DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

## CONTROLLED DOCUMENT

DMA Docket No. 4019

## DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

Cys to USGS, USBM, Reg. V and
This document has been recorded as

Exploration

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

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|---|---|---|---|
| To: | Rare & Misc. Met. Div. | Date | 10.17.55 |
| To: | Oper Com | Date | 10-27-55 |
| To: | Oper. Com | Date | 2/16/56 |
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## DO NOT DETACH

## CONTROLLED DOCUMENT

700

FILE COPY
Surname:

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

FEB 20 1956

Ralpho Mining Company
P. O. Box 92
Shamokin, Pennsylvania

Re: Docket No. DMEA-4019
(Columbium and tantalum)
Tract No. 1, Union Township
Union County, Pennsylvania

Gentlemen:

Reference is made to your application for Government aid in an exploration project on the above-named tract of land.

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

Careful study of all our information, although noting some minor columbium mineralization on your property, indicates to us that the probability of disclosing columbium or tantalum ore reserves is not sufficiently promising to justify Government participation in an exploration program. We regret to advise you that, under these circumstances, 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,

G. O. Mittendorf

Administrator

FMMurphy/izm 2-16-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
DMEA Field Team, Region V (2)
~~Messrs.~~ Horace T. Reno, Rm. 3641

R.E.L.

Docket Copy

700 Murphy

February 16, 1956

SUMMARY OF PROPOSED PROJECT

Object: Denial of application for exploration aid.

Docket No.: DMEA-4019

Commodity: Columbium and tantalum

Applicant: Ralpho Mining Company
P. O. Box 92
Shamokin, Pennsylvania

Property: Applicant is Lessee of Tract No. 1, consisting of 74.84 acres located on U. S. Route 11, approximately one mile southwest of town of Northumberland, in Union Township, Union County, Pennsylvania

Date of Application: October 10, 1955

Referred to Region V: October 28, 1955

Field Team Report received: February 2, 1956

Amount of Application: $58,093.25

Work Proposed: 10,000 feet of core drilling. The depth of drill holes to range from 50 to 500 feet.

Estimated Costs:

Independent Contracts:

| | | |
|---|---|---|
| 10,000 feet core drilling @ $4.00/ft. | $40,000.00 | |
| Bulldozer operations 200 hrs. @ $7/hr. | 1,750.00 | |
| Air compressor 200 hrs. @ $2.75/hr. | 550.00 | |
| Labor, supervision, consultants | 9,000.00 | |
| Service truck, 300 days @ $6/day | 1,800.00 | |
| Portable tool shed | 226.25 | |
| Analyses, 20 samples @ $70.00 | 1,400.00 | |
| 15 samples @ $15.00 | 225.00 | |
| Miscellaneous | 2,142.00 | |
| Contingencies | 1,000.00 | |
| Total Estimated Costs | | $58,093.25 |

Excerpts from Field Team Report:

Rocks on the subject property comprise interbedded shales, shaly sandstones, and fine-grained sandstones in the upper part of the Catskill formation of Devonian age.

Small amounts of columbium-bearing minerals, showing about 2 times the background count of anomalous radioactivity, appear to be present in tabular lens-like bodies of shaly sandstone. The lenses, from what can be seen of them, have a maximum diameter of 50 feet and may be up to 6 feet thick.

Previous work on the property consists of two short adits, one 5 foot, the other 18 foot in length driven into the face of a cliff, and two diamond-drill holes.

Twelve samples from the adits and of the cores from the drill holes were procured by the field examiners. Analyses of the samples show 0.02 to 0.04% $Cb_2O_5$ with $Ta_2O_5$ not detected.

The field examiners conclude that because of the low columbium content of all samples analyzed and because the columbium-bearing mineral is restricted to thin seams in the small lenses, the application should be denied. The Field Team is in agreement with this conclusion and recommend denial of the application.

Commodity Members Comments:

USGS, N. E. Nelson, February 9, 1956:

Mr. Nelson agrees with the conclusions of the field examiners and concurs in their and the Field Team's recommendations to deny the subject application.

USBM, Horace T. Reno, February 14, 1956:

Concurs in recommendation to deny the subject application for reasons similar to those of the field examiners.

Rare & Miscellaneous Metals Division, F. M. Murphy, February 16, 1956:

In view of the field examiners findings, this Division concurs in the Field Team's recommendation to deny the subject application.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

2/15/56 Lgm

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

RECEIVED
FEB 17 1956

February 14, 1956

Memorandum

To: E. W. Ellis, Director, Rare and Miscellaneous Metals Division, DMEA

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

Subject: Application for Exploration Aid, received October 17, 1955, from Ralpho Mining Company, DMEA Docket No. 4019, estimated cost $58,093.25 (columbium) Union County, Pennsylvania

According to the Field Team report on examination of the property by W. P. Williams and H. L. Burmeister, the highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cb_2O_5$. The columbium bearing minerals apparently are present only in small lens-like bodies in shaley sandstone. Under these circumstances the property does not warrant exploration. I concur with the Field Team recommendation that the application be denied.

Horace T. Reno

Horace T. Reno

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

RECEIVED
FEB 1 5 1956

February 14, 1956

Memorandum

To: E. W. Ellis, Director, Rare and Miscellaneous Metals Division, DMEA

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

Subject: Application for Exploration Aid, received October 17, 1955, from Halpho Mining Company, DMEA Docket No. 4019, estimated cost $58,093.25 (columbium) Union County, Pennsylvania

According to the Field Team report on examination of the property by W. P. Williams and H. L. Burmeister, the highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cb_2O_5$. The columbium bearing minerals apparently are present only in small lens-like bodies in shaley sandstone. Under these circumstances the property does not warrant exploration. I concur with the Field Team recommendation that the application be denied.

Horace T. Bene

RECEIVED

FEB 1 5 1956

February 14, 1956

Memorandum

To: W. W. Ellis, Director, Rare and Miscellaneous Metals Division, DMEA

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

Subject: Application for Exploration Aid, received October 17, 1955, from Malpho Mining Company, DMEA Docket No. 4019, estimated cost $56,093.25 (columbium) Union County, Pennsylvania

According to the Field Team report on examination of the property by W. P. Williams and F. L. Burmeister, the highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cb_2O_5$. The columbium bearing minerals apparently are present only in small lens-like bodies in shaley sandstone. Under these circumstances the property does not warrant exploration. I concur with the Field Team recommendation that the application be denied.

Horace T. Rene

H7Hamoijtmc

Copy to: DMEA (3 copies)
Division of Minerals
Branch of Rare and Precious Metals
R. L. Newcomb, Geo. Survey, Room 5227
R. W. Goshen, Room 3608
H. T. Rene
FILES

RECEIVED
FEB 1 5 1956

February 14, 1956

Memorandum

To: T. W. Ellis, Director, Rare and Miscellaneous Metals Division, DMEA

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

Subject: Application for Exploration Aid, received October 17, 1955, from Ralphs Mining Company, DMEA Docket No. 6019, estimated cost $58,073.25 (columbium) Union County, Pennsylvania

According to the Field Team report on examination of the property by W. F. Williams and K. L. Burnstater, the highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cb_2O_5$. The columbium bearing minerals apparently are present only in small lens-like bodies in shaley sandstone. Under these circumstances the property does not warrant exploration. I concur with the Field Team recommendation that the application be denied.

Maurice T. Dana

MTDana:jkm

Copy to: DMEA (3 copies)
Division of Minerals
Branch of Rare and Precious Metals
K. L. Dunnamb, Geo. Survey, Room 5227
R. W. Cochran, Room 3608
R. T. Dana
FILES

RECEIVED
FEB 1 5 1956

February 14, 1956

Memorandum

To: E. W. Ellis, Director, Rare and Miscellaneous Metals Division, [illegible]

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

Subject: Application for Exploration Aid, received October 17, 1955, from Delphe Mining Company, DMEA Docket No. A019, estimated cost $58,083.25 (calcium) Union County, Pennsylvania

According to the Field Team report on examination of the property by R. F. Williams and R. L. Bernstein, the highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cr_2O_3$. The calcium barrier minerals apparently are present only in small lens-like bodies in shaly sandstone. Under these circumstances the property does not warrant exploration. I concur with the Field Team recommendation that the application be denied.

Bernard T. Jones

BTJ:mmm:jtm

Copy to: DMEA (3 copies)
Division of Minerals
Branch of Rare and Precious Metals
E. L. Mamsch, Geo. Survey, Room 5227
R. W. Goehm, Room 3608
B. T. Jones
FILES

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
OCT 17 1955

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

*Not to be filled in by applicant*

Docket No. 4019
Metal or Mineral Columbium
Date Received Oct 17, 1955
Estimated Cost 58,093.25
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:

Ralpho Mineing Co. Partnership Pennsylvania
P.O. Box 92 Ray Y. Hoffman Elysburg, Pa.
Shamokin, Pa. Fred F. Metzger R # 2 Shamokin, Pa.

