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DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 4385

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| To: | 600 | Date | 7/18/56 |
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## DO NOT DETACH

## CONTROLLED DOCUMENT

Docket Copy
Surname: Selfridge
Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

NOV 28 1956

Hon. Gordon Allott
United States Senate
Washington 25, D. C.

Re: Docket No. DMEA-4385-Beryl,
Columbium, Tantalum, Uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

My dear Senator Allott:

Reference is made to your inquiry of November 21, 1956, on procedures for further review of the denied application of the Phil-Mar Oil Company, and the basis for denial.

The subject application denied on October 17, 1956, was reviewed after receipt of a letter from the company attorney, Richard B. Paynter, on October 25, 1956. Mr. Paynter requested the reasons for denial, reconsideration of the application, and a re-examination of the property. Our reply is quoted in part below and outlines the procedure for reopening the application:

"We have carefully reviewed the Field Team examination report and other data available concerning this property. We were aware that some $12,000.00 worth of beryl ore had been mined from nearby claims. However, our denial is based upon the sporadic occurrences of beryl, columbium, tantalum and uranium, and the lack of geologic evidence indicating the probability of finding minable concentrations of these minerals.

"Inasmuch as the field examination was made by two Government geologists and two Government engineers, accompanied by technical personnel from your company, we do not feel a re-examination at this time would change our opinion. However, if the applicant does additional work on the property of sufficient scope to obtain more favorable information, we would be pleased to reopen the application. This may be done by submitting new data and referring to the original application by docket number."

R.G.S.

Each application is analyzed and our decision is based upon the study of the facts. In this case the denial has been based upon the sporadic mineralization and not upon the assumption that pegmatites are poor hosts for commercial mineralization.

We have again re-examined all of the data available in this case and find after a thorough study that in our opinion the Government decision for denial is justified. We appreciate your interest in this case and will be pleased to furnish further information if desired.

Sincerely yours,

G. O. Mittendorf (for)

Administrator

LGHouk:gad 11/27/56
Copy to: Admr. R. File
Docket
Field Team, Region III
Mr. Kiilsgaard, 5222
Mr. Eilertsen, 3649
Mr. Houk

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

November 26, 1956

Memorandum

To: Administrator

From: George C. Selfridge
Special Assistant

Subject: Docket No. DMEA-4385 - Beryl, Columbium-tantalum, Uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

In a telephone conversation today, Messrs. Traver and Harshman discussed Senator Gordon Allott's letter of November 21, 1956, relating to the denial of the subject application.

The Field Team pointed out that it did not agree with the third paragraph of the Senator's letter. It further thought that a good report had been written on the property and that study of the report would show that it would cost more per cubic foot of excavation, using the Applicant's figures, than the potential gross value of recoverable minerals per cubic foot. The writer stated that that was also his recolletion of the report and that the information would be passed on to the Nonmetallic Minerals Division.

George C. Selfridge

George C. Selfridge

Selfridge
Johnson

November 26, 1956

Memorandum

To: Administrator

From: George C. Selfridge
Special Assistant

Subject: Docket No. DMEA-4385 - Beryl, Columbium-tantalum, Uranium
PETEL-Mar Oil Company
New Hope Claims
Larimer County, Colorado

In a telephone conversation today, Messrs. Trever and Marshman discussed Senator Gordon Allott's letter of November 21, 1956, relating to the denial of the subject application.

The Field Team pointed out that it did not agree with the third paragraph of the Senator's letter. It further thought that a good report had been written on the property and that study of the report would show that it would cost more per cubic feet of excavation, using the Applicant's figures, than the potential gross value of recoverable minerals per cubic feet. The writer stated that that was also his recollection of the report and that the information would be passed on to the Nonmetallic Minerals Division.

George C. Selfridge

GCSelfridge/esf
11/27/56
cc to: Docket
Admr. R. File
Mr. Houk
Mr. Selfridge

GORDON ALLOTT
COLORADO

COMMITTEES:
LABOR AND PUBLIC WELFARE
DISTRICT OF COLUMBIA

# United States Senate

WASHINGTON, D. C.

November 21, 1956

RECEIVED
26 1956
D.M.E.A.

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

RE: Docker No.DMEA-4385-beryl
columbium tantalum,uranium
Phil-Mar Oil Co
New Hope Claims
Larimer County, Colorado

Dear Mr. Mittendorf:

I am advised that the request by Phil-Mar Oil Company for a DMEA Loan was on October 17, 1956, refused.

Would you please inform me whether there is any procedure for further review of this application? If not, would you please explain in detail the basis for denying this application.

It appears that the denial may have been based on the assumption, long held by most people in the business, that pegmatite dykes are not associated with commercially useable quantities of critical minerals. I am informed, by responsible individuals, not associated with Phil-Mar, that developments in recent months necessitate a revision of this assumption. Denver-Golden Uranium Company reports that from one of their front range operations they have shipped 32 carloads of uranium ore derived from pegmatitic formations.

Your further consideration of the application of Phil-Mar Company will be appreciated.

Sincerely yours,

Gordon Allott - U.S.S.

GA:Emr

CC: W. M. TRAVER
Executive Officer DMEA, Denver.

cus

FILE COPY
SURNAME:

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

NOV - 5 1956

Mr. Richard Paynter
114 E. Kiowa Avenue
Fort Morgan, Colorado

Re: Docket No. DMEA-4385 (Beryl)
Columbium, Tantalum, Uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

Dear Mr. Paynter:

Reference is made to your letter of October 25, 1956, requesting reconsideration of the application of the Phil-Mar Oil Company for exploration assistance and a re-examination of the property.

We have carefully reviewed the Field Team examination report and other data available concerning this property. We were aware that some $12,000.00 worth of beryl ore had been mined from nearby claims. However, our denial is based upon the sporadic occurrences of beryl, columbium, tantalum and uranium, and the lack of geologic evidence indicating the probability of finding minable concentrations of these minerals.

Inasmuch as the field examination was made by two Government geologists and two Government engineers, accompanied by technical personnel from your company, we do not feel a re-examination at this time would change our opinion. However, if the applicant does additional work on the property of sufficient scope to obtain more favorable information, we would be pleased to reopen the application. This may be done by submitting new data and referring to the original application by docket number.

Sincerely yours,

Frank E. Johnson

Acting Administrator

LGHouk/FEJohnson/gad/bih
11-5-56
cc to: Docket
Adm. Reading File
Field Team, Reg. III (2)
Mr. Kiilsgaard R-5222
Mr. Eilertsen R-3649
Mr. Hopkins
Mr. Houk

Docket Copy
Surname:
Houk
Selfridge

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Mr. Richard B. Paynter
114 E. Kiowa Avenue
Fort Morgan, Colorado

Re: Docket No. DMEA-4385-Beryl,
Columbium, Tantalum, Uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

Dear Mr. Paynter:

Reference is made to your letter of October 25, 1956, requesting reconsideration of your application denied October 17, 1956, and a re-examination of the property.

A thorough review of the Field Team examination report and other data indicated that the exploration assistance requested in your application is not warranted. The denial action was taken with the knowledge that some $12,000.00 worth of beryl ore had been mined from nearby claims. Our denial is based upon the sporadic occurrence of beryl, columbium, tantalum and uranium, and lack of geologic evidence to infer the probability of finding concentrations of these minerals in sufficient quantity to justify Government participation in exploration of the subject property. Inasmuch as the field examination was made by two Government geologists and two Government engineers, accompanied by technical personnel from your company, we do not feel a re-examination at this time would change our opinion. However, if the applicant does additional work on the property of sufficient scope to obtain more favorable information, we would be pleased to reopen the application. This may be done by submitting new data and referring to the original application by docket number.

Sincerely yours,

Administrator

LGHouk:gad 11/2/56
Copy to: Admr. R. File
Docket
Field Team, Region III
Mr. Kiilsgaard, 5222
Mr. Eilertsen, 3649
Mr. Hopkins
Mr. Houk

PAYNTER AND PAYNTER
ATTORNEYS AT LAW
114 E. KIOWA AVENUE
FORT MORGAN, COLORADO

RECEIVED
OCT 29 1956

October 25, 1956

WILLIAM B. PAYNTER
RICHARD B. PAYNTER

OFFICES
FORT MORGAN, COLORADO
BRUSH, COLORADO

Mr. C. O. Mittendorf
Administrator Defense Mineral Exploration Adm.
United States Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-4385-Beryl,
Columbium, Tantalum, Uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

Dear Sir:

With reference to the above entitled loan application and your letter addressed to Phil-Mar Oil Company at Estes Park, Colorado, please be advised that the Directors of this company were somewhat surprised to hear that the loan had not been approved, particularly since some $12,000 worth of beryl ore had been taken out of claims practically adjacent to the properties included in the loan application by Phil-Mar Oil Company.

Can you advise us more fully as to the reason our company's loan was turned down.

If possible, we should like a reconsideration of the loan application and perhaps a re-examination of the properties upon a more thorough basis than was used by your department when the original loan application was filed.

I am the company attorney and any assistance you could give us would be greatly appreciated.

Yours very truly,

PAYNTER AND PAYNTER

Richard B. Paynter

RBP/pl

cw

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

DOCKET COPY
Surname:
Hopkins
Houk
Kiilsgaard
Yoder
Selfridge

OCT 1 7 1956

Phil-Mar Oil Company
P. O. Box 176
Estes Park, Colorado

Re: Docket No. DMEA-4385-beryl, columbium, tantalum, uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

Gentlemen:

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

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

Careful study of all our information indicates to us that the probability of disclosing significant reserves of beryl, columbium, tantalum or uranium are not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JHopkins:ms 10/1/56
Copy to: Docket
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Dilorisan 3649
Mr. Houk
Admr. R. File
Field Team, Region V

RGR.

IN REPLY REFER TO:

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

RECEIVED
OCT - 9 1956

October 8, 1956

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of Field Team report, DMEA Docket 4385, Phil-Mar Oil Company, New Hope Claims, Larimer County, Colorado

The Field Team has examined the applicant's property, accompanied by representatives of the applicant. They found numerous poorly-zoned pegmatites containing trace amounts of uranium and very small quantities of beryl. On the basis of their examination they concluded there is little probability of finding significant amounts of beryl, columbium, tantalum, or uranium on the property. Further, the cost of the proposed work is not commensurate with the mineral production thus far recovered from the property or with what might be expected to be recovered as result of the exploration.

Field examiners recommend denial of the application and I concur.

T. H. Kiilsgaard

T. H. Kiilsgaard

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C. 600

October 2, 1956

Memorandum

To: Mr. C. O. Mittendorf, Administrator

From: Lawrence G. Houk, Chief
Nonmetallic Minerals Division

Subject: A denial of exploration assistance and Summary Report

By: James Hopkins

1. Docket No. DMEA-4385-beryl, columbium, tantalum, uranium
Property: New Hope Group of Claims - 57 claims
Larimer County, Colorado
Secs. 13-114 T. 6 N., R 72 W
Secs. 18, 19, 17, and 9 T. 6 N., R 71 W 6th Principal Meridian
Applicant: Phil-Mar Oil Company
P. O. Box 176
Estes Park, Colorado
Application: dated July 10, 1956
Work proposed:
Trenching
Excavating 612,500 cu. ft. = 30,625 tons
Cost: $107,575.00 or $3.51/ton
No contract - application denied

2. Comments:

The applicant applied for exploration assistance to explore eight pegmatite dikes by digging a trench across each dike. A total of 612,500 cubic feet of material would be removed at a cost of $107,575.00 or $3.51 per ton.

The Phil-Mar Oil Company's property is located in the Crystal Mountain district about a mile northeast of the Myatt pegmatite which has been one of the larger and more productive beryl deposits in the area.

The country rock is Precambrian Idaho Springs quartz-mica schist into which a number of pegmatites have been intruded.

The operator has been mining a pegmatite on the "Sierra Mountain Lode" claim and recovered 21 tons of beryl and 4 to 5 tons of uranium-bearing rock from a pit measuring 100 feet by 40 feet and 15 feet deep.

During the examination only 3 to 4 small beryl crystals were observed. One small area of the pegmatite surface showed small quantities of meta-torbernite as thin coatings along tight fractures.

It is estimated that 5,000 tons of pegmatite material have been removed to recover the 21 tons of beryl or 0.4 % beryl in the pegmatite. At present prices, the value would be about $2.10 per ton.

Zoning is slight and the beryl occurence is sporadic. Radio-active spots are small and isolated. No appreciable deposition of columbite-tantalite was observed.

It is concluded that the beryl, columbium, tantalum and uranium minerals in these unzoned pegmatites could not be explored by the proposed method and there is slight probability that a significant discovery would result from any exploration work.

The Field Team therefore, recommends denial of the application. The Nonmetallic Minerals Division and the Commodity Divisions of the Geological Survey and Bureau of Mines concur in the recommendation.

