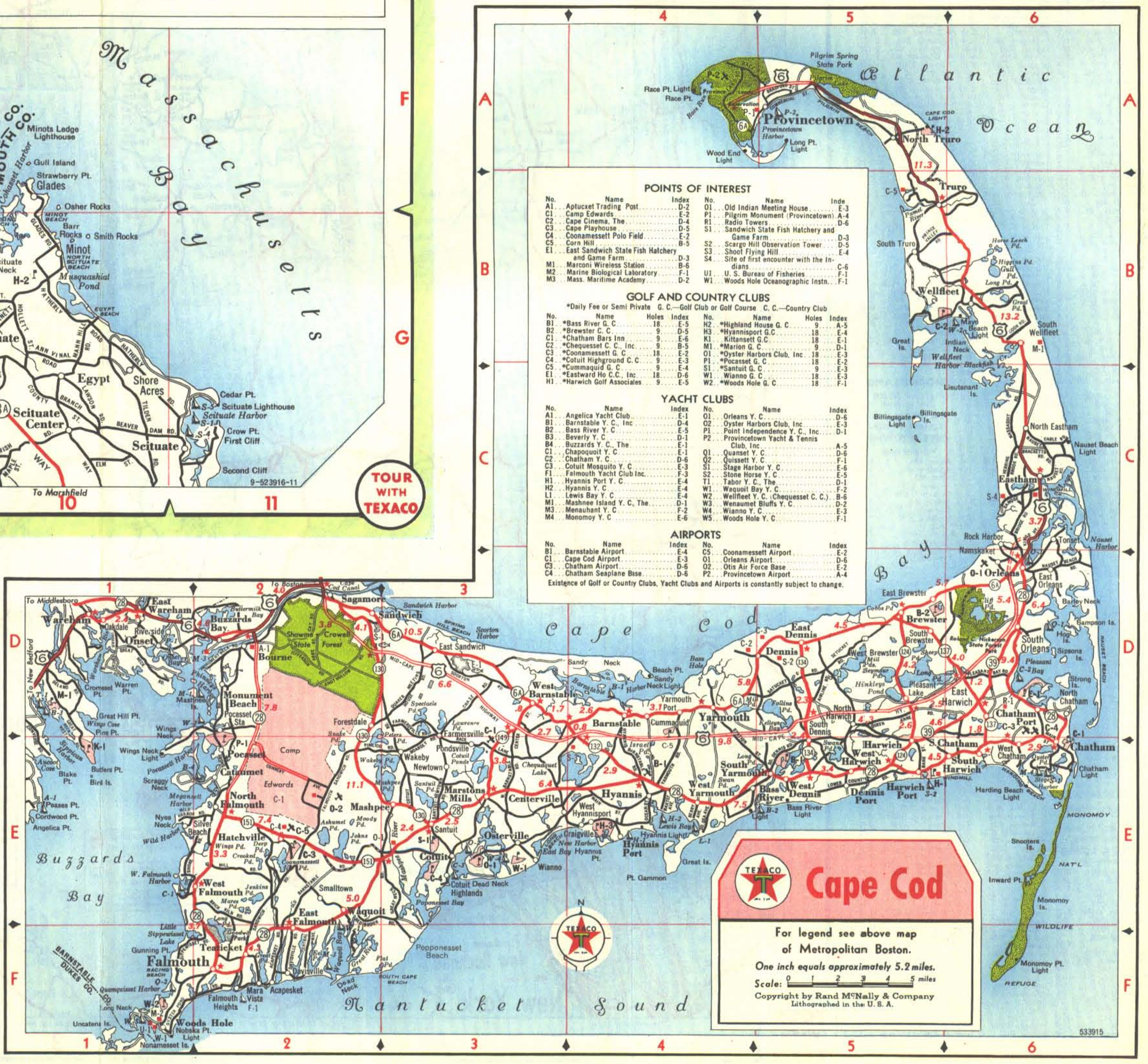

POINTS OF INTEREST

No.	Name	Index
A1	Aptucxet Trading Post	D-2
C1	Camp Edwards	E-2
C2	Cape Cinema, The	D-4
C3	Cape Playhouse	D-5
C4	Coonamessett Polo Field	E-2
C5	Corn Hill	B-5
E1	East Sandwich State Fish Hatchery and Game Farm	D-3
M1	Marconi Wireless Station	B-6
M2	Marine Biological Laboratory	F-1
M3	Mass. Maritime Academy	D-2
O1	Old Indian Meeting House	E-3
P1	Pilgrim Monument (Provincetown)	A-4
R1	Radio Towers	D-6
S1	Sandwich State Fish Hatchery and Game Farm	D-3
S2	Scargo Hill Observation Tower	D-5
S3	Shoot Flying Hill	E-4
S4	Site of first encounter with the Indians	C-6
U1	U. S. Bureau of Fisheries	F-1
W1	Woods Hole Oceanographic Instn.	F-1

GOLF AND COUNTRY CLUBS

*Daily Fee or Semi Private G. C.—Golf Club or Golf Course C. C.—Country Club

No.	Name	Holes	Index
B1	*Bass River G. C	18	E-5
B2	*Brewster C. C	9	D-5
C1	*Chatham Bars Inn	9	E-6
C2	*Chequesset C. C., Inc	9	B-5
C3	*Coonamessett G. C	18	E-2
C4	*Cotuit Highground C. C	9	E-3
C5	*Cummaquid G. C	9	E-4
E1	*Eastward Ho C.C., Inc	18	D-6
H1	*Harwich Golf Associates	9	E-5
H2	*Highland House G. C	9	A-5
H3	*Hyannisport G.C	18	E-4
K1	Kittansett G.C	18	E-1
M1	*Marion G. C	9	D-1
O1	*Oyster Harbors Club, Inc	18	E-3