(*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 Description attatched

(*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 Lease

(*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

(*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 Columbium Tantalum

(*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 10 days and be completed within 18 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 Oct. 10, 195 5

Ralpho Mining Co.
(Applicant)

By [signature]

**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

RALPHO MINING COMPANY
LAND DESCRIPTION
T RACT NO. 1

RECEIVED
OCT 17 1955

ALL THAT CERTAIN TRACT OR PIECE OF LAND, situate in the Township of Union, County of Union and Commonwealth of Pennsylvania, and being more particularly bounded and described as follows, to wit:- Beginning at a point at the low water mark of the Susquehanna River; thence, crossing Pa. State Highway Route No.25, Spur, and also crossing the right of way of the Reading Company Railroad, N. 83 degrees 55minutes W. a distance of 118 feet to a point in the center line of the County Line Road (separating Union and Snyder Counties); thence, along the center of said road the following courses and distances: N. 46 degrees 41 minutes W. 159.1 feet, N. 51 degrees 21 minutes W. 330.1 feet, N. 67 degrees 06 minutes W. 260.1 feet, N. 88 degrees 06 minutes W. 152.6 feet, S. 77 degrees 24 minutes W. 259.5 feet, S. 80 degrees 30 minutes W. 180.5 feet, S. 89 degrees 40 minutes W. 158.1 feet, N. 83 degrees 49 minutes W. 444.7 feet, S. 88 degrees 02 minutes W..91.8 feet, S. 83 degrees 04 minutes W. 113.8 feet, S. 74 degrees 59 minutes W. 114.9 feet, S. 83 degrees 49 minutes W. 51 feet, N. 83 degrees 09 minutes W. 57 feet to a point; thence, along land of Carl G. Hubbell, N. 15 degrees 10 minutes E. 1208.7 feet to a point; thence, by the same, N. 29 degrees 40 minutes E. 1155feet to a point at land of Benjamin E. Troutman; thence, by land of Benjamin E. Troutman S. 59 degrees 35 minutes E. 89.5 feet to a point; thence, by the same, S. 49 degrees 35 minutes E. 450. 5 feet to a point; thence, S. 40 degrees 35 minutes E. 297 feet to a point; thence, by the same, S. 34 degrees 35 minutes E. 877.9 feet to a point; thence, by the same, S. 13 degrees 35 minutes E. 306.9 feet to a point; thence, by the same, crossing the right of way of the Reading Company Railroad and Pa. State Highway Route No. 25, Spur, S. 88 degrees 38 minutes E. 256.1 feet to a point at the low water mark of the Susquehanna River; thence down the said low water mark of the Susquehanna River the following courses and distances: S. 12 degrees 23 minutes E. 349. 7 feet, S. 7 degrees 32 minutes E. 219.9 feet, S. 2 degrees 43 minutes E. 195.7 feet, S. 1 degrees 26 minutes W. 204.7 feet, to the place of beginning. Containing approximately 74.84 Acres.

RECEIVED
OCT 17 1955

TRACT #2

Being all that certain tract of land situate in the Township of Monroe, County of Snyder and Commonwealth of Pennsylvania, and being bounded on the North by lands of Bowen and Reichenbach, Known as Shikellamy Park; East by lands of Max W. Wolf and Grace E. Wolf, Robert Leiby and Susquehanna River; South by lands of Max W. Wolf and Grace E. Wolf and Robert Leiby; and West by land of William Treas, formerly Daniel Lecher, Containing 146 ACRES, more or less.

FRED F. METZGER

RAY Y. HOFFMAN

Shamokin 8-9795 - Phones - Elysburg 2-3101

RECEIVED
OCT 17 1955

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

Physical description

(a) Exploration of tract # 1 have been in progress for several months, a 10 ft. drift was driven into a 5ft layer of blue-grey sandstone which assayed .1to1.0 of columbium and .1 to 1.0 of tantalum. Two core drill holes have been drilled, a core sample shows columbium. See enclosed assay.

(b) No past or present production, ore reserves unknown, grade shown on enclosed assay.

(c) Exploration to date shows columbium and tantalum in 5 ft. layer of blue - grey sandstone believed to be metallior chemung rock.

(d) Accessibility is very good as Pa. highway # 25 and railroad are on boundary of property. The distance to residence points less than 3 miles

(e) A surplus of manpower is available for exploration and mining from the anthracite region 12 miles distant. Most necessary equipment is already on the job. Water and power are also in plentiful supply.

FRED F. METZGER

RAY Y. HOFFMAN

Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

RECEIVED
OCT 17 1955

The exploration project

(b) We propose to do 10000 Ft core drilling to establish the quality and quantity of ore on property. The mineralized layer has about 20 degree pitch into the hill and is exposed only for about 50 ft. Drill holes will be from 50 to 500 ft. as the elevations vary. The exploration will be in a westerly direction from drift shown on map.

(c)

(d) Ralpho Mining Co. is a recently formed company primarly intrested in prospecting for and mining rare earths. Its owners both own and operate mines in the anthracite coal fields as individuals. We have many years of mining experience, and feel well qualified to supervise the project.

FRED F. METZGER

RAY Y. HOFFMAN

Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

RECEIVED OCT 1 7

## Cost Estimate

| | | | |
|---|---|---|---|
| (a) Independent contracts | | | |
| Bulldozer operations | 250 Hrs @ 7.00 | 1750.00 | |
| Air Compressor | 200 Hrs @ 2.75 | 550.00 | |
| | | 2300.00 | 2300.00 |
| (b) Labor, supervision, consultants. | | | |
| Supervision | 300 days @ 18.00 | 5400.00 | |
| Engineer | 150 days @ 20.00 | 3000.00 | |
| Geological Consultants | 12 Days @ 50.00 | 600.00 | |
| | | 9000.00 | 9000.00 |
| (c) Operating Material and supplies | | | |
| Included in unit costs. | | | |
| (d) Operating equipment | | | |
| Diamond core drill | 10000 Ft. @ 4.00 | 40000.00 | |
| Service truck | 300 days @ 6.00 | 1800.00 | |
| | | 41800.00 | 41800.00 |
| (e) Rehabilitation and repairs | | | |
| None required | | | |
| (f) New buildings, improvements, installations. | | | |
| Portable tool shed | | 226.25 | 226.25 |
| (g) Miscellaneous. | | | |
| Analytical | 20 samples @ 70.00 | 1400.00 | |
| | 15 samples @ 15.00 | 225.00 | |
| Accounting | 600 Hrs. @ 1.40 | 840.00 | |
| Workmens Comp. insurance | | 530.00 | |
| Employers liability insurance | | 180.00 | |
| Payroll taxes | | 592.00 | |
| | | 3767.00 | 3767.00 |
| (h) Contingencies. | | | |
| | | 1000.00 | 1000.00 |
| | | Estimated total | $ 58093.25 |

2-13-56 [illegible]

IN REPLY REFER TO:

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

RECEIVED
FEB 10 1956

February 9, 1956

Re: DMEA 4019
Ralpho Mining Company
Ralpho Mining Company property
Union County, Pennsylvania
Columbium - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of Field Team report.

The applicant requested assistance in the exploration by diamond drilling of thin, weakly radioactive seams in interbedded shales, shaly sandstones and fine-grained sandstones of the upper part of the Catskill formation (Devonian).

The examiners conclude that the columbium 'ore' is restricted to thin seams in a host rock that exhibits lens structure, is low-grade and it is unlikely the work proposed would result in the discovery of a significant columbium ore body.

Two short adits, diamond drilling by the applicant, numerous faces in cuts (road and railroad), and quarries afford a large exposure of the host rocks and of the large number of samples taken (12), only two showed as much as 0.04% $Cb_2O_5$. No tantalum accompanies the columbium.

I concur with the conclusion and recommendations of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
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Re: DMEA 4019
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I concur with the conclusion and recommendations of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

NENelson/em

IN REPLY REFER TO:

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

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February 9, 1956

Re: DMEA 4019
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N. E. Nelson

N. E. Nelson

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

NENelson/em

IN REPLY REFER TO:

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

RECEIVED
FEB 10 1956

February 9, 1956

Re: DMEA 4019
Ralpho Mining Company
Ralpho Mining Company property
Union County, Pennsylvania
Columbium - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of Field Team report.

The applicant requested assistance in the exploration by diamond drilling of thin, weakly radioactive seams in interbedded shales, shaly sandstones and fine-grained sandstones of the upper part of the Catskill formation (Devonian).

The examiners conclude that the columbium 'ore' is restricted to thin seams in a host rock that exhibits lens structure, is low-grade and it is unlikely the work proposed would result in the discovery of a significant columbium ore body.

Two short adits, diamond drilling by the applicant, numerous faces in cuts (road and railroad), and quarries afford a large exposure of the host rocks and of the large number of samples taken (12), only two showed as much as 0.04% $Cb_2O_5$. No tantalum accompanies the columbium.

I concur with the conclusion and recommendations of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

NENelson/em

2/7/56 gla

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

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FEB - 2 1956

January 31, 1956

Memorandum

To: Operating Committee, DMEA - Washington

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

Subject: Field Examination Report, DMEA-4019 (uranium)
Ralpho Mining Company, P.O. Box 92, Shamokin, Pa.

Enclosed are 4 copies of the subject examination report.

The Field Team is in agreement with the recommendation for denial of the application.

Robert A. Laurence
Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch
V. J. Lynch, Executive Officer,
DMEA Field Team, Region V

Reviewed by
DMEA OPERATING COMMITTEE
2-6-56
(date)

Field Team Report on Examination of Property

by

W. P. Williams and H. L. Burmeister[1]

Reviewed by
DMEA OPERATING COMMITTEE
2-6-56
(date)

DMEA Docket No. 4019 (Uranium)
Applicant: Ralpho Mining Company
P. O. Box 92, Shamokin, Pa.
Property Location: Union County, Pa.

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## Summary, Conclusions and Recommendations

Rocks on that part of the Ralpho property where exploration work is proposed comprise interbedded shales, shaly sandstones, and fine-grained sandstones in the upper part of the Catskill formation of Devonian age. Although the property is on a broad synclinal structure the rocks are not sharply folded or faulted.

Small amounts of columbium-bearing minerals appear to be present in lens-like bodies of shaly sandstone. The columbium-bearing mineral associated with green copper minerals, and the sandstone lenses exhibit somewhat anomalous radioactivity. The highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cb_2O_5$. The samples were analyzed by petrographic, qualitative spectroscopic and by quantitative fluorescent x-ray spectrographic methods, in the College Park laboratories. The radiometric count did not exceed two times background at any point tested.

The Field Team representatives conclude that because of the low columbium content of all samples analyzed and because the columbium "ore" is restricted to thin seams in a host rock that exhibits lens structure, it seems unlikely that exploration work would result in the discovery of a significant columbium ore body. It is therefore recommended that the application for DMEA assistance be denied.

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1/ H. L. Burmeister, Bureau of Mines, and W. P. Williams, Geological Survey.