James Hopkins

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

RECEIVED
OCT - 2 1956

Date 10/1/56

DMEA Docket No. 4385
DMEA Contract No.
Commodity Uranium
Name of applicant Phil-Mar Oil Company
Name of property New Hope Claims
Location of property Larimer County, Colorado
Estimated cost of project $107,575.00

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee
Subject: Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: 9/14/56. 2. Date received by reviewer: 9/24/56.

3. Prior reports on this property known to reviewer: Yes ☐, No ☐.

4. Prior reports on nearby properties known to reviewer: Yes ☐, No ☐.

5. Information available on past production: Yes ☐, No ☐.

6. Other pertinent factors known to reviewer: Yes ☐, No ☐.

7. Explain items marked yes above:

8. Factors needing special consideration:
a. Location ☐
b. Ownership ☐
c. Evidence of mineralization ☐
d. Geology ☐
e. Proposed exploration method ☐
f. Alternate exploration method ☐
g. Costs ☐
h. _____ ☐

9. Action advised:
a. Obtain information from applicant ☐
b. Refer to Field Team ☐
c. Denial ☒
d. Agree with Field Team ☒
e. Disagree with Field Team ☐
f. Suggest alternate plan ☐
g. Request another examination ☐
h. Approval ☐
i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)
Mr. J. O. Hosted, Washington Representative of the Atomic Energy Commission, assisted in the review.

600

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

RECEIVED
OCT 12 1956

Date September 26, 1956

DMEA Docket No. 4385
DMEA Contract No.
Commodity Beryl - Columbium-Tantalum - Uranium
Name of applicant Phil-Mar Oil Co.
Name of property New Hope Claims
Location of property Larimer County, Colorado
Estimated cost of project $107,575.00

Memorandum

To: Ernest W. Ellis, DMEA Commodity Group Member

From: Kenneth B. Higbie, USBM Commodity Group Member

Subject: Review of Joint Examination Report
(Application, Field Team Report, etc.)

1. Date of subject document: 9/17/56. 2. Date received by reviewer: 9/25/56.

3. Prior reports on this property known to reviewer: Yes [ ], No [x].

4. Prior reports on nearby properties known to reviewer: Yes [ ], No [x].

5. Information available on past production: Yes [ ], No [x].

6. Other pertinent factors known to reviewer: Yes [ ], No [x].

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location [ ]
   b. Ownership [ ]
   c. Evidence of mineralization [ ]
   d. Geology [ ]
   e. Proposed exploration method [ ]
   f. Alternate exploration method [ ]
   g. Costs [ ]
   h. None [x]

9. Action advised:
   a. Obtain information from applicant [ ]
   b. Refer to Field Team [ ]
   c. Denial [x]
   d. Agree with Field Team [x]
   e. Disagree with Field Team [ ]
   f. Suggest alternate plan [ ]
   g. Request another examination [ ]
   h. Approval [ ]
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)
No signs of columbium-tantalum-bearing minerals have been found in this property by the field team.

Kenneth B. Higbie
Kenneth B. Higbie

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

RECEIVED
SEP 27 1956

Date September 26, 1956

DMEA Docket No. 4385
DMEA Contract No. -
Commodity Beryl-Columbium-Tantalum-Uranium
Name of applicant Phil-Mar Oil Company
Name of property New Hope Claims
Location of property Larimer County, Colorado
Estimated cost of project $107,575.00

Memorandum

To: Lawrence G. Houk, Chief, Non-Metallic Mineral Division, DMEA

From: Donald E. Eilertsen, Physical Scientist, Branch of Rare and Precious Metals

Subject: Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: 9/14/56. 2. Date received by reviewers: 9/25/56

3. Prior reports on this property known to reviewers: Yes [x], No [ ].

4. Prior reports on nearby properties known to reviewers: Yes [ ], No [x].

5. Information available on past production: Yes [ ], No [x].

6. Other pertinent factors known to reviewers: Yes [ ], No [x].

7. Explain items marked yes above:
7/25/56 Review of Docket No. 4385, Application for DMEA Aid.
Recommended examination by field team.

8. Factors needing special consideration:
a. Location [ ]
b. Ownership [ ]
c. Evidence of mineralization [ ]
d. Geology [ ]
e. Proposed exploration method [ ]
f. Alternate exploration method [ ]
g. Costs [ ]
h. _____ [ ]

9. Action advised:
a. Obtain information from applicant [ ]
b. Refer to Field Team [ ]
c. Denial [x]
d. Agree with Field Team [x]
e. Disagree with Field Team [ ]
f. Suggest alternate plan [ ]
g. Request another coordination [ ]
h. Approval [ ]
i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)
Above report sent to Mr. Higbie 9/25/56 for his comments regarding columbium and tantalum. From there, the report goes to Mr. Crawford for comments on uranium.

D.E.E.

TRANSMITTED

SEP 21 1956

REGION III

Memorandum

Building 20
Denver Federal Center
Denver 2, Colorado
September 17, 1956

RECEIVED
SEP 24 1956

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Marshman
John F. Shaw

Subject: Joint Examination Report, Docket DMEA 4385 (Beryl-Uranium) Phil-Mar Oil Company (New Hope Claims) Larimer County, Colorado

Enclosed are the original and nine copies of a Joint Engineering and Geological Report by J. Adams and L. McGreevy of the Geological Survey and D. E. Redman and C. R. Garrett, Jr. of the Bureau of Mines covering Docket DMEA 4385.

Phil-Mar Oil Company applied for DMEA assistance to explore the New Hope claims for beryl, columbium, tantalum and uranium. The applicant proposed to explore eight pegmatite dikes by digging a trench across each dike. A total of 612,500 cubic feet of material would be removed, at an estimated cost of $107,575.00

The field examination was made on August 20, 1956. The examining team concluded that there was little possibility of finding a significant amount of beryl, columbium, tantalum or uranium on the Phil-Mar Company's claims.

It is recommended that the application be denied.

E. N. Marshman
Member Field Team

John F. Shaw
Supervising Mining Engineer

JFS:sk

cc: 9
EMMarshman
DMEA 4385
Chron.

Referred to
DMEA OPERATING COMMITTEE
9-26-56
(GRC)

FOR UNITED STATES GOVERNMENT USE ONLY

TRANSMITTED
SEP 21 1956

RECEIVED
SEP 24 1956

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA A382

PHIL-MAR OIL COMPANY

Ray Rose Claims

Larimer County, Colorado

Beryl-Columbium-Tantalum-Uranium

Joint Engineering and Geological Report

By


J. Adams
L. McGreevy
Geological Survey

D. E. Redman
C. E. Garrett, Jr.
Bureau of Mines


September 14, 1956


DMEA [illegible]
9-26-56

DMEA 4385

PHIL-MAR OIL COMPANY
NEW HOPE CLAIMS
LARIMER COUNTY, COLORADO

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CONTENTS

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Location, topography and physical features.....2
History, production and ownership.....3
Geology.....4
Present status.....8
Applicant's project proposal and costs.....9
Conclusions and recommendations.....11

ILLUSTRATIONS

Figure — Follows page

1. Map showing location of Phil-Mar Oil Company, Mining Property, Larimer County, Colo. DMEA 4385.....2

2. Sketch map showing location and access road to the Phil-Mar Oil Company, New Hope Claims, Larimer County, Colorado DMEA 4385.....2

3. Phil-Mar Company Property Layout and Proposed Exploration DMEA 4385.....9

4. Geologic and Topographic map of the Phil-Mar Oil Company Property, Larimer County, Colo.....11

DMEA 4365

PHIL-MAR OIL COMPANY
NEW MOPE CLAIMS
GENERAL MOUNTAIN DISTRICT
LARIMER COUNTY, COLORADO

RECEIVED
SEP 24 1956

## INTRODUCTION AND SUMMARY

Phil-Mar Oil Company, P. O. Box 176, Estes Park, Colorado, a Colorado corporation applied to the DMEA for assistance in exploring for beryl, columbium, tantalum and uranium on its unpatented claims. The proposal is to prospect eight pegmatite dikes by digging a trench across each dyke. A total of 612,500 cubic feet of material would be removed, at an estimated cost of $107,575.00.

A field examination was made on August 20, 1956 by J. Adams, geologist, U. S. Geological Survey; L. Medrovy, geologist, U. S. Geological Survey; C. R. Garrett, mining engineer, U. S. Bureau of Mines and R. K. Hudson, mining engineer, U. S. Bureau of Mines. The examiners were accompanied by Leon Phillips, president, Phil-Mar Oil Company; Carl Samuelson, business manager, Phil-Mar Oil Company; H. L. Hidy, stockholder; John Phillips, stockholder; Maurice Wunsch, prospective stockholder; Mr. Brockenbrow, prospective stockholder; Douglas Whitrow, consulting mining engineer and Alfred Hayl, contracting engineer.

The first pit visited by the examining team is on the Storm Mountain claim from which there is a reported production of 21 tons of beryl and 4 or 5 tons of uranium-bearing material. The second pit, located on the Hide Above claim, was a dozer cut about 6 feet

wide and 40 feet long, to a maximum depth of 6 feet. A production of 1,000 pounds of beryl and 70 pounds of uranium-bearing material is reported to have come from this pit. A dozer cut across a dike on the Bar Hope No. 9 claim showed some beryl deposition. Some blasting has been done on a hard pegmatite dike located on the Bar Hope No. 4 claim, where a few beryl and radioactive specimens can be found. Radioactive spots occur in all of the pits but they are small and isolated. No marked zoning of the dykes was noted.

It is concluded that there is little probability of finding significant concentrations of beryl, columbium, tantalum and uranium minerals on the Phil-Mar Company's claims.

The examining team recommends that the application for assistance be denied.

## ACKNOWLEDGMENTS

The representatives of the Phil-Mar Oil Company who accompanied the inspection team seemed sincere in their efforts to supply any information regarding the property.

## LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Phil-Mar Oil Company's claims are situated on the southerly slopes of Storm Mountain, in secs. 13 and 24, T. 6 N., R. 72 W., and secs. 18, 19, 17, 9 and 16, T. 6 N., R. 71 W., 6th P. M., Larimer County, Colorado (figs. 1 and 2). The claims are reached by traveling west and north from Loveland, Colorado to Masonville, Colorado, thence westerly up Buckhorn creek for 3.5 miles to the Stringtown road.