P1	*Pocasset G. C	18	E-2
S1	*Santuit G. C	9	E-3
W1	Wianno G. C	18	E-3
W2	*Woods Hole G. C	18	F-1

YACHT CLUBS

No.	Name	Index
A1	Angelica Yacht Club	E-1
B1	Barnstable Y. C., Inc	D-4
B2	Bass River Y. C	E-5
B3	Beverly Y. C	D-1
B4	Buzzards Y. C., The	E-1
C1	Chapoquoit Y. C	E-1
C2	Chatham Y. C	D-6
C3	Cotuit Mosquito Y. C	E-3
F1	Falmouth Yacht Club Inc	F-3
H1	Hyannis Port Y. C	E-4
H2	Hyannis Y. C	E-4
L1	Lewis Bay Y. C	E-4
M1	Mashnee Island Y. C., The	D-1
M3	Menauhant Y. C	F-2
M4	Monomoy Y. C	E-6
O1	Orleans Y. C	D-6
O2	Oyster Harbors Club, Inc	E-3
P1	Point Independence Y. C., Inc	D-1
P2	Provincetown Yacht & Tennis Club, Inc	A-5
Q1	Quanset Y. C	D-6
Q2	Quissett Y. C	F-1
S1	Stage Harbor Y. C	E-6
S2	Stone Horse Y. C	E-5
T1	Tabor Y. C., The	D-1
W1	Waquoit Bay Y. C	F-2
W2	Wellfleet Y. C. (Chequesset C. C.)	B-6
W3	Wenaumet Bluffs Y. C	D-2
W4	Wianno Y. C	E-3
W5	Woods Hole Y. C	F-1

AIRPORTS

No.	Name	Index
B1	Barnstable Airport	E-4
C1	Cape Cod Airport	E-3
C3	Chatham Airport	D-6
C4	Chatham Seaplane Base	D-6
C5	Coonamessett Airport	E-2
O1	Orleans Airport	D-6
O2	Otis Air Force Base	E-2
P2	Provincetown Airport	A-4

Existence of Golf or Country Clubs, Yacht Clubs and Airports is constantly subject to change.