## General Discussion

The Applicant proposed to explore on two adjoining tracts, each held under separate lease. Tract No. 1 is located in Union County, Pa. and Tract No. 2 in Snyder County, Pa. Tract No. 2 was abandoned by the Applicants at the time of examination. Tract No. 1, consisting of 74.84 acres, is leased from the owners, Raymond C. Bowen and Benton E.Reichenback, both of the Borough of Selinsgrove, Snyder County, Pa. Tract No. 1 is located on U.S.Route 11, approximately one mile southwest of the Town of Northumberland, and in a triangle between the precipitous western bank of the Susquehanna river and the steep northern bank of a creek.(Location map and Fig.1). Tract No. 2 adjoined Tract No. 1 on the south.

The property was examined on Nov. 17, 1955 by H. L. Burmeister, Bureau of Mines, and on Nov. 24 by W. P. Williams, Geological Survey. In each case the examiner was accompanied by the Applicants, Mr. Fred F. Metzger and Mr. Ray Y. Hoffman. A total of 20 man-hours were spent on the property by the examiners.

Previous work on the property is limited to the exploration work done by the Applicants and consists of two short drifting adits approximately 5' x 18' long in the face of a cliff, and two diamond-drill holes (Figs. 1, 2 and 3). Supplies, equipment, water and labor are readily available. The average wage for labor is $1.75 per hour. A high voltage power line crosses the property.

The applicant proposed to diamond drill a total of 10,000 feet with company-owned equipment in an unspecified number of holes and employ a bulldozer for 250 hours to prepare drill sites. Poor core recovery obtained by the Applicant in drilling two holes indicated that further use

of company-owned equipment would not be satisfactory. Costs submitted were not broken down to a unit cost basis. It was considered advisable to assist the Applicants in preparing a unit cost program as the recommendations of the examiners depended on results of analyses obtained later. Funds requested in the application are adequate but the geologic target is considered too small. Copies of "Owner's Consent to Lien," "Subordination Agreement," maps and results of analyses of Applicant's samples were furnished by the Applicant about three weeks after examination.

## Geology

The property controlled by the Ralpho Mining Company is located, structurally, in the central part of an elongated synclinal basin. The long axis of the basin is oriented east-northeast. The southwest extremity of the basin is about 8 miles from the Ralpho property. The northeast extremity of the basin, about 7 miles from the property, is indeterminate and becomes involved in irregular folding and deformation. The synclinal structure has been called the Northumberland synclinal and is one of many alternating synclines and anticlines which extend, in broad concentric curves, from west to east across east-central Pennsylvania.

Rocks on the Ralpho property consist of alternating shales, shaly sandstones, and sandstones in the upper part of the Catskill formation of upper Devonian age. The rocks are well exposed on the property in two stone quarries and in various road and railroad cuts. The rocks range in color from brick red and purplish red to gray-green and green, with various shades of red much predominant. Grainsizes of the rocks range from clay size particles in the shaly members to fine-grained sandstones and siltstone in the coarser members.

The rocks on the property dip about 10 to 14 degrees to the northwest and strike about N.45° E. The dip of the beds may change within short distances. A short adit, about 18 feet long in a quarry face, figures 2 and 3, shows an undulation in the adit roof. The undulation is complete within the length of the adit. The closure of the fold is about 1½ feet.

The portals of two short adits, the longest of which is 18 feet, are shown on figures 1, 2 and 3. The two portals are located in thin-bedded, greenish gray, shaly sandstone. Tests with geiger counter show this material to be somewhat radioactive. The radiometric count is about two times background. The somewhat anomalous radioactivity does not seem to be disseminated throughout the shaly sandstone but is confined to seams of a black unidentified mineral and green secondary copper minerals. The mineralized seams are only a fraction of an inch thick and their total volume would compose only a fraction of one percent of the volume of the host rock. The shaly sandstone that contains the mineralized seams forms lens-like bodies which are tabular and appear to be accordant with the bedding in the Catskill formation (fig.4). The lenses, from what can be seen of them, hava a maximum diameter of 50 feet and may be as thick as 5 or 6 feet. Because of their lack of exposure it is difficult to predict how numerous the lenses are or what their distribution in the Catskill formation might be.

Because the mineralized seams are so thin and sporadic and because the host rock forms lenses the possibility of developing significant tonnages of ore-grade material appear to be remote, if not impossible.

A total of twelve channel samples were taken on the property and analyzed for columbium and tantalum. The locations of the sample points are shown on figures 2 and 3, and the results of analyses are given in table I. Tantalum was not detected in any of the samples, and the highest columbium assay was 0.04 percent $Cb_2O_5$.

Two diamond drill holes have been completed on the property by the applicant. Adequate core was not recovered from hold No. 1 so results from that hole are obscure. By the Applicant's admission the hole was barren. The other hole, No. 2, collared in the floor of a quarry in red, shaly sandstone was drilled to a depth variously reported by the Applicant as 220 feet, and 230 feet. The core for the latter hold was made available for inspection. Less than half the core had been recovered, and intervals where core was not recovered were not recorded by the driller. The core that was available afforded the following geologic log:

| Depth (ft.) | Lithology |
|---|---|
| 0 - 6 | Purplish gray, fine-grained sandstone. Even textured, few fractures. |
| 10 - 30 | Uniform purplish-red siltstone. Unfractured. |
| 30 - 45 | Greenish gray to purplish gray, fine-grained sandstone. One-foot thick conglomeratic bed at 32-33 feet. |
| 45 -119 | Brick-red siltstone. Some grayish shaly laminae. Few fractures. |
| 119 -126 | Purplish red, fine-grained sandstone. Local dark-red siltstone laminae. |
| 126 -220 | Purplish red, very fine-grained siltstone. Few 6 inches to 1-foot thick, very fine-grained, red sandstone beds. Few scattered green clauconitic (?) partings transverse to core. Few fractures. |
| 220 -230 | Purplish gray, very fine-grained sandstone. Even textured, few fractures, arkosic. Small, bright, scattered metallic grains are probably pyrite. Assay sample at 225 feet was reported by applicant to contain 0.02-0.10% Cb. Sample of core from approximately same depth by examining team assayed 0.04% $Cb_2O_5$. |
| Total depth 230 feet | |

Table I
Samples from Ralpho Mining Company property
Union County, Pennsylvania

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| Sample No. | $Cb_2O_5$ % | $Ta_2O_5$ % | Remarks |
|---|---|---|---|
| R-1 | 0.02 | Not detected | 7' vertical channel sample along west side of adit portal, across "ore zone." |
| R-2 | 0.02 | " " | 6' vertical channel sample in road cut. |
| R-3 | 0.03 | " " | 5' vertical channel sample up from old adit portal, above "ore zone." |
| R-4 | 0.02 | " " | 6' vertical channel sample across "ore zone" at old adit portal. |
| R-5 | 0.02 | " " | 5' vertical channel sample down from old adit portal, below "ore zone." |
| R-6 | 0.04 | " " | Approximately 6" length of AX core from 225' depth. Diamond drill hole in quarry. |
| 32 | 0.02 | " " | 4' vertical channel sample. West side of west adit, 4' from portal. Gray ss. |
| 33 | 0.03 | " " | 2½" vertical channel sample, East side of west adit, 10' from portal, Gray ss. |
| 34 | 0.02 | " " | 6' vertical channel, in cliff face above back of west adit, Gray ss. |
| 35 | 0.03 | " " | 4' vertical channel in cliff face, 20' west of west adit portal. In same strata as adit. |
| 36 | 0.04 | " " | 5' vertical channel continuing above 35 |
| 37 | 0.02 | " " | 6' vertical channel in road cut |

The channel samples taken by the examining team were analyzed by x-ray methods. All of the sample material was too fine-grained to allow identification of any specific columbium-bearing minerals. No concentrations of heavy minerals were noted in the Catskill formation on the Ralpho property.

H. L. Burmeister, Mine Exploration & Examination Engr.
Bureau of Mines

W. P. Williams, Geologist
U.S.Geological Survey

January 19, 1956

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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OCT 17 1955

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

*Not to be filled in by applicant*

Docket No. 4019
Metal or Mineral Chromium
Date Received Oct 17, 1955
Estimated Cost $8,093.25
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:

Ralpho Mineing Co. Partnership Pennsylvania
P.O. Box 92 Ray Y. Hoffman Elysburg, Pa.
Shamokin, Pa. Fred F. Metzger R # 2 Shamokin, Pa.

(*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 Description attatched

(*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 Lease

(*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

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

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OCT 19 1955
U. S. Geol. Survey
Geol. Division

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.

16—66551-1

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

(*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 10 days and be completed within 18 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 Oct. 10, 1955

Ralpho Mining Co.
(Applicant)

By [signature]

**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

RALPHO MINING COMPANY
LAND DESCRIPTION
TRACT NO. 1

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OCT 17 1955

ALL THAT CERTAIN TRACT OR PIECE OF LAND, situate in the Township of Union, County of Union and Commonwealth of Pennsylvania, and being more particularly bounded and described as follows, to wit:- Beginning at a point at the low water mark of the Susquehanna River; thence, crossing Pa. State Highway Route No.25, Spur, and also crossing the right of way of the Reading Company Railroad, N. 83 degrees 58minutes W. a distance of 118 feet to a point in the center line of the County Line Road (separating Union and Snyder Counties); thence, along the center of said road the following courses and distances: N. 46 degrees 41 minutes W. 139.1 feet, N. 51 degrees 21 minutes W. 350.1 feet, N. 67 degrees 06 minutes W. 260.1 feet, N. 68 degrees 06 minutes W. 152.6 feet, S. 77 degrees 24 minutes W. 259.5 feet, S. 80 degrees 30 minutes W. 180.5 feet, S. 89 degrees 40 minutes W. 158.1 feet, N. 83 degrees 49 minutes W. 444.7 feet, S. 88 degrees 02 minutes W. 91.8 feet, S. 83 degrees 04 minutes W. 113.8 feet, S. 74 degrees 59 minutes W. 114.9 feet, S. 83 degrees 49 minutes W. 51 feet, N. 83 degrees 32 minutes W. 57 feet to a point; thence, along land of Carl J. Hubbell, N. 16 degrees 10 minutes E. 1208.7 feet to a point; thence, by the same, N. 29 degrees 40 minutes E. 1155feet to a point at land of Benjamin E. Troutman; thence, by land of Benjamin E. Troutman S. 59 degrees 35 minutes E. 89.5 feet to a point; thence, by the same, S. 49 degrees 35 minutes E. 450. 5 feet to a point; thence, S. 40 degrees 35 minutes E. 197 feet to a point; thence, by the same, S. 34 degrees 35 minutes E. 877.9 feet to a point; thence, by the same, S. 13 degrees 35 minutes E. 906.9 feet to a point; thence, by the same, crossing the right of way of the Reading Company Railroad and Pa. State Highway Route No. 25, Spur, S. 28 degrees 38 minutes E. 256.1 feet to a point at the low water mark of the Susquehanna River; thence down the said low water mark of the Susquehanna River the following courses and distances: S. 12 degrees 25 minutes E. 349. 7 feet, S. 7 degrees 32 minutes E. 219.0 feet, S. 2 degrees 43 minutes E. 195.7 feet, S. 1 degrees 26 minutes W. 204.7 feet, to the place of beginning. Containing approximately 74.24 Acres.