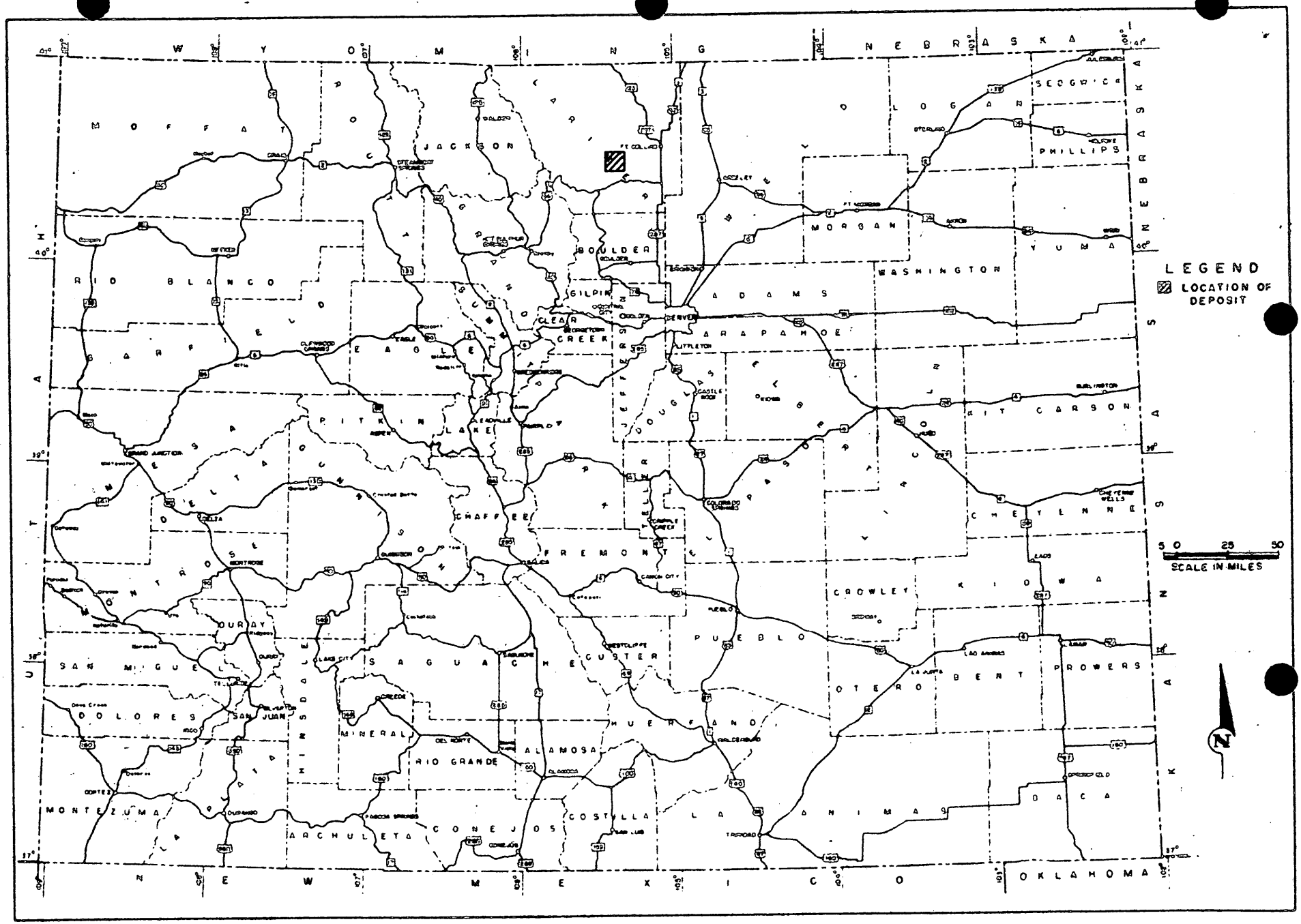


FIGURE 1 - MAP SHOWING LOCATION OF PHIL-MAR OIL CO., MINING PROPERTY, LARIMER COUNTY, COLO. DMEA 4385

RECEIVED
SEP 24 1956

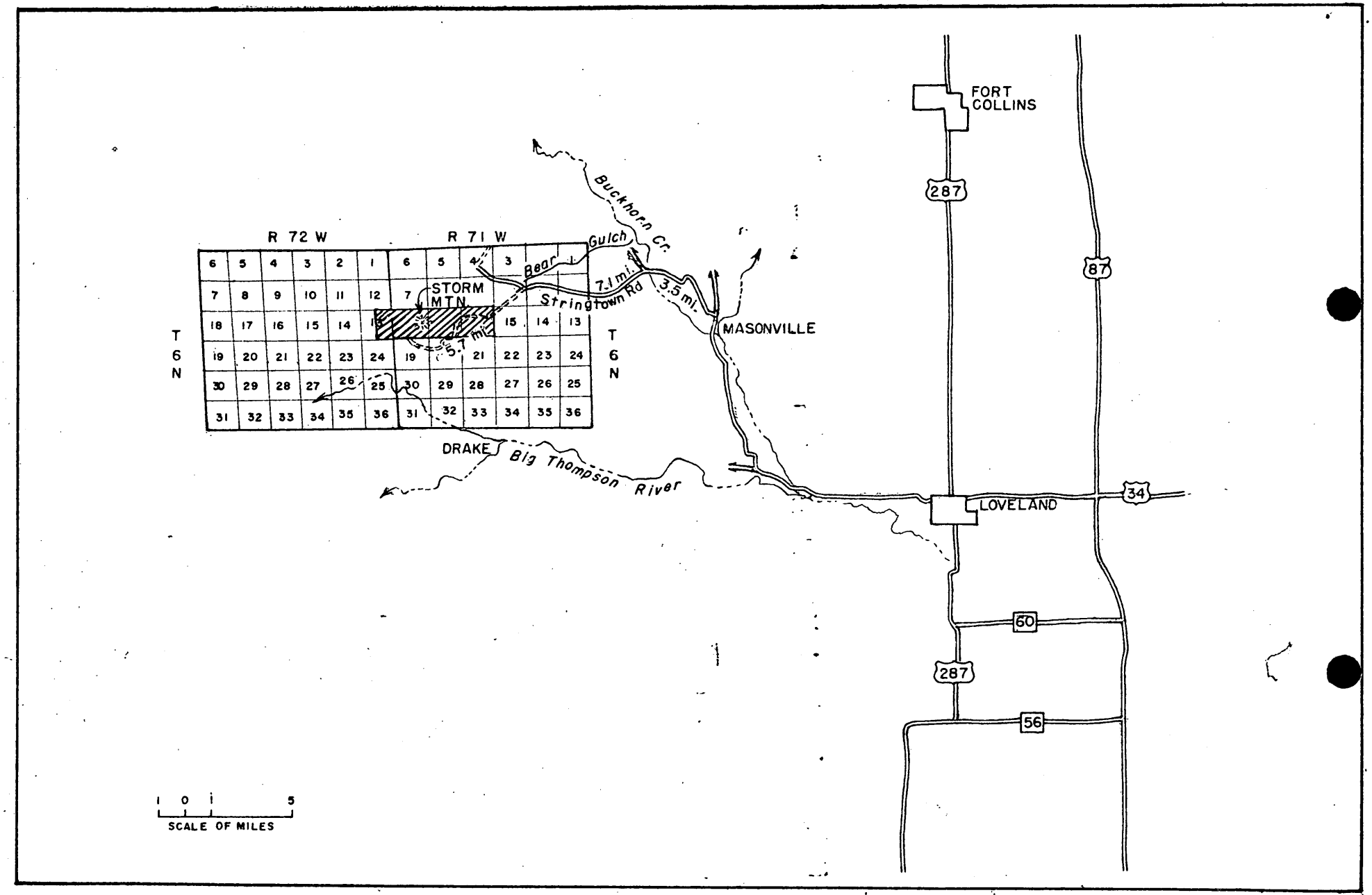


FIGURE 2 - SKETCH MAP SHOWING LOCATION AND ACCESS ROADS TO THE PHIL-MAR OIL CO., NEW HOPE CLAIMS, LARIMER COUNTY, COLO. DMEA 4385

RECEIVED
SEP 24 1956

From this point on the road is seasonal. A 4-wheel-drive vehicle is needed to travel it. One follows Stringtown road a distance of 7.1 miles where a left turn is made onto the Phil-Mar road. This road is followed for 5.7 miles to the Phil-Mar Oil Company's tent camp which is at an elevation of about 9,500 feet.

The topography is rough and steep and a good soil cover exists.

There is a good growth of ponderosa and lodge pole pine with some spruce and fairly extensive groves of aspen. The only water supply is from a fresh water spring at the tent camp. Roads can be built on the property at reasonable cost with a bulldozer and some blasting.

The climate is moderate during much of the year, but heavy snowfalls occur in the springs and winters which would make open-pit operations difficult.

## HISTORY, PRODUCTION AND OWNERSHIP

The subject property consists of the following named unpatented mining claims:

Glamile Nos. 1 to 6, inclusive
Hide Above
Storm Mountain
Bear Hope Nos. 1 to 20, inclusive
Top Flight Nos. 1 to 18, inclusive
Southern Nos. 7 to 11, inclusive

Lotsa Phillips and John Phillips purchased the Glamile group, the Hide Above and the Storm Mountain claims in February, 1956. The claims were transferred to Phil-Mar Oil Company for stock in that concern. The Phil-Mar Oil Company subsequently acquired the rest

of the above named claims, thus increasing their holdings to 49 claims.

The Hyatt mine lies about two miles south of the applicant's property. It was operated sporadically since its discovery in 1936, and has a reported production of 50 tons of beryl, 30 tons of scrap mica and 400 tons of potash feldspar. The Lewis mine (also known as the Lost Beryl mine) is about one mile west of the applicant's property. According to Leon Phillips, it has a long record of production. However, in U. S. Geological Survey Professional Paper No. 227, the location of the Lewis mine is shown to be the same as the Storm Mountain mine that now belongs to the Phil-Mar Oil Company. The Survey publication does not report any production from the Lewis mine. Phil-Mar Oil Company claims a production of 21 tons of beryl and 4 or 5 tons of uranium-bearing material from the Storm Mountain claim.

## GEOLOGY

The Phil-Mar Oil Company's property is located in the Crystal Mountain district about a mile northwest of the Hyatt pegmatite which has been one of the larger and more productive beryl deposits in the area. In the vicinity of the Crystal Mountain district the country rock consists primarily of Precambrian Blake Springs quartz-mica schist, which has been intruded by sills and essentially concordant multiple intrusions of coarse-grained granite. A great number of pegmatites accompanied and followed the intrusion of the granite and formed concordant and discordant bodies in the schist and granite.

The majority of the pegmatite bodies examined on the property trend in a northeasterly direction and are essentially vertical, which is also the general attitude of the enclosing country rock. Only the "Stovepipe Lode" pegmatite on the Ride Above claim is known to be flat-lying and discordant to the enclosing schist. (fig. 4)

The applicant recently has been mining the "Storm Mountain Lode" on the Ride Above claim. Here an open-cut measuring approximately 100 feet by 40 feet, and 15 feet deep exposes the upper part of a northeasterly trending pegmatite body. About 21 tons of beryl and 4 to 5 tons of uranium-bearing rock are reported to have been removed from the cut. The beryl was shipped but the uranium ore is supposedly stockpiled at Estes Park. The grade of the uranium-bearing rock is not known. During the examination of the "Storm Mountain Lode" pegmatite, only 3 or 4 small beryl crystals were observed. These were associated with pods of smoky quartz seen in the dump material. Anomalous radioactivity was noted at only one small area of the exposed pegmatite surface. Here minute quantities of meta-torbernite occur as thin coatings along tight fractures. From the size of the open-cut it is estimated that at least 5,000 tons of pegmatite material have been removed to recover the 21 tons of beryl. The pegmatite is believed to average about 0.4 percent beryl.

The "Stovepipe Lode" pegmatite on the Ride Above claim has a northeasterly strike but dips very flatly to the southeast, discordant to the nearly vertically dipping foliation of the enclosing schist. The pegmatite is partly exposed in a shallow bulldozed cut about

100 feet long and 5 to 10 feet wide. The applicant states that about 1,000 lbs. of beryl, mostly in large crystals, was taken from the cut. Examination of the cut disclosed only a few small fragments of beryl crystals in the loose material of the scraped over area, but no beryl crystals were observed in place. No indication of uranium mineralization was observed, although the applicant states that a small amount of high grade uranium ore was taken from this cut.

On the New Hope No. 9 claim a recently bulldozed road cuts across the lower (southern) end of a northeasterly trending concordant pegmatite body. The pegmatite material exposed in the road cut is considerably weathered and very fragmental. A few small beryl crystals have been picked from this weathered pegmatite material by the applicant, but no beryl crystals were found during the field examination. No anomalous radioactivity was observed in the exposed pegmatite body.

On the New Hope No. 4 claim a pegmatite, forming a prominent outcrop, is well exposed over a large area. The body trends northeasterly parallel to the strike of the vertically dipping schist country rock. The attitude of the dike was not determined, but internal structure suggests a northwesterly dip. The pegmatite mass is chiefly fine grained albite-quartz-muscovite-garnet pegmatite with scattered pods of coarser grained perthite-quartz pegmatite which represent fracture fillings in the earlier fine-grained rock. No beryl was observed in the fine-grained pegmatite material and only a few small

beryl crystals were found in the pods of coarser-grained material. The largest beryl crystal observed in place was 4 inches long and about 1 inch in diameter. The only uranium minerals seen at the New Hope No. 4 claim were thin coatings of autunite along fracture planes in the loose material blasted from a small cut on the east side of the pegmatite. The meta-torbernite was associated with altered masses of iron-manganese phosphate minerals and garnet.

The geological report by Leland Clark, that was submitted by the applicant, has made much of the probability of finding commercial concentrations of uranium within the pegmatites. His highly theoretical conclusions seem chiefly based on the premise that the pegmatite bodies contain perfectly developed, persistent zones. This, definitely, is not the case on the Phil-Ohr property. Zones were very poorly developed in all the bodies of pegmatite examined. Albite, quartz, garnet and muscovite constitute a poorly defined border zone, and sporadic pods of massive smoky quartz may constitute segments of a discontinuous core. The quartz segments are generally surrounded by coarse-grained perthite, muscovite and quartz in various proportions. Most of the mass of the pegmatites contains finer grained perthite, quartz, muscovite, garnet and tourmaline. As well as can be determined from dump material, the beryl occurs chiefly in coarse-grained pegmatite material along the margins of the discontinuous quartz core segments. The few beryl crystals seen were bluish-green crystals from 2 to 3 inches in length. Uranium minerals

were found in only two small areas as thin films of meta-autunite coating small tight fractures. No columbium or tantalum minerals were observed in any of the pegmatites.

## PRESENT STATUS

Exploration consists of road building with a bulldozer, and some hand-drilling and blasting on the New Hope No. 1. No exploration has been done on the Antlers or Top Flight claim groups.

Some production is being realized from the Storm Mountain and the Ride Above claims. No exploration work is proposed for the producing properties.

The Phil-Mar Company has the following equipment on the property, which could be used on an exploration project:

1 International T. D. 9 with dozer
1 Allis Chalmers H. D. 6 dozer and loader
1 Worthington rotary compressor, No. 80, 300 c.f.m., diesel powered
1 jeep station wagon
2 jeep pickup trucks
1 Dodge 6 by 6 truck
2 air-leg mounted Ingersoll Rand rock drills
1-150 kw. Koehler power plant
1 Worthington 35 lb. pavement breaker
1 Ingersoll Rand pavement breaker
several lengths of 1-in. hexagonal drill steel
1 log-slab shelter
3 canvas tents about 10 by 14 feet

There is an abundance of timber on the property for mining and domestic use, lodge-pole and ponderosa pine being the most plentiful. Water supply is not sufficient for mining purposes, but the springs are reported to flow all year.