Cape Cod

For legend see above map of Metropolitan Boston.
One inch equals approximately 5.2 miles.
Scale: 0 1 2 3 4 5 miles
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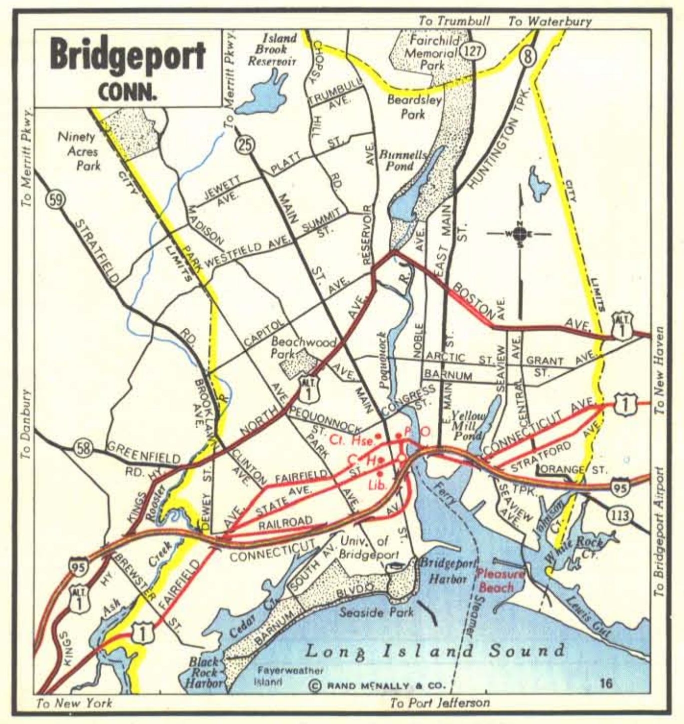