TRACT #2

Being all that certain tract of land situate in the Township of Monroe, County of Snyder and Commonwealth of Pennsylvania, and being bounded on the North by lands of Bowen and Reichenbach, Known as Shikellamy Park; East by lands of Max W. Wolf and Grace E. Wolf, Robert Leiby and Susquehanna River; South by lands of Max W. Wolf and Grace E. Wolf and Robert Leiby; and West by land of William Treas, formerly Daniel Leaher, Containing 146 ACRES, more or less.

FRED F. METZGER

RAY Y. HOFFMAN

Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

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OCT 17 1955

Physical description

(a) Exploration of tract # 1 have been in progress for several months, a 10 ft. drift was driven into a 7ft layer of blue-grey sandstone which assayed .1to1.0 of columbium and .1 to 1.0 of tantalum. Two core drill holes have been drilled, a core sample shows columbium. See enclosed assay.

(b) No past or present production, ore reserves unknown, only shown on enclosed assay.

(c) Exploration to date shows columbium and tantalum in 8 ft. layer of blue - grey sandstone believed to be satellite showing vein.

(d) Accessibility is very good as Pa. Highway # 30 and railroad are on boundary of property. The distance to Pennsylvania Station less than 3 miles

(e) A surplus of manpower is available for exploration and mining from the anthracite region 12 miles distant. Most necessary equipment is already on the job. Water and power are also in plentiful supply.

FRED F. METZGER RAY Y. HOFFMAN
Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92
SHAMOKIN, PA.

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OCT 1 5 1955

The exploration project

(b) We propose to do 10000 Ft core drilling to establish the quality and quanity of ore on property. The mineralized layer has about 20 degree pitch into the hill and is exposed only for about 50 ft. Drill holes will be from 50 to 500 ft. as the elevations vary. The exploration will be in a westerly direction from drift shown on map.

(c)

(d) Ralpho Mineing Co. is a recently formed company primarly intrested in prospecting for and mineing rare earths, its owners both own and operate mines in the anthracite coal fields as individuals. We have many years of mineing experience, and feel well qualified to supervise the project.

FRED F. METZGER

RAY Y. HOFFMAN

Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

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OCT 17 1955

[illegible]

(a) [illegible]

> Rubber gaskets [illegible] 7.00 [illegible]

None Air compressor [illegible] 0.75 [illegible]

[illegible] [illegible]

(b) Labor, supervision, consultants.

> Superintendent [illegible] 10.00 [illegible]

> Engineer [illegible] [illegible]

> Geological Consultants [illegible] 10.00 [illegible]

[illegible] [illegible]

None (c) Operating charges and supplies [illegible]

[illegible] to mill costs.

(d) Special equipment

Diamond core drill [illegible] 0.00 [illegible]

> Service truck [illegible] 6.00 [illegible]

[illegible] [illegible]

> (e) Maintenance and repairs

[illegible] supplies

> (f) Use of buildings, structures, installations.

~~Cost to coal [illegible]~~ [illegible] [illegible]

> Core shed

(g) Assessments.

Analytical [illegible] [illegible]

[illegible] [illegible]

> Insurance [illegible]

[illegible] [illegible]

[illegible] liability insurance [illegible]

Payroll taxes [illegible]

[illegible] [illegible]

(h) Contingencies. [illegible] [illegible]

[illegible] [illegible]

MF-201
(Revised February 1953)

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

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FEB - 2 1956

## SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

judgment note dated November 10, 1954 filed to No. 55 January Term, 1955

in the Court of Common Pleas of Union County
upon that certain parcel of ground described in a proposed Exploration Project Contract

between Ray Y. Hoffman and Fred F. Metzger, trading as Ralpho Mining Co.,

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this _____ day of November, 1955.

_____ [SEAL]

_____ [SEAL]

I, _____, certify that I am the _____

(Secretary, etc.) of the corporation named herein; that _____

who signed this agreement was then _____ (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

6/ Shamokin 8.9795

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MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator
Docket No. DMEA-
Contract No. Idm-E
Contract Date

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Union, State of Pennsylvania, described ~~as follows~~:1/

in a lease dated July 6, 1955 and recorded in Miscellaneous Book 17, Page 514, official records of said County.

which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. Undertakes and agrees that property in which the Government may acquire an interest or equity under the contract may be dismantled, severed from the land, and removed, as may be provided in the contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned;

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/ Judgment note in favor of S. B. Rhoads, dated November 10, 1954 and filed to No. 55 January Term 1955, Court of Common Pleas of Union County

3. Undertakes and agrees neither to commit any act nor assert any claim in conflict with the provisions of this Consent to Lien; and to give advance notice of the Government's rights under this Consent to Lien to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, or interest in the land; and

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

3/ Write "none" if that is the case. Do not leave lines blank.

4. Consents to all amendments and assignments of the contract without notice thereof, and agrees that this Consent to Lien shall extend and apply thereto.

5. Added provision: _____

_____

_____

_____

_____

_____

_____

_____

Dated this _____ day of November, 195 5.

Raymond C. Bowen [Seal]

Benton E. Reichenbach [Seal]

_____ [Seal]

I, _____ certify that I am the _____ _____ (Secretary, etc.) of the corporation named herein; that _____ _____ who signed this agreement was then _____ (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____

[Corporate Seal]

RECEIVED
FEB - 2 1956

# ARTICLES OF AGREEMENT

MADE AND CONCLUDED this 6th day of July, 1955, by and between RAYMOND C. BOWEN and BENTON E. REICHENBACH, both of the Borough of Selinsgrove, County of Snyder and Commonwealth of Pennsylvania, Lessors, parties of the first part,

and RAY Y. HOFFMAN and FRED F. METZGER, both of the Township of Ralpho, County of Northumberland and Commonwealth of Pennsylvania, co-partners trading and doing business as RALPHO MINING CO., Lessees, parties of the second part;

WITNESSETH: That the parties of the first part, for and in consideration of the sum of One Dollar ($1.00), and of the rents, royalties and covenants hereinafter reserved and contained, have granted, bargained, sold, demised and to mine let, and by these presents do grant, bargain, sell, demise and to mine let, unto the parties of the second part, their heirs and assigns, all of the minerals, including stone, in all of the veins and deposits, lying under and beneath the surface of the land described as follows:

being ALL THAT CERTAIN TRACT OR PIECE OF LAND, situate in the Township of Union, County of Union and Commonwealth of Pennsylvania, and being more particularly bounded and described as follows, to wit:- BEGINNING at a point at the low water mark of the Susquehanna River; thence, crossing Pa. State Highway Route No. 25, Spur, and also crossing theright of way of the Reading Company Railroad, N. 83 degrees 55 minutes W. a distance of 118 feet to a point in the center line of the County Line Road (separating Union and Snyder Counties); thence, along the center of said road the following courses and distances: N. 46 degrees 41 minutes W. 159.1 feet, N. 51 degrees 21 minutes W. 330.1 feet, N. 67 degrees 06 minutes W. 260.1 feet, N. 88 degrees 06 minutes W. 152.6 feet, S. 77 degrees 24 minutes W. 259.5 feet, S. 80 degrees 30 minutes W. 180.5 feet, S. 89 degrees 40 minutes W. 158.1 feet, N. 83 degrees 49 minutes W. 444.7 feet, S. 88 degrees 02 minutes W. 91.8 feet, S. 83 degrees 04 minutes W. 113.8 feet, S. 74 degrees 59 minutes W. 114.9 feet, S. 83 degrees 49 minutes W. 51 feet, N. 83 degrees 09 minutes W. 57 feet to a point; thence, along land of Carl G. Hubbell, N. 16 degrees 10 minutes E. 1208.7 feet to a point; thence by the same, N. 29 degrees 40 minutes E. 1155 feet to a point at land of Benjamin E. Troutman; thence, by land of Benjamin E. Troutman, S. 59 degrees 35 minutes E. 89.5 feet to a point; thence, by the same, S. 49 degrees 35 minutes E. 450.5 feet to a point; thence,

S. 40 degrees 35 minutes E. 297 feet to a point; thence, by the same, S. 34 degrees 35 minutes E. 877.8 feet to a point; thence, by the same, S. 13 degrees 35 minutes E. 306.9 feet to a point; thence, by the same, crossing the right of way of the Reading Company Railroad and Pa. State Highway Route No. 25, Spur, S. 88 degrees 38 minutes E. 256.1 feet to a point at the low water mark of the Susquehanna River; thence down the said low water mark of the Susquehanna River the following courses and distances: S. 12 degrees 23 minutes E. 349.7 feet, S. 7 degrees 32 minutes E. 219.9 feet, S. 2 degrees 43 minutes E. 195.7 feet, S. 1 degrees 26 minutes W. 204.7 feet, to the place of beginning. Containing approximately 74.84 Acres.