Labor, equipment and supplies are available in Loveland, Colorado, which is about 25 miles from the property.

## APPLICANTS' PROJECT PROPOSAL AND COSTS

The applicant proposes to explore the pegmatite dikes on eight claims by trenching (fig. 3).

The work will consist of:

One cut on each of the New Hope Nos. 4, 5, 13 and 18 claims,
125 ft. long by 40 ft. deep by 20 ft. wide times 4 = 400,000 cu. ft.

One cut on Glenmile No. 4 claim,
100 ft. long by 20 ft. wide by 25 ft. deep = 50,000 cu. ft.

One cut on Antlers No. 16 claim,*
125 ft. long by 25 ft. deep by 20 ft. wide = 62,500 cu. ft.

One cut on each of the Top Flight Nos. 3 and 8 claims,
100 ft. long by 20 ft. wide by 25 ft. deep times 2 = 100,000 cu. ft.

Total material excavated ---- 612,500 cu. ft.

*The Antlers No. 16 is shown on figure 3. The indicated cut is on Antlers No. 7.

The applicant's itemized account of costs is as follows:

1. <u>Independent Contracts</u>

None

2. <u>Labor, Supervision and Consultants</u>

| | | |
|---|---|---|
| 4 men, 8 hours a day for 300 days = 9,600 hrs. at $3.10 per hour | $29,760.00 | |
| General Superintendent - 12 months at $1,000 per month | 12,000.00 | |
| Geologist and Engineer - 12 months at $800.00 per month | 9,600.00 | |
| Total | | $51,360.00 |

3. <u>Operating Materials and Supplies</u>

| | |
|---|---|
| Dynamite, fuses and caps | $5,000.00 |
| Bits for air hammers | 1,200.00 |
| Fuel for tractors and compressor | 2,040.00 |

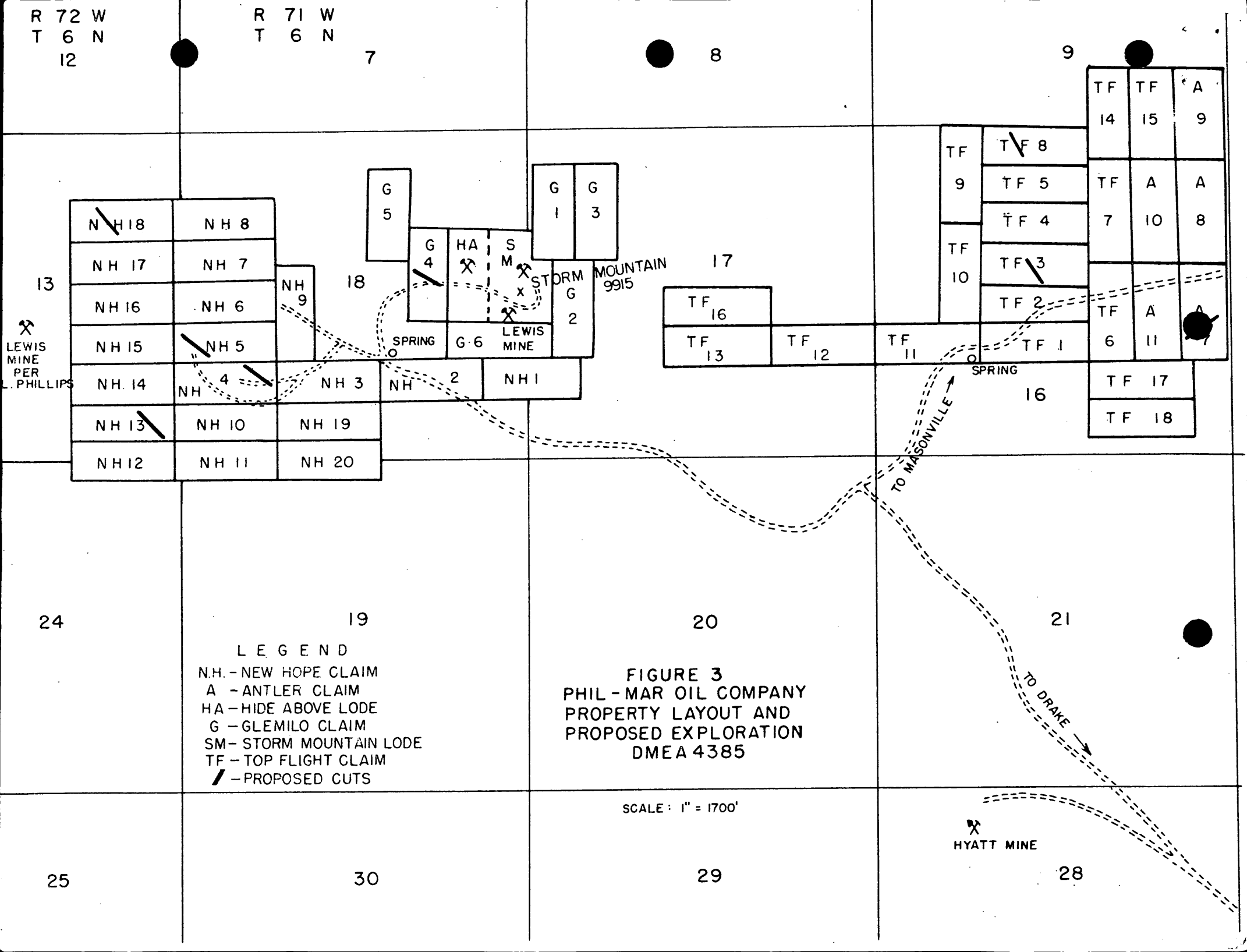


FIGURE 3
PHIL-MAR OIL COMPANY
PROPERTY LAYOUT AND
PROPOSED EXPLORATION
DMEA 4385

RECEIVED
SEP 24 1956

| | | |
|---|---|---|
| Oil and grease | $1,000.00 | |
| Shop supplies | 6,600.00 | |
| Hand tools | 600.00 | |
| Total | | $16,440.00 |

4. Operating Equipment

| | | |
|---|---|---|
| 1 # 3 Allis Chalmers tractor shovel | $9,000.00 | |
| Air compressor | 2,640.00 | |
| Rock Drill, Wagon Drill, 300 ft. hose at $.70 per foot | 4,200.00 | |
| 60 ft. drill steel at $2.25/ft. | 135.00 | |
| Rental of Jeeps (2) | 6,000.00 | |
| Rental of Dodge truck | 4,500.00 | |
| Total | | $26,475.00 |

5. Rehabilitation and Repairs

None

6. New Buildings and Installations

| | | |
|---|---|---|
| Powder house 8 by 10 feet | $450.00 | |
| Cabin for employees 16 by 24 feet | 1,500.00 | |
| Water pump and accessories | 400.00 | |
| Electric generator | 350.00 | |
| Electric wiring installation | 150.00 | |
| Medical supplies | 150.00 | |
| Total | | $3,000.00 |

7. Miscellaneous

| | | |
|---|---|---|
| Maintenance and repair to equipment | $3,000.00 | |
| Assayer | 800.00 | |
| Accounting | 2,500.00 | |
| Workmen's compensation and employers' liability insurance | 1,800.00 | |
| Insurance on equipment | 1,600.00 | |
| Attorneys' fees | 1,000.00 | |
| Total | | $10,100.00 |

8. Contingencies

None

| | |
|---|---|
| Total estimated cost | $107,575.00 |

Total proposed volume movement = 612,500 cu. ft.

612,500 cu. ft. at 20* cu. ft. a ton = 30,625 tons

Total estimated cost = $107,575
Total proposed tonnage = 30,625 = $3.513653 a ton

*The applicant's figure of 20 cu. ft. a ton for pegmatite in place appears inaccurate; 12 cu. ft. a ton in place would probably be more nearly correct.

## CONCLUSIONS AND RECOMMENDATIONS

The pegmatite on the subject Phil-Mar Oil Company's claims is estimated to contain less than 0.5 percent beryl and the beryl value is estimated at about $2.10 a ton.

Zoning is slight and the beryl occurrence is sporadic. Radioactive spots are small and isolated. No appreciable deposition of columbite-tantalite was observed.

It is concluded that the sporadic occurrence of the beryl, columbium, tantalum and uranium minerals in these unnamed pegmatites dikes could not be properly explored by the proposed method and that there is little probability that a modified exploration project would disclose significant concentrations of the sought-after minerals.

It is recommended that the application for DMEA assistance be denied.

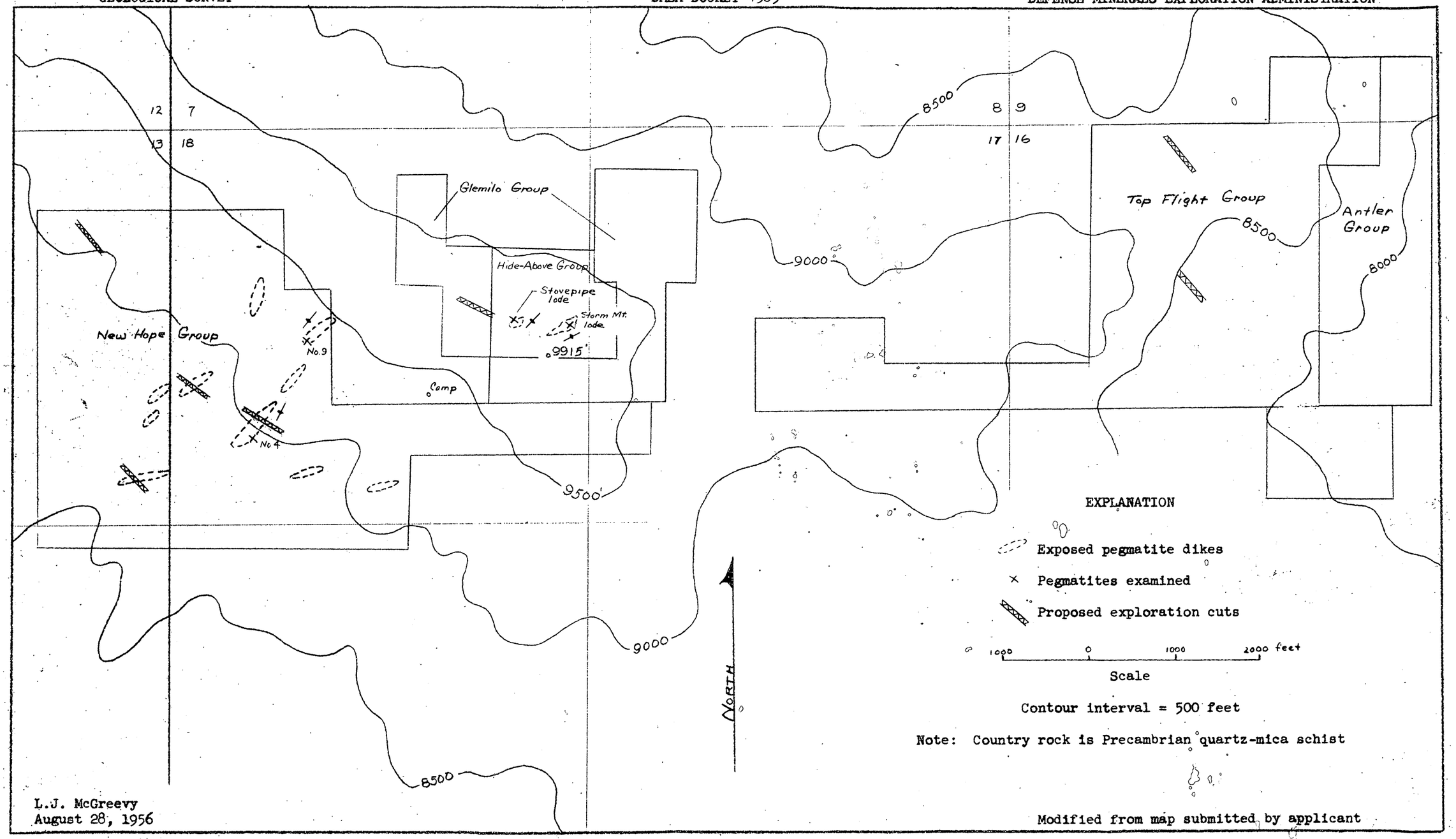


FIGURE 4 - GEOLOGIC AND TOPOGRAPHIC MAP OF THE PHIL-MAR OIL COMPANY PROPERTY, LARIMER COUNTY, COLORADO

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

RECEIVED
SEP 24 1956

224 New Customhouse
Denver 2, Colorado

September 20, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Joint Report Examination, Docket DMEA 4385 (Beryl - Columbium - Tantalum - Uranium) Phil-Mar Oil Company (New Hope Claims) Larimer County, Colorado

Ecnlosed are the original and three copies of a Joint Engineering and Geological Report on the subject property.