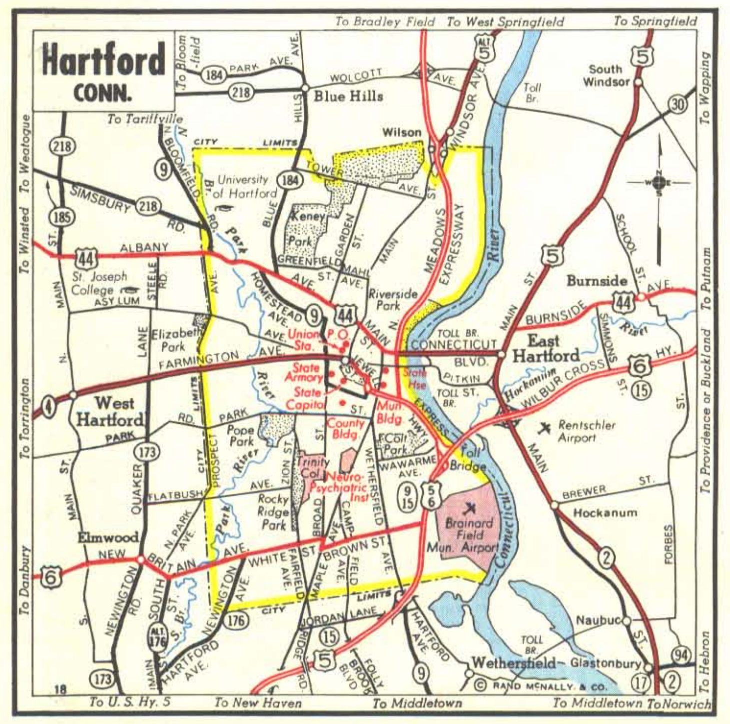

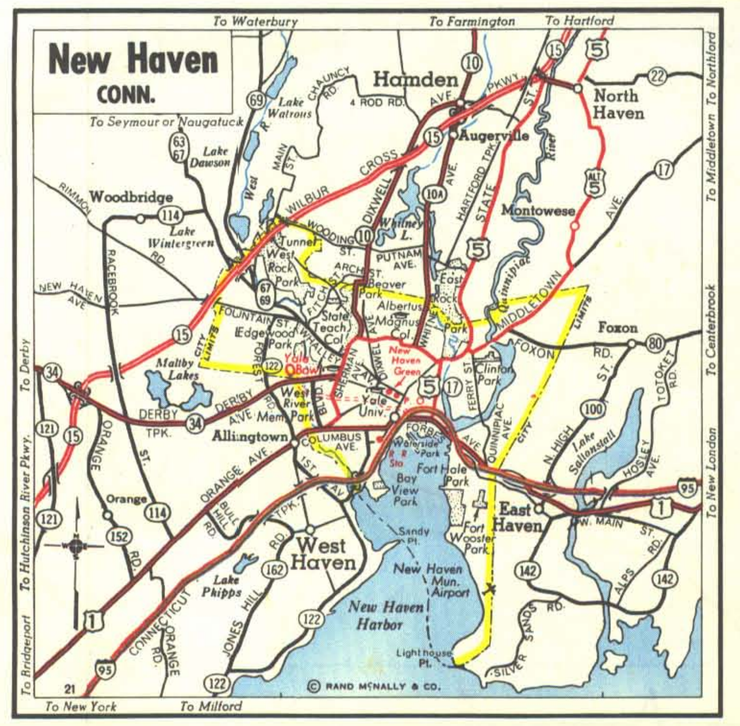

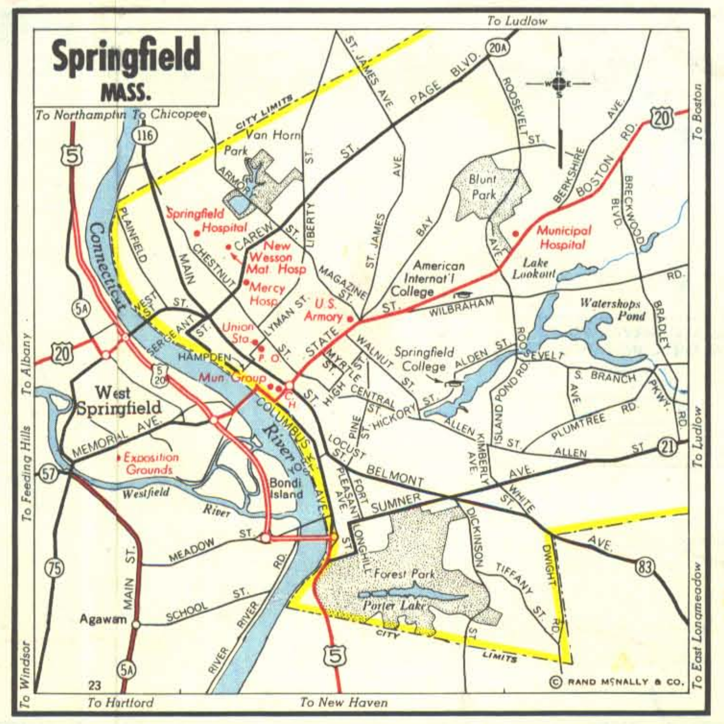

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CONNECTICUT
HIGHWAY DEPARTMENT

KENT QUADRANGLE
CONNECTICUT
7.5 MINUTE SERIES (TOPOGRAPHIC)

Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and Connecticut Geodetic Survey

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1944. Field check 1948
Revised 1955

Polyconic projection. 1927 North American datum
10,000-foot grid based on Connecticut coordinate system

12½°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1955

SCALE 1:31 680

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

CONNECTICUT
QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U. S. Route — State Route

KENT, CONN.
N4137.5—W7322.5/7.5
1955

Blue = route to mine

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CONNECTICUT
HIGHWAY DEPARTMENT

NEW MILFORD QUADRANGLE
CONNECTICUT
7.5 MINUTE SERIES (TOPOGRAPHIC)

Blue = route to mine

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Topography from aerial photographs by multiplex methods
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Polyconic projection. 1927 North American datum
10,000-foot grid based on Connecticut coordinate system