TO HAVE AND TO HOLD, ALL of the said minerals in and under the said tract of land, unto the said parties of the second part, their heirs and assigns, to and for the only proper use and behoof of the said parties of the second part, their heirs and assigns, for a term of one (1) year from the date of these presents, with the option in the parties of the second part to renew this lease from year to year as long as operation of the mines on the said tract are profitable or as long as the parties of the second part are actively engaged in mining operations or exploration. The said option shall be exercised by the parties of the second part by mailing a written notice of said renewal to either of the first parties, by registered mail, at least sixty (60) days prior to the expiration date of this lease or the expiration date of any renewal hereof.

AND the said parties of the first part do also, for the consideration aforesaid, hereby grant unto and confer upon the said parties of the second part, their heirs and assigns, all of the rights and privileges necessary for the advantageous mining of the said minerals, with the right to remove and dispose of the same, provided, however, that the said parties of the second part shall not have the right to use the surface of the said land except for the purpose of opening and maintaining necessary airshafts, pumphouses, buildings, and other equipment, and for the deposit and storage of ore, or minerals.

THE above covenants and restrictions are made and concluded under and subject to the following provisions, which shall be binding upon the parties hereto, their heirs and assigns:

1. The parties of the second part shall begin exploratory proving of the tract with a tunnel or core drilling within sixty (60) days from

the date of these presents.

2. The rent reserved hereunder by the parties of the first part is the one-half portion of the net profit realized by the parties of the second part in the mining and sale of minerals and ores of all kinds recovered from the demised premises. True and complete records shall be maintained by the parties of the second part of the income and expenditures accruing from and chargeable to the mining operations carried on under the terms of this lease. The net profit arising from the operation shall first be computed, and the one-half portion thereof paid over to the parties of the first part, on December 31, 1955. Thereafter, the parties of the second part shall quarterly present to the parties of the first part a financial report showing, inter alia, the net profit of the operation, and shall pay over the said one-half portion of the said net profit. The books and records of the parties of the second part shall be subject to inspection by the parties of the first part, or their agents, at any reasonable time.

3. The parties of the second part shall procure, and shall keep in force by the payment of the premiums therefore, adequate public liability and property insurance, insuring both the parties of the first part and the parties of the second part.

4. It is agreed that the operations carried on by the parties of the second part under the terms of this lease shall be as independent contractors, and the parties of the second part shall be responsible for Workmen's Compensation insurance and for compliance with the Mining Laws of the Commonwealth of Pennsylvania.

5. The parties of the first part shall not under any circumstances be responsible for, or be required to pay, any portion of any losses incurred in the exploration or mining on the said tract. However, losses may be carried forward any length of time in computing net profits.

6. Any taxes levied and assessed on the minerals or mineral rights on the demised premises shall be borne equally by the parties of the first part and the parties of the second part.

7. On and after the showing of a profit from the mining operation carried on in and about the demised premises, the parties of the second part may make a reasonable charge for supervision of the said operation, which shall be based on the time actually spent in supervision, but which shall not, in any event, exceed the sum of $5,000.00 annually.

8. In the event that the mining operations, or explorations, carried on on the demised premises shall interfere with and deplete the flow of water from the well now on the premises, the parties of the second part shall drill and case a new well with a flow equal to the flow of the present well.

9. The allowance for depletion for income tax purposes shall be computed on the gross receipts before the net profit is calculated and the advantage of the said allowance shall inure equally to both the parties of the first part and the parties of the second part.

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

$ Raymond C. Bowen (SEAL)
Raymond C. Bowen

$ Benton E. Reichenbach (SEAL)
Benton E. Reichenbach

$ Ray Y. Hoffman, Co-partner (SEAL)
Ray Y. Hoffman, Co-partner

$ Fred F. Metzger, (SEAL)
Fred F. Metzger, Co-partner
Trading as Ralpho Mining Co.

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF SNYDER ss.:

On this 6th day of July, 1955, personally appeared before me, the undersigned officer, Raymond C. Bowen, Benton E. Reichenbach, Ray Y. Hoffman and Fred F. Metzger, known to me (or satisfactorily proven) to be the persons who signed the foregoing Agreement, and acknowledged the same to be their act and deed for the purposes therein contained.

In witness whereof I have hereunto set my hand and official seal.

S Aberdeen Phillips
Notary Public

My commission exp. Jan. 7, 1956

EY McCREATH

FRED A. PENNINGTON
MERTON H. DAVEY

ANDREW S. McCREATH & SON
ANALYTICAL AND CONSULTING CHEMISTS
236-242 LIBERTY STREET
HARRISBURG, PA.

April 20, 1955

Metzger Coal Company

Gentlemen:

The sample of Uranium received from you on April 1, 1955 shows the following:

Spectrographic Analysis

| | |
|---|---|
| Fe | Present |
| Si | High |
| Al | Present |
| Ca | Present (low) |
| Mg | Present (low) |
| Cu | .10 |
| Pb | N.D. |
| Zn | Trace |
| Ni | N.D. |
| Na | Present |
| U | N.D. |
| Th | N.D. |
| Ce | N.D. |
| V | Trace |
| Ti | Present |

App. Sample "A"

Yours very truly,

ANDREW S. McCREATH & SON

BY Merton H. Davey
Partner.

3' sample (vertical) just above R.R. tracks + 30' N. of cliff face, Same strata as drift

LESLEY McCREATH

FRED A. PENNINGTON
MERTON H. DAVEY

ANDREW S. McCREATH & SON

ANALYTICAL AND CONSULTING CHEMISTS

236-242 LIBERTY STREET

HARRISBURG, PA.

November 4, 1955

Metzger Coal Company
R.D.#2 Box 497
Shamokin, Pennsylvania

Gentlemen:

The Rock Sample received from you on October 28, 1955 yields the following on spectrographic analysis:

| | | | | |
|---|---|---|---|---|
| Cb | | .05 to .10 | | per cent |
| Ta | | Nil | | |
| | Major | | | |
| Si | | | | |
| | Minor | | | |
| Fe | Al | Mg | | |
| | Present | | | |
| Ca | Ti | V | Na | |
| | Trace | | | |
| Cr | Mn | K | | |

Very truly yours,

ANDREW S. McCREATH & SON

BY [signature]

Appl. Sample "B"

3 pound sample (1 piece) at random.

~~Drift muck pile~~

Same as BM sample No. ~~6~~ 37

LESLEY McCREATH

FRED A. PENNINGTON
MERTON H. DAVEY

ANDREW S. McCREATH & SON

ANALYTICAL AND CONSULTING CHEMISTS

236-242 LIBERTY STREET

HARRISBURG, PA.

October 4, 1955

Ray Hoffman
Elysburg, Penna.
Northumberland County

Gentlemen:

The core sample received from You on September 30, 1955 yields the following on spectrographic analysis:

| | | | |
|---|---|---|---|
| Cb | .02 to .10 | | |
| Ta | Not detected | | |
| Major | | | Trace |
| Fe | Ti | | Cu |
| Minor | | | Mn |
| Al | Mg | Ti | Cr |
| Present | | | Ni |
| Ca | | | V |

Very truly yours,

ANDREW S. McCREATH & SON

BY Bruce D. Kracker

Appl. sample "C"
6" width 220' deppth, (rock above this was similar)
Drill hole #2

LESLEY McCREATH

FRED A. PENNINGTON
MERTON H. DAVEY

ANDREW S. McCREATH & SON
ANALYTICAL AND CONSULTING CHEMISTS
236-242 LIBERTY STREET
HARRISBURG, PA.

September 3, 1955

Mr. Ray Hoffman
Elyburg, Pennsylvania

Dear Mr. Hoffman:

The Core sample received from you on August 30, 1955 shows on Spectrographic Analysis:

**Major**

Calcium, Magnesium

**Minor**

Iron, Silicon

**Present**

Aluminum, Sodium, Manganese

**Trace**

Copper, Lead, Vanadium, Chromium, Titanium

**Not Detected**

Gold, Silver, Columbium, Tantalum, Nickel

Very truly yours,

ANDREW S. McCREATH & SON

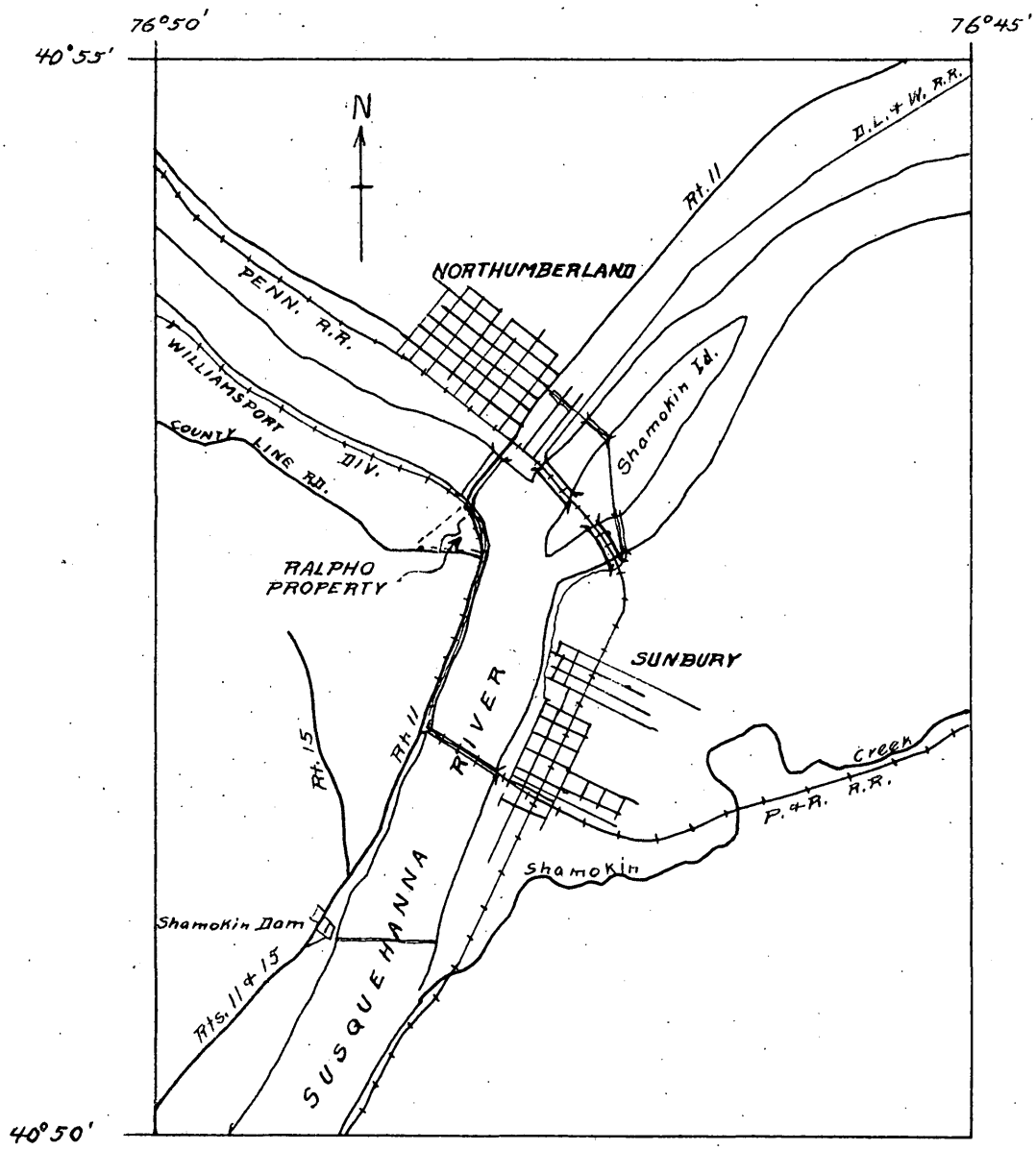
BY Bruce D. Krecker

~~AREA (C)~~

DRILL HOLE # 2 ~~35 FT HOLE~~

6" sample at 35 feet depth

Applic. sample "II"




RALPHO PROPERTY
UNION COUNTY, PA.
DOCKET DMEA 4019

U.S.G.S. SUNBURY, PA. QUAD.

U.S.B.M. DEC. 1955

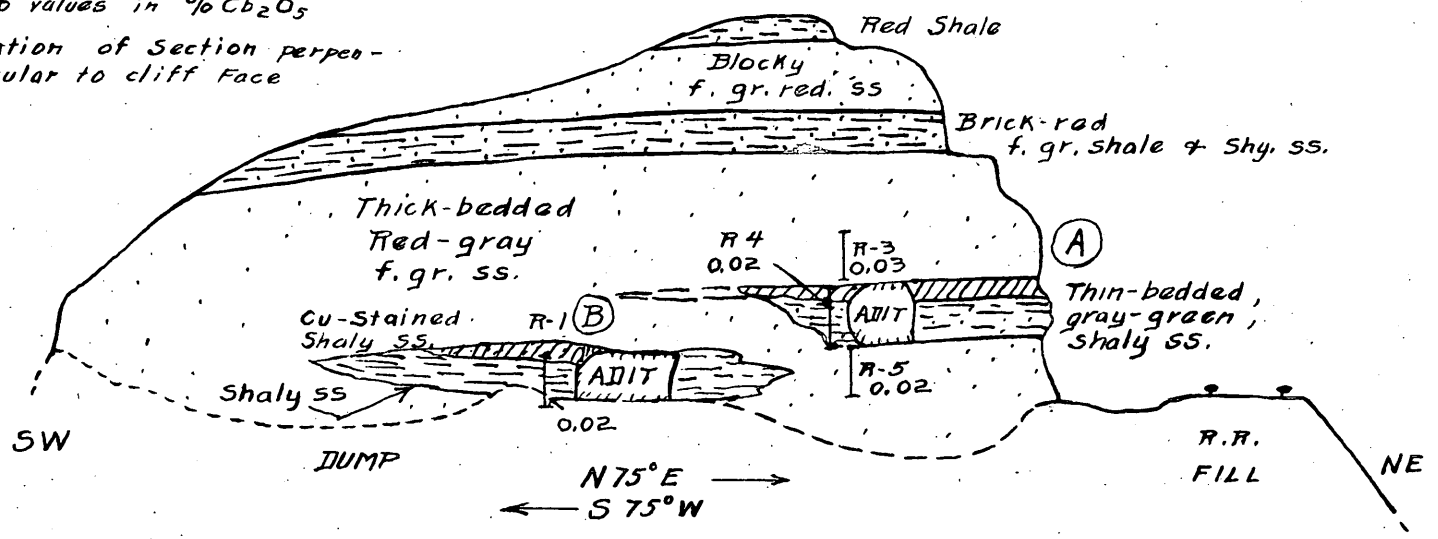
0 Miles 1

Location Map

U.S. GEOL. SURVEY

EXPLANATION

- Thin bedded, red & gray shale & shaly sandstone
- Thick-bedded red & gray Sandstone
- Shaly sandstone with Cu minerals
- R-3 0.03 — Channel Sample showing Cb values in % $Cb_2O_5$
- (A) Location of Section perpendicular to cliff Face



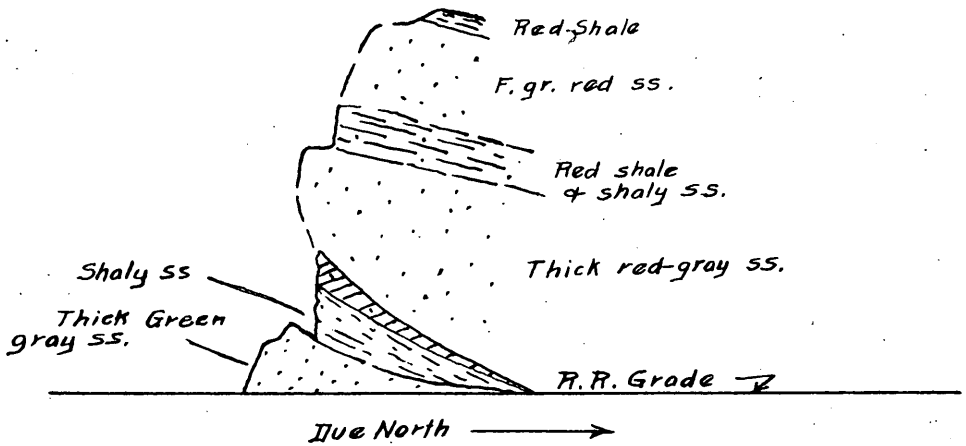

HORIZ. & VERT. SCALE — 1" = 20'

— SECTION OF CLIFF FACE —

RALPHO MINING CO., UNION COUNTY, PA.

FIG. 3

U.S GEOL. SURVEY




SECTION AT Ⓐ

Horiz. + Vert. Scale — 1" = 20'

FIG. 4

RALPHO MINING CO.
UNION COUNTY, PA.

2-3-56 Lzm

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1025 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
FEB - 2 1956

January 31, 1956

Memorandum

To: Operating Committee, DMEA - Washington

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

Subject: Field Examination Report, DMEA-4019 (uranium)
Ralphe Mining Company, P.O. Box 92, Shamokin, Pa.

Enclosed are 4 copies of the subject examination report.

The Field Team is in agreement with the recommendation for denial of the application.

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

V. J. Lynch, Executive Officer,
DMEA Field Team, Region V

VJL/zm
cc:
Burmeister
Lynch
Files

RECEIVED
FEB - 2 1956

# Field Team Report on Examination of Property

by

W. P. Williams and H. L. Burmeister[1]

Reviewed by
DMEA OPERATING COMMITTEE
2-6-56
(date)

DMEA Docket No. 4019 (Uranium)
Applicant: Ralpho Mining Company
P. O. Box 92, Shamokin, Pa.
Property Location: Union County, Pa.

## Summary, Conclusions and Recommendations

Rocks on that part of the Ralpho property where exploration work is proposed comprise interbedded shales, shaly sandstones, and fine-grained sandstones in the upper part of the Catskill formation of Devonian age. Although the property is on a broad synclinal structure the rocks are not sharply folded or faulted.

Small amounts of columbium-bearing minerals appear to be present in lens-like bodies of shaly sandstone. The columbium-bearing mineral associated with green copper minerals, and the sandstone lenses exhibit somewhat anomalous radioactivity. The highest value obtained from 12 channel samples and one core sample was 0.04 percent $Cb_2O_5$. The samples were analyzed by petrographic, qualitative spectroscopic and by quantitative fluorescent x-ray spectrographic methods, in the College Park laboratories. The radiometric count did not exceed two times background at any point tested.

The Field Team representatives conclude that because of the low columbium content of all samples analyzed and because the columbium "ore" is restricted to thin seams in a host rock that exhibits lens structure, it seems unlikely that exploration work would result in the discovery of a significant columbium ore body. It is therefore recommended that the application for DMEA assistance be denied.

- - - - - -

1/ H. L. Burmeister, Bureau of Mines, and W. P. Williams, Geological Survey.

## General Discussion

The Applicant proposed to explore on two adjoining tracts, each held under separate Lease. Tract No. 1 is located in Union County, Pa. and Tract No. 2 in Snyder County, Pa. Tract No. 2 was abandoned by the Applicants at the time of examination. Tract No. 1, consisting of 74.04 acres, is leased from the owners, Raymond C. Boren and Dalton E. Reichenback, both of the Borough of Selinsgrove, Snyder County Pa. Tract No. 1 is located on U.S.Route 11, approximately one mile southwest of the Town of Northumberland, and in a triangle between the precipitous western bank of the Susquehanna river and the steep northern bank of a creek.(Location map and Fig.1). Tract No. 2 adjoined Tract No. 1 on the south.