The field examiners concluded that there is little possibility of finding a significant amount of beryl, columbium, tantalum, or uranium on this group of claims. They recommend that the application be denied. We concur in this recommendation.

The Atomic Energy Commission was consulted relative to the appraisal of this property.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
9-26-56
(date)

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

File in docket

September 19, 1956

4385

Dear Bill:

This will acknowledge receipt of your letter of September 14 relative to a lease for the Phil-Mar Oil Company, Estes Park, Colorado, to explore for possible mineralization on their properties.

I have requested the Administrator of Defense Minerals Exploration Administration to give this matter prompt attention.

With kindest personal regards and best wishes for a successful campaign, I am

Sincerely yours,

(sgd) Felix

Felix E. Wormser
Assistant Secretary

Honorable William S. Hill
House of Representatives
Washington 25, D. C.

Beryl.

Appl'n received 7/18/56.

Referred to field for exam. 7/27.
No reply yet.
fw

JGLiebert/GMcC

(With incoming)

cc: Secretary's Files
Secretary's Reading File
FEW's Staff Reading File
FEW's Chron File
Mr. John Liebert
Mr. C. O. Mittendorf (DMEA)

(Our Number: Sept. 17th - #14)

OFFICE OF THE
ASSISTANT SECRETARY OF THE INTERIOR
WASHINGTON

9/17/56

Mr. Mittendorf.

600

from

Office of the Assistant Secretary
for Mineral Resources

CEM

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

[illegible] 7/18
Left [illegible] 7/27

September [illegible], [illegible]

RECEIVED
SEP 24 1956

[illegible] Normser, Assistant Secretary
[illegible] Interior
[illegible]
[illegible] C.

[illegible] note to tell you that [illegible] Colay [illegible] C. O.
[illegible] Administrator of [illegible] Mineral Exploration
[illegible] ration, concerning [illegible] IMCA-4[illegible], which
[illegible] for a loan from [illegible] of Exploration
[illegible] r Colorado, [illegible], [illegible] Colorado.

[illegible] er handling this [illegible] considerable work
[illegible] here. So, I feel this is a worthwhile propo-
[illegible] have carefully examined by them.

[illegible] enclose a copy of the letter I have written Mr.
[illegible].

If there is anything you can do to further this matter,
[illegible] consider it a great personal favor.

Everything seems to be going okay, and we are lining up
our political activity in such a way that will keep us busy until
[illegible].

Best of luck and kindest regards.

[illegible],

William S. Hill, M.C.

WSH/[illegible]
[illegible]

Docket Copy
Surname:
Hopkins
F. Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

SEP 19 1956

Hon. William S. Hill
House of Representatives
Washington 25, D. C.

My dear Mr. Hill:

This will acknowledge receipt of your letter of September 14, 1956, regarding an application for exploration assistance for beryl, columbium, tantalum and uranium by the Phil-Mar Oil Company in Larimer County, Colorado, that has been docketed under No. DMEA-4385.

This application was received in this office July 18, 1956, and after review by the Nonmetallic Minerals Division it was referred to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, 224 New Customhouse Building, Denver 2, Colorado, on July 26, 1956, for further consideration and possibly a field examination.

Upon receipt of the Field Team's examination report this office will again review the application in the light of all available information to determine if Government assistance in the applicant's proposal is warranted.

Please be assured that this application is being given every consideration and its processing is being expedited as much as possible.

We appreciate your interest in this case and will be pleased to furnish further information if desired.

Sincerely yours,

C. O. Mittendorf

Administrator

JHopkins:gad 9/18/56
Copy to: Admr. R. File
Docket DMEA-4385
Field Team, Region III
Mr. Kiilsgaard, 5222
Mr. Eilertsen, 3649
Mr. Houk
Mr. Hopkins

R.C.S.

WILLIAM S. HILL
2D DIST., COLORADO

HOME ADDRESS:
FORT COLLINS, COLORADO

600

COMMITTEES:
AGRICULTURE
SMALL BUSINESS

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

RECEIVED
SEP 17 1956

September 14, 1956

Mr. C. O. Mittendorf
Assistant Administrator
Defense Minerals Exploration Administration
Interior Building
Washington, D. C.

Dear Mr. Mittendorf:

A day or so ago Dr. Jacob O. Mall and Mr. Ronald C. Brodie, both officials in the company of Phil-Mar Oil Company, Estes Park, Colorado, visited my office.

They have made an application which is now in your Department, No. DMEA-4385, concerning exploration funds for their Company which now holds mining claims in Larimer County near Estes Park, Colorado, where the tests show beryl, columbium, tantalum and uranium.

Frankly, many of our people feel this Company has a wonderful opportunity for developing this type and kind of ore and that there is sufficient ore in the area to be worth careful examination and exploration.

I think it would be worthwhile to expedite this loan and examine this area thoroughly as that seems to be the only way we can possibly learn just what situation exists in this mountainous area.

I should consider this a personal favor and do feel it is a worthwhile proposition.

Very truly yours,

William S. Hill

William S. Hill, M. C.

WSH/s

RECEIVED
AUG 6 1956

August 1, 1956

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4385 (Beryl-Columbium-Tantalum-Uranium), Phil-Mar Oil Company (New Hope claims) Larimer County, Colorado

The application for Phil-Mar Oil Company, DMEA 4385, in the amount of $107,575.00 was received in this office on August 1, 1956.

A field examination will be made and suitable report prepared by an engineer from the Denver office.

JOHN F. SHAW
John F. Shaw

cc: W. M. Traver (2)
E. N. Harshman
J. F. Shaw
Sec. Op. Com. (2)

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

RECEIVED
AUG - 3 1956

July 31, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
E. N. Kershman

From: Field Team, Region III

Subject: Docket DMEA 4385 (Beryl-Columbium-Tantalum-Uranium), Phil-Mar Oil Company (New Hope Claims) Larimer County, Colorado

Enclosed is the subject application in the amount of $107,575.00. A field examination and suitable report are requested.

Also enclosed for your information is a copy of a letter from the Chairman of the Operating Committee, dated July 27, 1956, with attached memoranda of review of the application by W. P. Williams and Donald E. Eilertsen.

Please return the brochure with the Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

EEC:ab

cc: Sec. Op. Comm. (2)
Docket 4385
Chron.

DOCKET COPY
Surname:

Hopkins
Houk
Selfridge
Hyman

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

JUL 27 1956

Mr. W. H. Traver
Executive Officer, DMEA
Field Team, Region III
United States Bureau of Mines
224 New Customhouse Building
Denver, 2, Colorado

Re: Docket No. DMEA-4385-beryl
columbium, tantalum, uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

Dear Mr. Traver:

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

Copies of memoranda dated July 24 and 25, 1956, by Mr. W. P. Williams, USGS, and Mr. D. E. Eilertsen, USBM, respectively, relating to the project are enclosed. We are also enclosing a copy of the application which was returned by the Commodity Division of the United States Bureau of Mines.

Sincerely yours,

George C. Selfridge (by esf)
Chairman, Operating Committee

Approved:

[illegible] (by esf)
Member, Bureau of Mines

[illegible] (by esf)
Member, Geological Survey

Enclosures: 5

JHopkins:ms 7/26/56
Copy to: Docket
Operating Committee
Mr. Kiilsgaard, 5222
Mr. Eilertsen, 3649
Mr. Houk
Admr. R. File

R.C.S.

DOCKET COPY
Surname:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Hope Houk yours Allison Selfridge Johnson

JUL 27 1956

Phil-Mar Oil Company
P. O. Box 176
Estes Park, Colorado

Re: Docket No. DMEA-4385-beryl, columbium, tantalum, uranium
Phil-Mar Oil Company
New Hope Claims
Larimer County, Colorado

Gentlemen:

Your application for assistance in exploring the subject property has been reviewed by the Nonmetallic Minerals Division of the Defense Minerals Exploration Administration and has been referred to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, United States Bureau of Mines, 224 New Customhouse Building, Denver, 2, Colorado, for further consideration and possibly a field examination.

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

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JHopkins:ms 7/26/56
Copy to: Docket
Operating Committee
Field Team, Region III
Mr. Kiilsgaard, 5222
Mr. Eilertsen, 3649
Mr. Houk
Admr. R. File

R.C.S.

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

RECEIVED
JUL 25 1956

July 25, 1956

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

From: Commodity-Industry Analyst, Branch of Rare and Precious Metals

Subject: Review of Docket No. 4385, Beryl, application for DMEA aid in an exploration by Phil-Mar Oil Co., L. Leau Phillipps, President, P. O. Box 176, Estes Park, Colorado, to explore for beryl and valuable minerals containing columbium, tantalum, and uranium in Larimer County, Colorado.

A review of the above subject application shows that the Phil-Mar Oil Company owns 49 unpatented claims in or near lands of U. S. Government Public Domain. These claims are located in Larimer County, Colorado, in Township 6 North, Ranges 71 and 72 West of the 6th Principal Meridian. The area is also about 8 air miles northwest of Masonville, and 25 miles northwest of Loveland, Colorado.

The application states that the Phil-Mar Oil Company plans to explore 22 zoned-pegmatite dikes on 8 claims for beryl and valuable minerals containing columbium, tantalum, and uranium. Exploration is planned to be done by excavating 8 large open cuts and sampling them. About 612,500 cubic feet (30,625 tons) of cut-material costing $107,575.00 are planned to be excavated. A dirt road has already been constructed in the area to be explored.

The company has some technical men and will engage others for consultation and advisory purposes. There is ample manpower, materials, and equipment in the area to do the work.

The Phil-Mar Oil Company is now mining the Hide Above Lode in Larimer County and has mined and shipped 21 tons of beryl containing 11.44 percent BeO, and 10 tons of uranium ore. They also have an AEC permit to mine and ship 15,000 tons of uranium ore. The application also states that between 1942-1944, a number of mines operated by the United Beryllium Ores Company produced and sold several thousand tons of beryl from the general area.

The DMEA field team should be requested to make an examination of the property.

Donald E. Eilertsen

Donald E. Eilertsen

Attachment

IN REPLY REFER TO:

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

RECEIVED
JUL 24 1956

July 24, 1956

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

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

Subject: Review of application, DMEA 4385 (beryl, columbium, tantalum, uranium), Phil-Mar Oil Company, New Hope claims, Crystal Mountain district, Larimer County, Colorado.

The applicant proposes to spend an estimated $107,575 to explore for beryl, columbium, tantalum, and uranium by means of open cutting and trenching.

The property involved is located in the Crystal Mountain pegmatite district; and the applicant's claims are about a mile northwest of the Hyatt pegmatite, which has been one of the largest and most productive beryl deposits in the district.

Beryl deposits in the district are small, pod-like, and scattered. Beryl production has been intermittent and sporadic over the past 15 years.

Geological Survey Bulletin 1011 makes the following observations concerning the Crystal Mountain district:

> Beryl is widely distributed throughout the area in pegmatites that contain from traces to about 2 percent.
>
> Three clusters of columbite-tantalite crystals having an aggregate volume of about 11 cubic inches, is the largest single occurrence found in the district. A few other single small crystals have been found.
>
> Minute quantities of uraninite and alteration products have been found in various pegmatites, but the uraninite content of the pegmatites is estimated at about 0.000X percent.
>
> Principal reserves of beryl in the district are fine grained and not amenable to hand sorting. The future of the district depends upon the development of milling methods which will profitably separate beryl, perthite, mica, and columbite-tantalite from the associated minerals. Feldspars in the district are intergrown and of such grain size as to make them unexploitable

at present.

All in all the district does not appear to have a rosy immediate future. Certainly, the expenditure of $100,000 on a single property does not seem warranted at this time.

I believe the Field Team should be asked to comment on the application. Unless the Field Team has some new information that change the potentialities of the district denial of the application seems indicated.

W. P. Williams

W. P. Williams

July 18, 1956

Phil-Mar Oil Company
P. O. Box 176
Estes Park, Colorado

Subject: DMEA-4385
Re: Exploration Assistance
New Hope et. al, Claims

The receipt of your application dated July 10, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4385 and referred to the Nonmetallic Mineral Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

July 18, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

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

DMEA
-4385 Phil-Mar Oil Company

New Hope et. al, Claims

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

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

RECEIVED
JUL 18 1956

July 16, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Beryl-Columbium-Tantalum-Uranium) Phil-Mar Oil Company, (New Hope et al. claims), Larimer County, Colorado

Enclosed are three copies of the subject application in the amount of $107,575.00. One copy of the application is being retained in our file.

DMEA Field Team, Region III

for By W. M. Traver
Executive Officer

Enclosures

MF-103
(Revised April 1952)

# UNITED STATES DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
JUL 13 1956
DMEA
Date Rec'd.

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

JUL 13 1956
BUREAU OF MINES
Denver, Colorado

*Not to be filled in by applicant*

Docket No. 4385
Metal or Mineral Beryl
Date Received 7-18-56
Estimated Cost $107,575.00
Participation (Government %)

## INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Phil-Mar Oil Company, a corporation of Colorado
P. O. Box 176
Estes Park, Colorado

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract owner by location

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise owner of unpatented claims

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

(*e*) If you own the land, describe any liens or encumbrances on it none

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

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

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore .....