Area along Shepaug Reservoir subject to controlled inundation to 200 feet

12½° MAGNETIC NORTH TRUE NORTH
APPROXIMATE MEAN DECLINATION, 1955

SCALE 1:31680

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

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QUADRANGLE LOCATION

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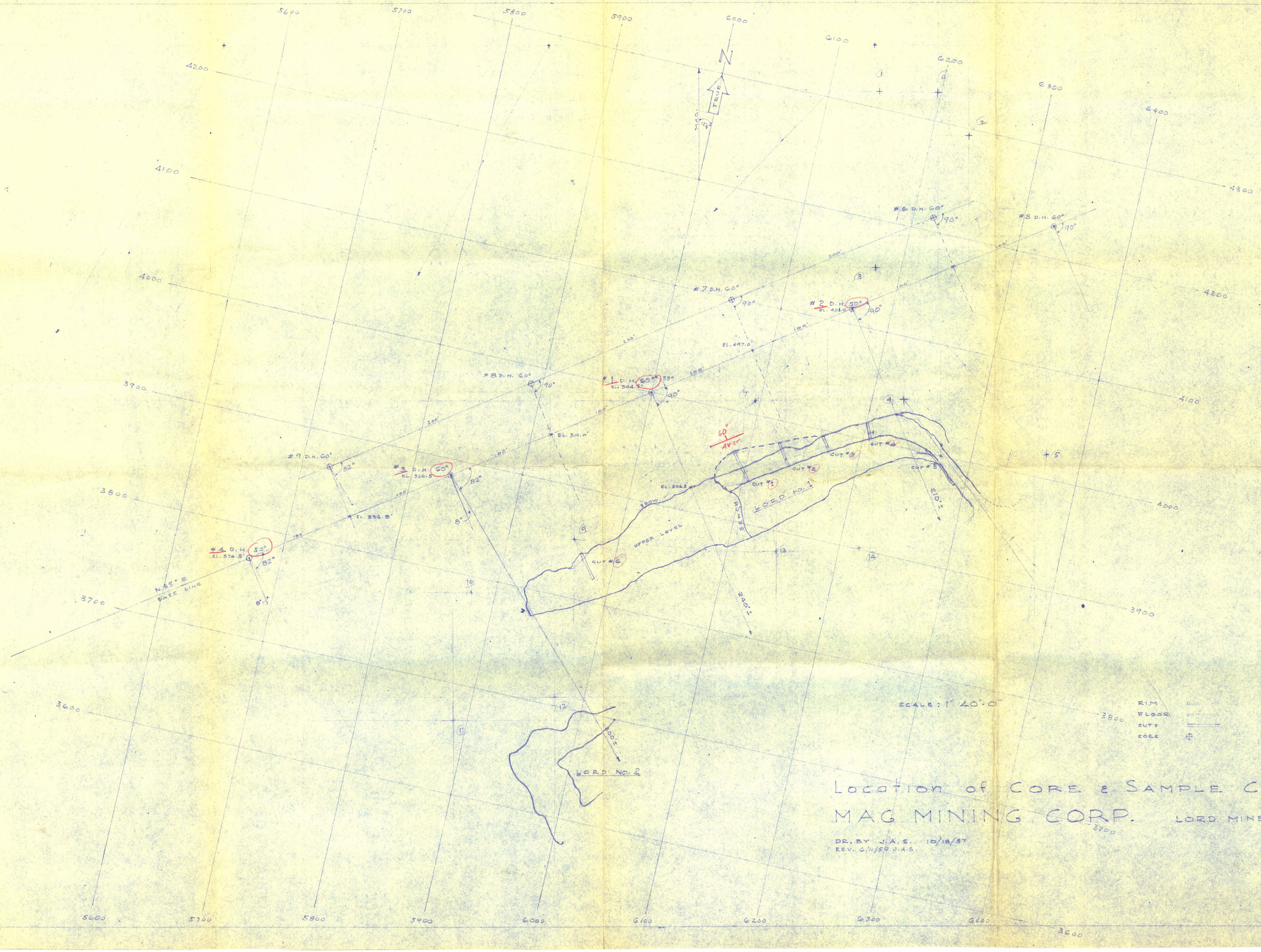
U. S. Route — State Route

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1956
M R 1931

NEW MILFORD, CONN.
N4130—W7322.5/7.5
1955



Holes not foreshortened to show fan

Location of Core & Sample Cuts
MAG MINING CORP. LORD MINES No. 1 & 2

DR. BY J.A.S. 10/18/57
REV. 6/11/58 J.A.S.

Location of Drill Holes & Cuts
MAG MINING CORP. MINES No. 1 & 2.
DR. BY. JAS. 6/9/59