The property was examined on Nov. 17, 1955 by H. L. Burmeister, Bureau of Mines, and on Nov. 24 by W. F. Williams, Geological Survey. In each case the examiner was accompanied by the Applicants, Mr. Fred F. Metzger and Mr. Ray E. Hoffman. A total of 20 man-hours were spent on the property by the examiners.

Previous work on the property is limited to the exploration work done by the Applicants and consists of two short drifting adits approximately 5' x 18' long in the face of a cliff, and two diamond-drill holes (Figs. 1, 2 and 3). Supplies, equipment, water and labor are readily available. The average wage for labor is $1.75 per hour. A high voltage power line crosses the property.

The applicant proposed to diamond drill a total of 10,000 feet with company-owned equipment in an unspecified number of holes and employ a bulldozer for 250 hours to prepare drill sites. Poor core recovery obtained by the Applicant in drilling two holes indicated that further use

of company-owned equipment would not be satisfactory. Costs submitted were not broken down to a unit cost basis. It was considered advisable to assist the Applicants in preparing a unit cost program as the recommendations of the examiners depended on results of analyses obtained later. Funds requested in the application are adequate but the geologic target is considered too small. Copies of "Owner's Consent to Lien," "Subordination Agreement," maps and results of analyses of Applicant's samples were furnished by the Applicant about three weeks after examination.

Geology

The property controlled by the Ralpho Mining Company is located, structurally, in the central part of an elongated synclinal basin. The long axis of the basin is oriented east-northeast. The southwest extremity of the basin is about 8 miles from the Ralpho property. The northeast extremity of the basin, about 7 miles from the property, is indeterminate and becomes involved in irregular folding and deformation. The synclinal structure has been called the Northumberland synclinal and is one of many alternating synclines and anticlines which extend, in broad concentric curves, from west to east across east-central Pennsylvania.

Rocks on the Ralpho property consist of alternating shales, shaly sandstones, and sandstones in the upper part of the Catskill formation of upper Devonian age. The rocks are well exposed on the property in two stone quarries and in various road and railroad cuts. The rocks range in color from brick red and purplish red to gray-green and green, with various shades of red much predominant. Grainsizes of the rocks range from clay size particles in the shaly members to fine-grained sandstones and siltstone in the coarser members.

The rocks on the property dip about 10 to 14 degrees to the northwest and strike about N.45° E. The dip of the beds may change within short distances. A short adit, about 18 feet long in a quarry face, figures 2 and 3, shows an undulation in the adit roof. The undulation is complete within the length of the adit. The closure of the fold is about 1½ feet.

The portals of two short adits, the longest of which is 18 feet, are shown on figures 1, 2 and 3. The two portals are located in thin-bedded, greenish gray, shaly sandstone. Tests with geiger counter show this material to be somewhat radioactive. The radiometric count is about two times background. The somewhat anomalous radioactivity does not seem to be disseminated throughout the shaly sandstone but is confined to seams of a black unidentified mineral and green secondary copper minerals. The mineralized seams are only a fraction of an inch thick and their total volume would compose only a fraction of one percent of the volume of the host rock. The shaly sandstone that contains the mineralized seams forms lens-like bodies which are tabular and appear to be accordant with the bedding in the Catskill formation (fig.4). The lenses, from what can be seen of them, have a maximum diameter of 50 feet and may be as thick as 5 or 6 feet. Because of their lack of exposure it is difficult to predict how numerous the lenses are or what their distribution in the Catskill formation might be.

Because the mineralized seams are so thin and sporadic and because the host rock forms lenses the possibility of developing significant tonnages of ore-grade material appear to be remote, if not impossible.

A total of twelve channel samples were taken on the property and analyzed for columbium and tantalum. The locations of the sample points are shown on figures 2 and 3, and the results of analyses are given in table I. Tantalum was not detected in any of the samples, and the highest columbium assay was 0.04 percent $Cb_2O_5$.

Two diamond drill holes have been completed on the property by the applicant. Adequate core was not recovered from hold No. 1 so results from that hole are obscure. By the Applicant's admission the hole was barren. The other hole, No. 2, collared in the floor of a quarry in red, shaly sandstone was drilled to a depth variously reported by the Applicant as 220 feet, and 230 feet. The core for the latter hold was made available for inspection. Less than half the core had been recovered, and intervals where core was not recovered were not recorded by the driller. The core that was available afforded the following geologic log:

| Depth (ft.) | Lithology |
|---|---|
| 0 - 6 | Purplish gray, fine-grained sandstone. Even textured, few fractures. |
| 10 - 30 | Uniform purplish-red siltstone. Unfractured. |
| 30 - 45 | Greenish gray to purplish gray, fine-grained sandstone. One-foot thick conglomeratic bed at 32-33 feet. |
| 45 -119 | Brick-red siltstone. Some grayish shaly laminae. Few fractures. |
| 119 -126 | Purplish red, fine-grained sandstone. Local dark-red siltstone laminae. |
| 126 -220 | Purplish red, very fine-grained siltstone. Few 6 inches to 1-foot thick, very fine-grained, red sandstone beds. Few scattered green claconitic (?) partings transverse to core. Few fractures. |
| 220 -230 | Purplish gray, very fine-grained sandstone. Even textured, few fractures, arkosic. Small, bright, scattered metallic grains are probably pyrite. Assay sample at 225 feet was reported by applicant to contain 0.02-0.10% Cb. Sample of core from approximately same depth by examining team assayed 0.04% $Cb_2O_5$. |
| Total depth 230 feet | |

Table I
Samples from Ralpho Mining Company property
Union County, Pennsylvania

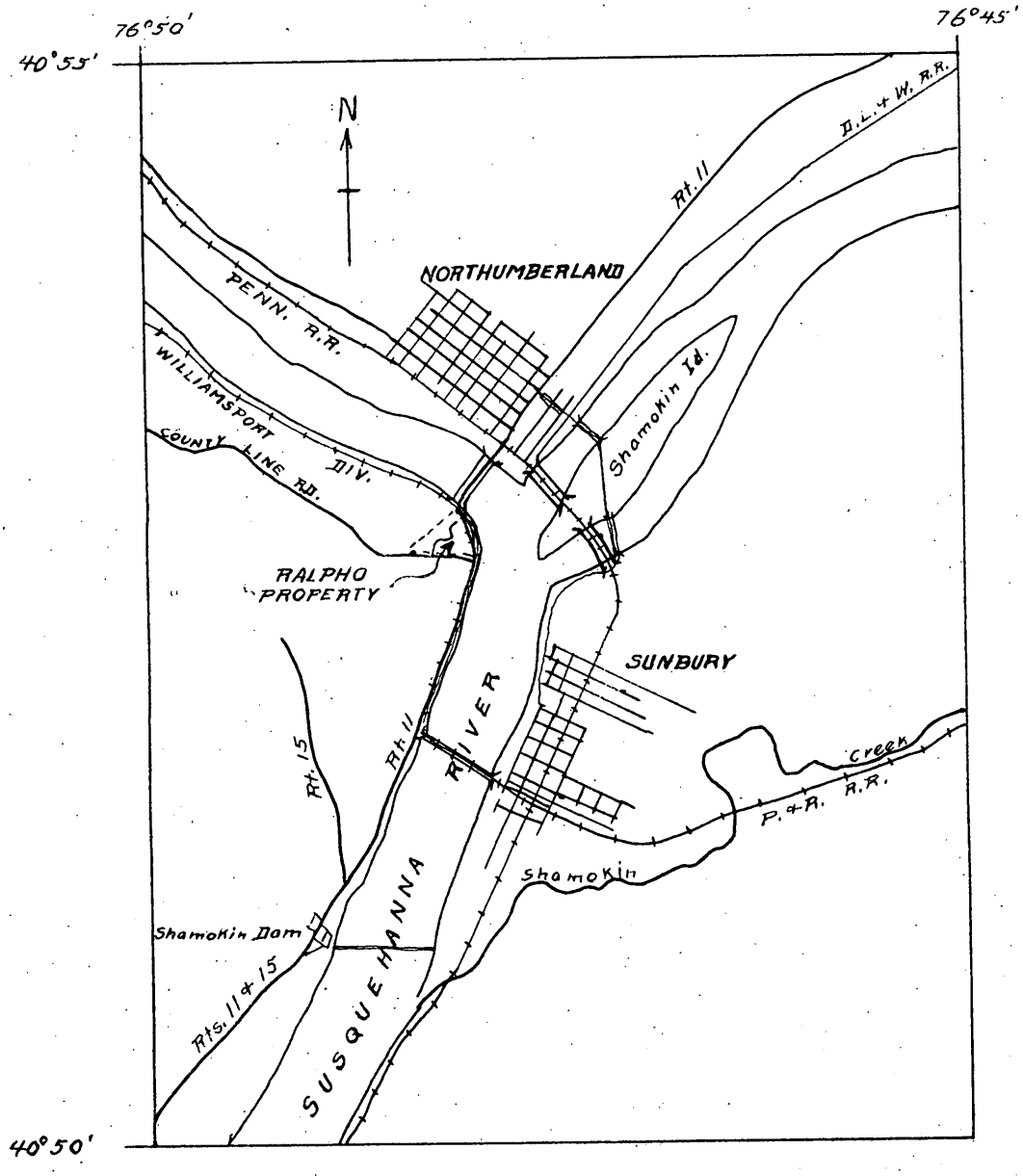
| Sample No. | $Cb_2O_5$ % | $Ta_2O_5$ % | Remarks |
|---|---|---|---|
| R-1 | 0.02 | Not detected | 7' vertical channel sample along west side of adit portal, across "ore zone." |
| R-2 | 0.02 | " " | 6' vertical channel sample in road cut. |
| R-3 | 0.03 | " " | 5' vertical channel sample up from old adit portal, above "ore zone." |
| R-4 | 0.02 | " " | 6' vertical channel sample across "ore zone" at old adit portal. |
| R-5 | 0.02 | " " | 5' vertical channel sample down from old adit portal, below "ore zone." |
| R-6 | 0.04 | " " | Approximately 6" length of AX core from 225' depth. Diamond drill hole in quarry. |
| 32 | 0.02 | " " | 4' vertical channel sample. West side of west adit, 4' from portal. Gray ss. |
| 33 | 0.03 | " " | 2½" vertical channel sample, East side of west adit, 10' from portal, Gray ss. |
| 34 | 0.02 | " " | 6' vertical channel, in cliff face above back of west adit, Gray ss. |
| 35 | 0.03 | " " | 4' vertical channel in cliff face, 20' west of west adit portal. In same strata as adit. |
| 36 | 0.04 | " " | 5' vertical channel continuing above 35 |
| 37 | 0.02 | " " | 6' vertical channel in road cut. |

The channel samples taken by the examining team were analyzed by x-ray methods. All of the sample material was too fine-grained to allow identification of any specific columbium-bearing minerals. No concentrations of heavy minerals were noted in the Catskill formation on the Ralpho property.