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

(*c*) The work will start within 30 days and be completed within 24 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

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

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

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

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

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

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

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

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

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

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

Explain in detail on acompanying paper.

## CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 10, 1956

Phil Mar Oil Company
(Applicant)

By L. Leon Phillips
President

Jacob O. Hall, III
Secretary

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

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

APPLICATION FOR AID IN AN EXPLORATION PROJECT

Phil-Mar Oil Company — Estes Park, Colorado

1 (c) L. Leau Phillipps — President
Loveland, Colorado
A. L. Vaughn — Vice-President
Estes Park, Colorado
Ronal C. Brodie — Treasurer
Estes Park, Colorado
Jacob O. Mall — Secretary
Estes Park, Colorado

3 (a) Larimer County, Colorado
Township 6-North, Range 71-72 West
6th PM
~~see assignment of wd~~
~~t Glimilo~~

(b) Antler (5)
Glimilo (6)
New Hope (20)
Top Flight (18)

(c) Owner of unpatented claims (4~~0~~9)

(e) None

(f) see 3-(b)

4 (a) We are now mining the Hide Above Lode, located in Larimer County, Township 6 north, Range 71 West, 6th PM. A road has been constructed into the general area where we wish to explore.

(b) We have mined and shipped 21 tons of beryl, 11.44%, and 10 ton of uranium, grade unknown at this time. Reserves unknown.

(c) See Geological Reports by Leland Clark, dated September 5, 1955 and February 23, 1956.
See assay report by Charles,Parker, Denver.
See maps.
Geological and assay reports indicate there are minerals which are in critical demand. There are twenty-two (22) zoned pegmatite dikes which we wish to explore.

(d) A road has been constructed by Phil-Mar Oil Company across the Top Flight and Antler claims to the New Hope claims.
Loveland, the closest town, is 25 miles from the mining operation.

(e) There are ample supplies of manpower, materials and equipment. There is no electrical power at present available, but there is an ample supply of water.

APPLICATION FOR AIDIN'AN EXPLORATION PROJECT

Phil-Mar Oil Company — Estes Park, Colorado

5 (a) We expect to explore for beryl, columbium, tantalum and uranium.

(b) We have been advised by both a competent geologist and assayer to make a cross cut in the dikes to penetrate the ore bearing zones. See maps accompanying application.

(c) Work will start within 30 days and be completed within 24 months.

(d) John and Leau Phillips have been exploring in this area for eighteen months. Both have had twenty years experience in the oil fields, drilling, testing, exploring oil formations. Both men have held positions as general superintendents of production and John Phillips was a partner in an oil field construction company.
We have and will engage for consultation and advisory purposes geologists, mining engineers, mineralogists and assayers.

6 (a) None

(b) Labor

4 men, 8 hours a day = 32 hours x 300 days = 9600 hours x $3.10 = $29760.00

| | | |
|---|---|---|
| Total | | $29760.00 |
| Supervision | | |
| General superintendent -12 months - $1000.00 | | $12000.00 |
| Tax | | |
| Insurance | | |
| Geologist and engineer 12 months $800.00 | | $ 9600.00 |
| Total | | $51360.00 |

(c) Operating materials and supplies:

| | |
|---|---|
| Dynamite, fuses and caps | $ 5000.00 |
| Bits for air hammers | 1200.00 |
| Fuel for tractor and compressor | 2040.00 |
| Oil and grease | 1000.00 |
| Camp supplies | 6600.00 |
| Hand tools | 600.00 |
| Total | $ 16440.00 |

(d)

| | | |
|---|---|---|
| 1 HD Allis-Chalmer tractor shovel, rental | | $ 9000.00 |
| Air compressor, rental | | 2640.00 |
| Rock drill | | |
| Wagon drill | | 4200.00 |
| 300 feet hose | $ .70 | |
| 60 feet steel | 2.25 | 135.00 |
| Rental of jeeps (2) | | 6000.00 |
| Rental of Dodge truck | | 4500.00 |
| Total | | $26475.00 |

(e) None

APPLICATION FOR AID IN AN EXPLORATION PROJECT

Phil-Mar Company Estes Park, Colorado

(f) New buildings and installations:

| | |
|---|---|
| Powder house 8' x 10' | $ 450.00 |
| Cabin for employees 16' x 24' | 1500.00 |
| Water pump and accessories | 400.00 |
| Electric generator | 350.00 |
| Electrical wiring installation | 150.00 |
| Medical supplies | 350.00 |
| Total | $ 3200.00 |

(g) Miscellaneous:

| | |
|---|---|
| Maintenance and repair to equipment | $ 3000.00 |
| Assayer | 800.00 |
| Accounting | 2500.00 |
| Workmen's compensation and employer's liability insurance | 1600.00 |
| Insurance on equipment | 1000.00 |
| Attorney's fees | 1000.00 |
| Total | $10100.00 |

(h) Contingencies:

None anticipated at this time

5 (b) The dikes on the New Hope claims extend above the surface (see [illegible] Map) and vary in height and width. We plan to make cross cuts [illegible] enough on Claims 4, 5, 13 and 18 to penetrate the ore bearing zones (see Plats 1 and 2). The average cut will be one hundred twentyfive (125) feet long, forty (40) feet deep, and twenty (20) feet wide. These tests can be made by drilling, blasting and removing with a tractor shovel

The Glemilo dikes do not extend above the surface except in ridge formation. The pegmatite-schist contact has been established on these dikes. A cut one hundred (100) feet long, twenty (20) feet wide and twentyfive (25) feet deep should penetrate the ore bearing zones. Cut would be made on Claim #4 and operation would be the same as New Hope claims.

The Antler Claims are similar to the Glemilo claims. We plan to make a crosscut on Claim #16. Cut would be one hundred twenty-five (125) feet long, twentyfive (25) feet deep and twenty (20) feet wide and operation would be same as Glemilo.

The Top Flight claims are similar to the Antler claims as they join. The dikes on these claims appear as ridges, and crosscuts can be made in the ridges. Cuts would be made one hundred (100) feet long, twenty (20) feet wide and twentyfive (25) feet deep. Cuts would be made on Claims 3 and 8 and operation would be same as Antlers.

COST OF PROJECT:

| | |
|---|---|
| Cuts on New Hope Claims 4, 5, 13, 18<br>125 x 40 x 20 x 4 = | 400,000 cu. ft. |
| Cut on Glemilo #4<br>100 x 20 x 25 = | 50,000 cu. ft. |
| Cut on Antlers #16<br>125 x 25 x 20 = | 62,500 cu. ft. |
| Cut on Top Flight # 3 and 8<br>100 x 20 x 25 x 2 = | 100,000 cu. ft. |
| TOTAL | 612,500 cu. ft. |

612,500 cu. ft. divided by 20 cu. ft. equals 30,625 tons
Estimated cost $107,575.00 divided by 30,625 tons = $3.512653 per ton

APPLICATION FOR AID IN AN EXPLORATION PROJECT

Phil-Mar Oil Company — Estes Park, Colorado

UNPATENTED CLAIMS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. | Antlers No. 7, | recorded | in | book | 998 | page | 402. | Section (16) Township (6) |
| 2. | " " 8, | " | " | " | " | " | 401. | North, Range 71 West 6 PM |
| 3. | " " 9, | " | " | " | " | " | 400. | |
| 4. | " " 10, | " | " | " | " | " | 116. | |
| 5. | " " 11, | " | " | " | " | " | 117. | |
| 6. | New Hope No. 1, | " | " | " | 991 | " | 89. | |
| 7. | " " " 2, | " | " | " | " | " | 90. | Section (13)(18)(19) |
| 8. | " " " 3, | " | " | " | " | " | 91. | |
| 9. | " " " 4, | " | " | " | 999 | " | 291. | Township (6) North |
| 10. | " " " 5, | " | " | " | " | " | 293. | |
| 11. | " " " 6, | " | " | " | " | " | 292. | Range (71)(72) West 6 PM |
| 12. | " " " 7, | " | " | " | 1000 | " | 298. | |
| 13. | " " " 8, | " | " | " | " | " | 299. | |
| 14. | " " " 9, | " | " | " | " | " | 300. | |
| 15. | " " " 10, | " | " | " | " | " | 301. | |
| 16. | " " " 11, | " | " | " | " | " | 302. | |
| 17. | " " " 12, | " | " | " | " | " | 303. | |
| 18. | " " " 13, | " | " | " | " | " | 304. | |
| 19. | " " " 14, | " | " | " | " | " | 305. | |
| 20. | " " " 15, | " | " | " | " | " | 306. | |
| 21. | " " " 16, | " | " | " | " | " | 307. | |
| 22. | " " " 17, | " | " | " | " | " | 308. | |
| 23. | " " " 18, | " | " | " | " | " | 309. | |
| 24. | " " " 19, | " | " | " | " | " | 310. | |
| 25. | " " " 20, | " | " | " | " | " | 364. | |
| 26. | Top Flight No. 1, | " | " | " | 996 | " | 351. | Sections (16)(17)(21) |
| 27. | " " " " 2, | " | " | " | " | " | 352. | |
| 28. | " " " " 3, | " | " | " | " | " | 353. | Township (6) North |
| 29. | " " " " 4, | " | " | " | " | " | 354. | |
| 30. | " " " " 5, | " | " | " | 997 | " | 332. | Range, Range 71 W 6 PM |
| 31. | " " " " 6, | " | " | " | " | " | 333. | |
| 32. | " " " " 7, | " | " | " | " | " | 334. | |
| 33. | " " " " 8, | " | " | " | " | " | 431. | |
| 34. | " " " " 9, | " | " | " | " | " | 432. | |
| 35. | " " " " 10, | " | " | " | " | " | 433. | |
| 36. | " " " " 11, | " | " | " | 998 | " | 74. | |
| 37. | " " " " 12, | " | " | " | " | " | 75. | |
| 38. | " " " " 13, | " | " | " | " | " | 76. | |
| 39. | " " " " 14, | " | " | " | " | " | 77. | |
| 40. | " " " " 15, | " | " | " | " | " | 78. | |
| 41. | " " " " 16, | " | " | " | " | " | 399. | |
| 42. | " " " " 17, | " | " | " | " | " | 398. | |
| 43. | " " " " 18, | " | " | " | " | " | 397. | |
| 44. | Glemilo No. 1, | " | " | " | 1021 | " | 392. | |
| 45. | " " " 2, | " | " | " | " | " | 393. | |
| 46. | " " " 3, | " | " | " | " | " | 394. | |
| 47. | " " " 4, | " | " | " | " | " | 395. | |
| 48. | " " " 5, | " | " | " | " | " | 396. | |
| 49. | " " " 6, | " | " | " | " | " | 397. | |

February 23, 1956

# GEOLOGICAL REPORT
on
# OPINION OF STRUCTURE AND DEPOSITION OF URANIUM ORE
of
# PHIL-MAR PROPERTIES, LARIMER COUNTY, COLORADO

## LOCATION

This area centers around Section 18, Township 6 North, Range 71 West of Larimer County, Colorado, approximately 8 air miles north-west of Masonville Store, 4½ miles south of Crystal Mountain and on the west slope of Storm Mountain Peak.

## TOPOGRAPHY AND WEATHER

This area is between the north fork of the Big Thompson River and the positive feature of Storm Mountain Peak and its ridge runs northwesterly. The area is on a flattening of slope of 1¼ miles in width, between the 2 features. The elevation is between the 8500 and 9000 foot contour lines. The area is heavily wooded and terrain on slope is rolling. A good body of soil covers most of the area. The weather is like the foothills of Front Range and Phil-Mar Company has carried on operations about 10½ months of the year.

## PROPERTIES

The properties under discussion consist of the 20 "New Hope" Group of claims, owned by the Phil-Mar Oil Company of Fort Morgan, Colorado. The land is U.S. Government Public Domain. The claims were properly staked and notices posted in April, 1955. They were filed and recorded in May, 1955 at the County Recorder's Office, Larimer County Courthouse; all in accordance with the laws of Colorado Code of Mining. Since that time the assessment work has been carried out by building 11 miles of road, purchase of bulldozer and air compressor and blasting materials and labor opening pits on these claims.

## MINING OPERATIONS IN AREA

In the past year, the entire area of Crystal Mountain and Storm Mountain has been staked and filed on for uranium claims. Several companies are mining and shipping ore, from pegmatite structures in this area. Phil-Mar has AEC permit, license No. P 2721, to ship 15,000 tons from these claims. Around 1942 to 1944, a number of mines in this area were operated by United Beryllium Ores Company, and several thousand tons of beryl ore were mined and sold. In 1946 to 1950 the U.S.G.S. mapped about 2,000 pegmatite structures in Hyatt Ranch area and 2 miles south of Crystal Mountain. However only the exterior of pegmatites were examined, and no internal search was conducted for uranium. None of this work was conducted by U.S.G.S. in the area of the New Hope claims, the closest being on Hyatt Ranch, Sec. 28, Twp. 6 N., R. 71 W., about 2½ miles to the southeast.

## ORIGIN OF PEGMATITES: ITS PARAGENESIS

A pegmatite is a "pod-like" or lenticular of massive rock, of 2 types;

(1) the simple, homogeneous, having no zones and some minerals from wall to wall; of this type the "spodumene pegmatites" are most common. (2) The complex, heterogeneous, having 4 distinct zones, (a) border, (b) wall, (c) intermediate, (d) core. Occasionally the core zone may be absent. The complex pegmatites will also have fractures, faults, veins, dikes and alternating stratas; they are highly mineralized and composition is a very coarse crystalline and easily disintegrated, "nephelite-syenite" rock character. Pegmatites are dominated by mica, quartz, microcline feldspars, beryl, and an unusual concentration of rare earth elements of the "Actinide Series." Presence of secondary uranium ores is common and those pegmatites, whose origin has the proper chemical elements and whose parageneous has the proper chemical reactions and dispositions, will contain high grade primary uranium ores. As example, mines in foothills west of Golden, Colorado have found 10% pitchblende from pegmatites, whose original rock above surface has been destroyed, dissolved or eroded down to surface and even hidden by overburden of soil; nevertheless they are true pegmatite structures.

The heterogeneous pegmatite and the ones that will contain primary uranium deposits can be determined by a chemical analysis of a general sample taken from the "wall zone." There will be some question as to this being true. However, chemistry and chemical reactions are basic formations of all substances. I doubt if the theory will be proved wrong.

Pegmatites originate in a magma state, in similar fashion to a "laccolith" on igneous rock. The position in the universe, the chemical elements in magma, as well as various chemical elements in the "metcoric waters" injected into the magma. These factors will decide the final classification of pegmatite when it reaches the earth's surface. Also a vital factor is the chemical reaction during the paragenesis of pegmatite. From the magma stage its movement starts upward by a "pinch and swell" process, aided by folding or horizontal pressure, causing the magma to be squeezed up through softer rocks such as schists. The magma is crystallized when its movement starts and is rich in meteroic water content. It solidifies through a hydrothermal process, the heat generates chemical reactions, dissolves the water, replaces some original minerals and forms new ones. The movement to the surface is a periodical process, over millions of years; it is no continuous movement, but in stages regulated by its internal chemical reaction and outside pressures. No two pegmatites will be alike chemically or in size or movement, but all will move and material formed in following stages:

1. Progenic - the magma stage in igneous rocks.
2. Hydrothermal stage - high temperature.
   (a) early, (b) middle, (c) late.
3. Mesothermal stage - intermediate temperatures.
4. Epithermal stage - low temperature.
5. The final thrust penetrating earths surface rock strata and cooling off process to permanent position on earth's surface.

It is doing this paragenesis of pegmatite that results in its final construction being: homogeneous or heterogeneous type, also its mineral content and its content of primary uranium ore deposits. Although pegmatites are common the world over, they are rare in the fact that they are confined to definite localities. Their sizes vary from those of 100 feet long by 25 feet in width, to those in South Africa of 2 miles in length and half a mile wide. There are a very much greater percentage of homogeneous types and of those heterogeneous

types; only a small percentage of them will contain primary uranium ore deposits of commercial value.

## PEGMATITES AND RADIOACTIVE PROBLEMS

Most all pegmatites of both types will give off radioactive waves, if only from the granite rock material.

There are over 36 minerals, 7 rare earth elements of "Actinide Series" and an unknown number of chemical elements that can be present in a pegmatite, all of which are radioactive and will react on a counter instrument.

Many minerals, such as fractures filled with pink colored feldspar, for some unknown reason, will give off high radioactivity, yet when removed and analyzed, the sample shows little or no radioactive minerals. To determine the presence of primary uranium ore in pegmatites by use of counter instrument is extremely difficult. I don't believe the type or price of the instrument used is important; it would take a technical specialist, who had investigated many pegmatites and had his work followed by trenching, blasting or tunneling, to identify the peripheral zones and assay of radioactive minerals found.

For this reason I advocate the chemical analysis of the wall zone to determine not only the type of pegmatite but if it will contain primary uranium deposits. It has been proven that certain chemical elements and minerals formed from them do indicate presence of primary uranium ores. As example (this merely mentions theory, not explaining why), a pegmatite with a strong potassium residue, associated with the acid radicals of halides and the abundance of microcline feldspars, with a combination of "Actinide Series" of rare earths are some indication that you can assume and follow the theory, that is the first stage is crystallization of primary uranium ore contemporaneous with the microcline feldspar in "wall zone," occurs in "sheetlike" deposits in muscovite complexity. This in turn is indicative of the second stage, where primary uranium crystallizations will occur in vein, dike or deposits in fractures in the intermediate zone of the pegmatite. I am confident this condition exists in the pegmatites on the "new Hope" claims of Phil-Mar Company, Larimer County, Colorado.

## THE NEW HOPE CLAIM NO. 4, TYPE AND INVESTIGATIONS

The New Hope Claim No. 4, located in parts of New Hope Claims 3, 4, 5, 9 and 10 in Section 18, Township 6 North, Range 71 West, Larimer County, Colorado. Although 75%of pegmatite is concealed below the surface, you can walk out and get an approximate estimate of its size, by following the contact between the Silver Plume schist formation, being forced to near vertical position. By pegmatite "upthrust movement." I estimate its length to be 2000 to 2500 feet, a width (which varies) of maximum of 175 feet and a depth of (estimated from above 2 dimensions) of 100 feet; at several points the rock extends 30 feet above the surface.

Its definitely complex heterogenous type also of the "pneumatolytic" class is due to the exenite and polycrose type minerals found. An assay run on section, trenched into wall zone about 5 to 6 feet, shows it to have the strong potassium residue and associated minerals, that it contained 18 chemical elements and minerals, that indicate proper composition and construction for primary uranium deposits in the intermediate zone; that this assay, made by Charles A Parker, September 2, 1955, Folio No. 6572, not only showed secondary ores, but primary ore as well. A picked sample showed 1.37% uranium and the general sample showed

.338% uranium.

Although many other channels, trenches or holes have been blasted from this and other New Hope claims, the above mentioned assayed section has been the deepest penetration made on any of the claims. Therefore, I want it definitely understood in my report, pertaining to contents of all New Hope pegmatites, going further into their construction and composition beyond 6 feet from surface, is based entirely on my theory and my knowledge and experience in relationship to known, thoroughly investigated, primary uranium producing pegmatites.

There are 11 pegmatites on the "New Hope" 20 claims. These have been walked out and size estimated through the schist-pegmatite contact. There may be other pegmatites, whose surface rocks have eroded or dissolved, covered by overburden soil and I was not able to map. In fact I am convinced this is true by evidence of alibite deposits on surface at several points.

The size of these 11 pegmatites was determined by stepping off, by walking over difficult wooded area and estimating distances, by the same method that a man playing golf uses when figuring which iron to use to get on the green. One of the pegmatites was approximately 3,000 feet in length; all were around the 2,000 foot mark. Their width appeared to be uniform, 150 to 175 feet and I assumed 100 ft. as depth.

With this estimation, using 2,000 ft. by 150 ft. for a total of 300,000 square feet, at 43,560 sq. ft. per acre, gives you the surface area covered by one pegmatite of 6½ acres and for the 11 New Hope pegmatites your surface area covered in total acres can be placed from 60 to 65 acres.

Since I have had no engineer's survey or enough blasting, or tunneling to furnish data for mining engineers' valuation of minerals or ores, I am only using these measurements, assays of New Hope No. 4, other claims blasted, results of Geiger Counter reaction, surface walking and inspection of rocks with pick hammer. Rock and mineral samples sacked and location labled and their identification processed at Colorado School of Mines Processing Laboratory, together with much research work, correspondence with Tom Beard, Consulting Mining Engineer, degree from Massachusetts Institute of Technology and degree in Chemistry, along with my own experience with the Ross pegmatite in the Black Hills of South Dakota, the pegmatites of Nunn Lake Area, Saskatchewan, Canada, pegmatites in New Hampshire, pegmatites in New Mexico, as well as those along the Front Range of Colorado. My education and experience on pegmatites resulted from my interest as a sort of hobby so I feel that I am better qualified along with my work on the New Hope claims to express my theories, make my estimations and evaluation of properties than the average geologist.

Tom Beard, Consulting Geologist of Sherman Oaks, California, whom I mentioned above, was mailed 3 sets of samples, taken from New Hope No. 4, which he personally ran through a laboratory in California. In his assay one general sample had a 52% uranium. He then put it through an "upgrading process" and got 1,75% uranium. I also quote from his letter of February 6, 1956 to me on his opinion of pegmatite structure and ore deposition from the 3 samples of New Hope No. 4:

> "This ore is regarded as a microcline-feldspar, which is micro-aphanitic in texture and structure, being highly altered with severe

complexity of the nepheline-syenite of pegmatic deposition. Such alteration has developed the mafa-complex silicates of sodium, potassium and the aluminum of the Alkali Group. The mococeous complexity reverts to the litchfieldite, leptynolite and lepedolite related to the lithium mica variety, in the minor state, with muscovite as the major mica indicated. The micatization of the minerals in association with deposition seem to be genetically related to the ore type and structure. The altered feldspathoids deposited in lentilic fashion in miocsceous mass of Stratified Series, have been enriched by fission action. This alteration has been related to the severe endogenetic process of chemical action, and accounts for the complex uranium values in the autinite, tobernite, uranamite, pitchblende and minor inclusions of fissionable elements emanating from hydrous developments of unknown origin."

Mr. Beard with his degrees, experience in North and South America and the European continent, is one of this country's outstanding authorities on pegmatites, composition and construction and relation to uranium ores.

## MINING OPERATIONS AND ORE ESTIMATED VALUES

The first principle of proposed mining operation is the cost of getting ore in truck and on to mill and market. In uranium ores transportation is paid by purchasing agent.

The New Hope claims are accessible by a 12 mile privately owned road built by Phil-Mar Company that connects into Highway 186 at Masonville, Colorado, which highway goes to Fort Collins or Loveland, Colorado. The Phil-Mar Company owns a bulldozer and air compressor on location of claims. Mining operations will not be as expensive as the majority of those on Colorado Plateau area. The pegmatite structures are of those on Colorado Plateau area. The pegmatite structures are of brittle coarse cranular rocks that are very easy to disintegrate. Trenching, blasting and open pits along with air compressor drill and loader and trucks to haul will be the method of operating.

At present from 6 ft. of wall zone of New Hope No. 4 assays have proven commercial uranium ore. In the intermediate zone will be veins or dikes of larger deposits of primary uranium ore.

Therefore, since the next principle of mining is to figure the total tonnage of ore you expect to mine and market, we have not done the work to obtain the necessary data to give an engineer's valuation report on ore recovery. However, to convey a rough estimate of what I believe to be the recovery in tonnage, I am using the known data from New Hope No. 4 along with my surface data through my reconnaissance Geological Survey of 20 New Hope claims.

New Hope No. 4, being 2,000 ft. long and 150 ft. wide and producing uranium ore from wall zone and intermediate zone, a possible productive zone of uranium ores, 30 ft. wide and 50 ft. deep that encircles the entire pegmatite, then the uranium ore bearing area would be 4,000 ft. long by 30 ft. wide by 50 ft. deep, or a total of 6,000,000 cubic feet of raw ore material area. Using 20 cubic feet as unit per ton you have 30,000 tons of ore above. Now this 30,000 tons is the amount of raw material present in the outlined zone. I know this entire 6,000,000 cu.

ft. zone will not be a continuous uranium producing formation. However, conservative estimate should show that 15% of zone will yield commercial ore above .30% and bring $40 per ton at market. Therefore, 15% of 30,000 tons of raw material is a total of 4,500 tons of ore from New Hope No. 4 that at market will bring $40 per ton times 4,500 tons or $180,000 total ore value.

Assuming that the 11 other pegmatites on New Hope claims will yield on the same basis, some possibly more or possibly less, having no exploration data, we assume that the value of each one to be $180,000. Then for the 11 pegmatites the total value of all is: $1,980,000.00.

Of course it is my opinion the assay will run about .30%. There will be a larger tonnage recovery and also more pegmatite structures will be uncovered.

By: Leland Clark
Wheat Ridge, Colorado
February 23, 1956

2114 CURTIS STREET

TELEPHONE MAin 3-1852

# CHARLES O. PARKER & CO.

## CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6519

Date August 1, 1955

[illegible]
[illegible]
[illegible], Colorado

**We hereby Certify,** that the samples assayed for you gave the following results:

| DESCRIPTION | URANIUM OXIDE $U_3O_8$ | VANADIUM PENTOXIDE $V_2O_5$ | LIME $CaCO_3$ | RADIOMETRIC EQUIVALENT eU | THORIUM OXIDE $ThO_2$ | TOTAL RARE EARTHS | COMBINED COLUMBIUM TANTALUM OXIDES |
|---|---|---|---|---|---|---|---|
| [illegible] | 0.26% | | | | | | |

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

**Charge $** [illegible].00 Paid

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

RECEIVED
JUL 18 1956

[illegible] CURTIS STREET

TELEPHONE MAin 3-1852

# CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 6571

Date Sept. 2, 195[illegible]

[illegible] Oil Co.
[illegible], Colorado

**We hereby Certify,** that the samples assayed for you gave the following results:

| DESCRIPTION | URANIUM OXIDE $U_3O_8$ | VANADIUM PENTOXIDE $V_2O_5$ | LIME $CaCO_3$ | RADIOMETRIC EQUIVALENT eU | THORIUM OXIDE $ThO_2$ | TOTAL RARE EARTHS | COMBINED COLUMBIUM TANTALUM OXIDES |
|---|---|---|---|---|---|---|---|
| New Hope #4- [illegible]: | 1.370% | | | | | | |
| New Hope #4- Gold: | 0.338% | | | | | | |

Qualitative analysis on New Hope #4-Gold: Copper, trace; Iron, small; Alumina, large; Calcium, small; Magnesium, small; Alkalies (sodium & potassium), fair; Silica, large; Uranium, trace; Lithium, trace; Rare Earths (cerium family), trace; Thorium, trace; Manganese, trace; Phosphorus, trace; Gold, trace; Silver, trace; Uranium, fair; Vanadium, micro-trace.

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

**Charge $** 20.00

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

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JUL 18 1956

2114 CURTIS STREET

TELEPHONE MAin 3-1852

# CHEMISTS • ASSAYERS • ENGINEERS

DENVER 5 COLORADO

"URANIUM CENTER"

Folio 8073

Date Oct. 12, 1955.

[illegible] Oil Co.,
Box 787,
Fort Morgan, Colorado.

**We hereby Certify,** that the samples assayed for you gave the following results:

| DESCRIPTION | URANIUM OXIDE $U_3O_8$ | VANADIUM PENTOXIDE $V_2O_5$ | LIME $CaCO_3$ | RADIOMETRIC EQUIVALENT •U | THORIUM OXIDE $ThO_2$ | TOTAL RARE EARTHS | COMBINED COLUMBIUM TANTALUM OXIDES |
|---|---|---|---|---|---|---|---|
| Tex No. 24 | 3.660% | | | | | | |

PLEASE PAY FROM THIS INVOICE AS NO OTHER STATEMENT WILL BE MAILED. THANK YOU.

**Charge $** [illegible]

CHARLES O. PARKER & CO.

CHEMISTS, ASSAYERS and ENGINEERS

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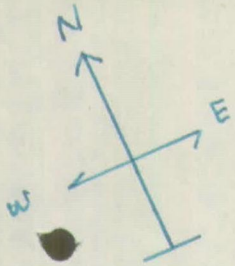
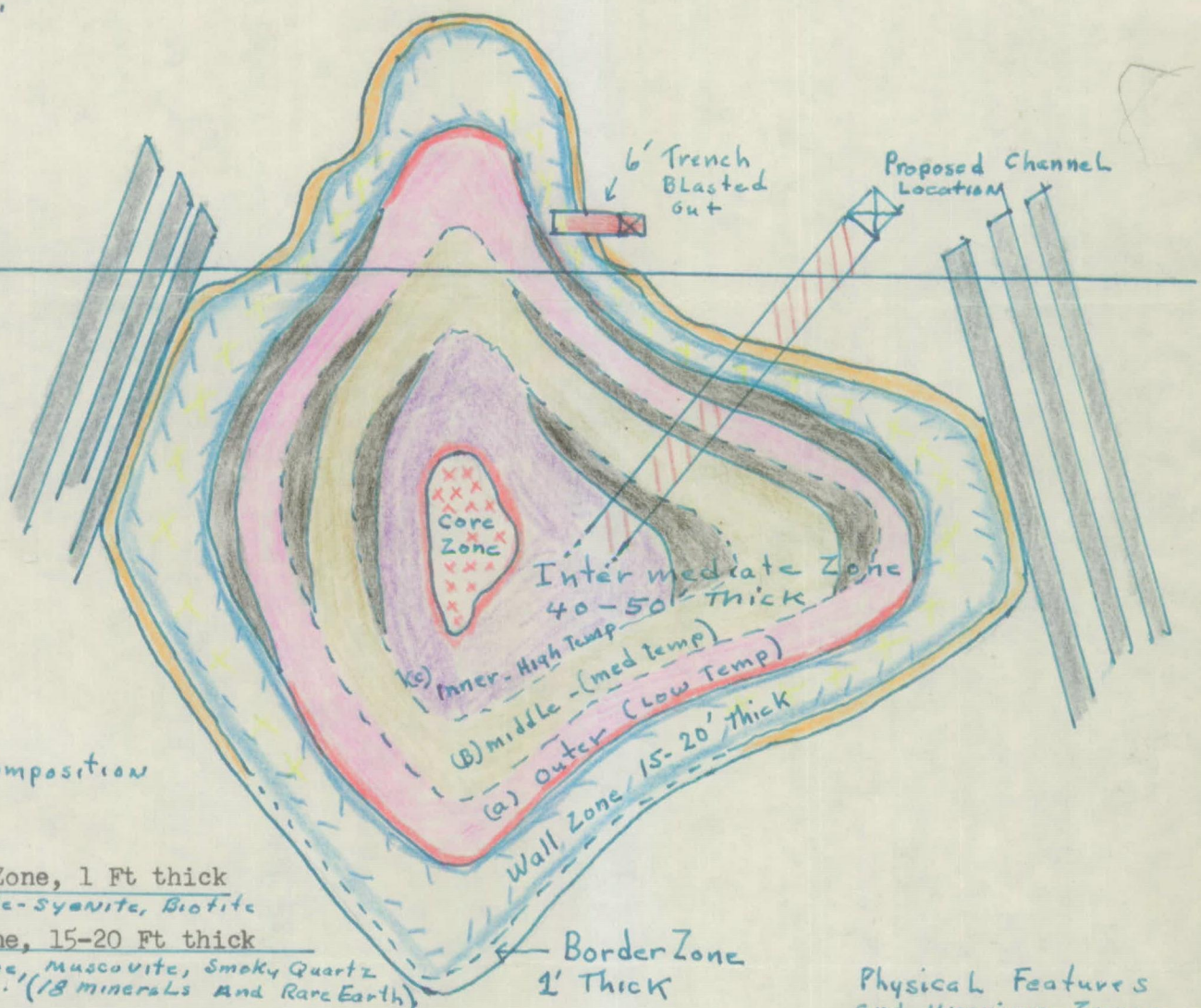
JUL 1 8 1955

Plat #2

CROSSECTION, A - A ( See Plat #1 ) OF THE NEW HOPE CLAIM #4, A HETEROGENOUS TYPE PEGMATITE; SHOWING ZONES, AND THE THEORETICAL INTERPUTATION OF THE POSSIBLE STRUCTURE WITH THE PROBABLE URANIUM DEPOSITS. PART ARE PROVEN.




Not Drawn to any Scale.




Zones + Composition

Border Zone, 1 Ft thick
Nephelite-Syenite, Biotite

Wall Zone, 15-20 Ft thick
Microcline, Muscovite, Smoky Quartz Beryl, (18 minerals And Rare Earth)

Intermediate Zone, 40-50 Ft thick
Divided into 3 Genetically Zones

(a) Outer - Late Hydrothermal stage
Muscovite, Alkali Group, Pyrites, etc

(b) Middle - Medium TTemp. Hyrdothermal stage
Exuenite, Polycase, Beryl, Quartz, etc

(c) Inner- High Temp Hydrothermal stage
Silicas, Cholcoprite, Tourmoline, etc merging with Graphic Granite near Core.

The Core Zone -Igneous minerals, (may not always be present.) Schorl, Albite, Quartz

Sketch By:- Leland Clark
as part Geological Report
Feb 23, 1956

Physical Features and Uranium Zones

Silver Plume Schist Strata Forced vertical by uptrust of pegmatite.

Channel 6 ft into wall zone, from where assay samples were obtained and Uranium ores.

Sheet Uranium deposits, in Wall zone, Proven by assays.

Location of where Channel should be blasted, and dip.

~~Sheet like Uranium deposits present in Wall Zone.~~

Possible and probable Uranium Veins, Dikes or deposits in Intermediate Zone.

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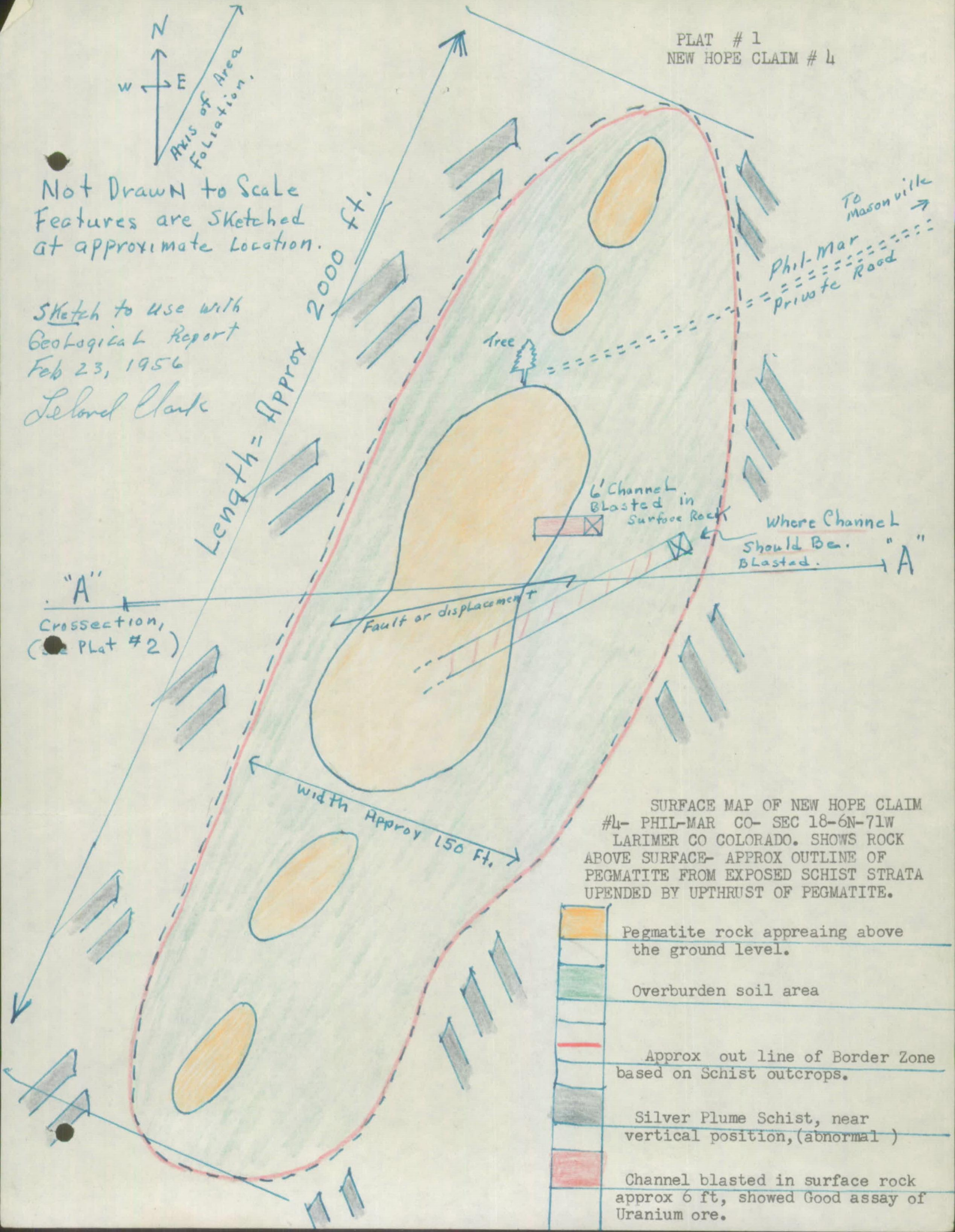
JUL 18 1956

PLAT # 1
NEW HOPE CLAIM # 4




SURFACE MAP OF NEW HOPE CLAIM #4- PHIL-MAR CO- SEC 18-6N-71W LARIMER CO COLORADO. SHOWS ROCK ABOVE SURFACE- APPROX OUTLINE OF PEGMATITE FROM EXPOSED SCHIST STRATA UPENDED BY UPTHRUST OF PEGMATITE.

Pegmatite rock appreaing above the ground level.

Overburden soil area

Approx out line of Border Zone based on Schist outcrops.

Silver Plume Schist, near vertical position,(abnormal )

Channel blasted in surface rock approx 6 ft, showed Good assay of Uranium ore.

RECEIVED
JUL 18 1966