A. L. Burmeister, Mine Exploration Examination Engr.
Bureau of Mines

W. P. Williams, Geologist
U.S. Geological Survey

January 19, 1956




RALPHO PROPERTY
UNION COUNTY, PA.
DOCKET DMEA 4019

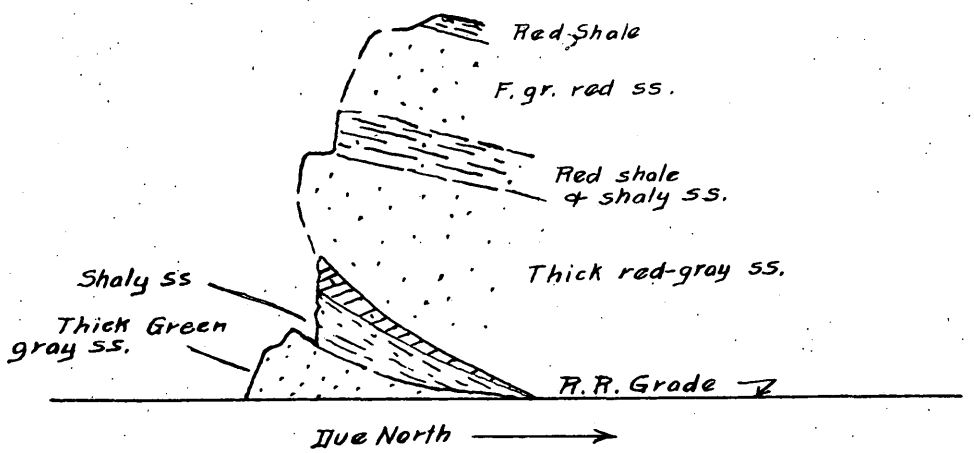
U.S.G.S. SUNBURY, PA. QUAD.

U.S.B.M. DEC. 1955

0 Miles 1

Location Map

U.S GEOL. SURVEY




SECTION AT (A)

Horiz. + Vert. Scale — 1" = 20'

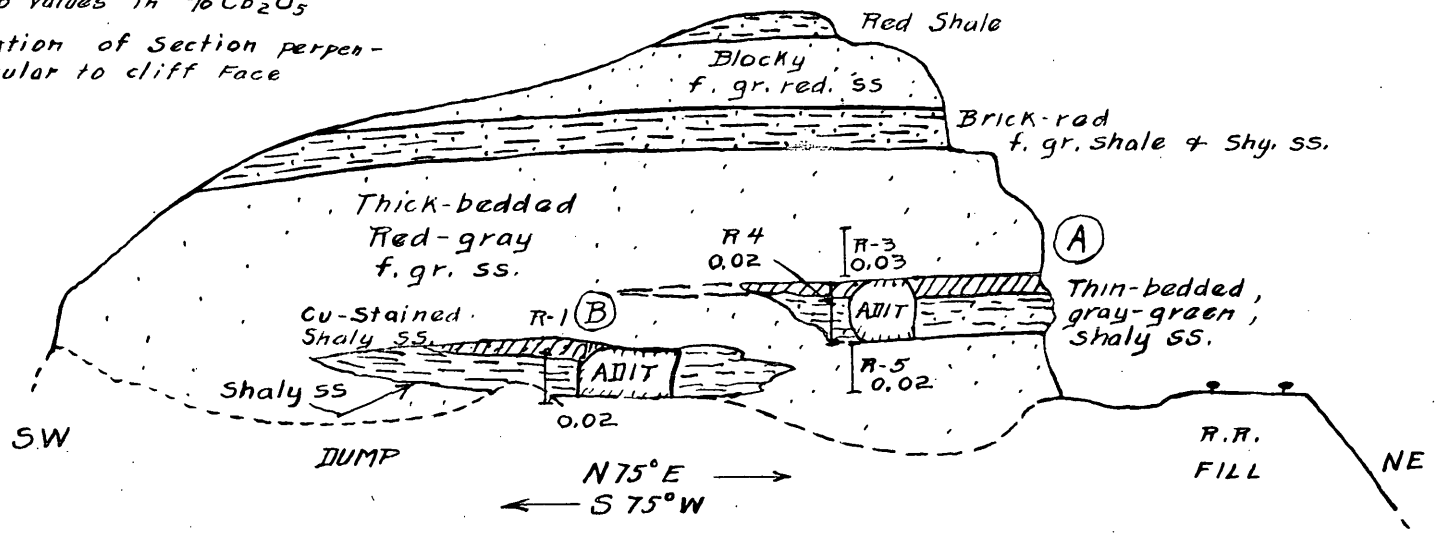
FIG. 4

RALPHO MINING CO.
UNION COUNTY, PA.

U.S. GEOL. SURVEY

EXPLANATION

- Thin bedded, red & gray shale & shaly sandstone
- Thick-bedded red & gray Sandstone
- Shaly sandstone with Cu minerals
- R-3 0.03 — Channel Sample showing Cb values in % $Cb_2O_5$
- (A) Location of Section perpendicular to cliff Face




HORIZ. & VERT. SCALE — 1" = 20'

— SECTION OF CLIFF FACE —

RALPHO MINING CO., UNION COUNTY, PA.

FIG. 3

RECEIVED
FEB - 2 1956

Andrew S McCreath & Son

Harrisburg, Pa.

April 20, 1955

Metzger Coal Co.
For Ralpho Mineing Co.

Gentlemen:

The sample of Uranium received from you on April 1, 1955 shows the following:

| | | |
|---|---|---|
| Fe | Present | |
| Si | High | |
| Al | Present | |
| Ca | Present | (low) |
| Mg | Present | (low) |
| Cu | .10 | |
| Pb | N.D. | |
| Zn | Trace | |
| Ni | N.D. | |
| Na | Present | |
| U | N.D. | |
| Th | N.D. | |
| Ce | N.D. | |
| V | Trace | |
| Tl | Present | |

Yours very truly,

Andrew S. McCreath & Son

By Merton H. Davey
Partner

True Copy

Applicant's sample "A"
Applicant's description — 3' vertical chip — just above R.R. tracks and 30' N. of cliff corner.

RECEIVED
FEB 2 1956

ANDREW S McCREATH & SON

Analytical and Consulting Chemists

236-242 Liberty St.

Harrisburg, Pa.

November 4, 1955

Ralpho Mining Co.
% Metzger Coal Co.
R.D. # 2 Box 497
Shamokin, Pa.

Gentlemen:

The Rock Sample recieved from you on October 28, 1955 yields the following on spectrographic analysis:

| | | | | |
|---|---|---|---|---|
| Cb | | | .05 to .10 | per cent |
| Ta | | | nil | |
| | Major | | | |
| Si | | | | |
| | Minor | | | |
| Fe | Al | Mg | | |
| | Present | | | |
| Ca | Ti | V | Na | |
| | Trace | | | |
| Cr | Mn | K | | |

Very truly yours,

ANDREW S. McCREATH & SON

BY MERTON H. DAVEY

COPY

Applicant's sample "B"
" description — 3 pound chunk from Recreation road cut about 440' East of and 90' in elevation above collar of Applicant's #2 drill hole

RECEIVED
FEB - 2 1956

ANDREW S McCREATH & SON

Analytic and Consulting Chemists

236-242 Liberty St.

Harrisburg, Pa.

October 4, 1955

Ralpho Mining Co.
Ray Hoffman
Elysburg, Pa.
Northumberland Co.

Gentlemen:

The core sample recieved from you on September 30, 1955 yields the following on spectrographic analysis:

| | | | |
|---|---|---|---|
| Cb | | .02 to .10 | |
| Ta | | Not detected | |
| | Major | | Trace |
| Fe | | Si | Cu |
| | Minor | | Mn |
| Al | Mg | Ti | Cr |
| | Present | | Ni |
| Ca | | | V |

Very Truly yours,

ANDREW S. McCREATH & SON

BY BRUCE D. KRECKER

COPY

Ray Hoffman

Applicant's Sample "C"
" description — 6" section of core at 220' depth in Applicant's drill hole #2

Burnicatt

ANDREW S, McCREATH & SON

Analytical and Consulting Chemists

236-242 Liberty St.

Harrisburg, Pa.

September 3, 1955

Ralpho Mining Co.
Mr. Ray Hoffman
Elysburg, Pa.

Dear Mr. Hoffman:

The Core sample recieved from you on August 30, 1955 shows on Spectrographic Analysis:

Major
Calcium, Magnesium
Minor
Iron, Silicon
Present
Aluminum, Sodium, Manganese
Trace
Copper, Lead, Vanadium, Chromium, Titanium
Not Detected
Gold, Silver, Columbium, Tantalum, Nickel

Very truly yours,

ANDREW S. McCREATH & SON

BY Bruce H. Krecker

COPY

Ray Hoffman

Applicant's Sample "D"
" description — 6" core at 35' depth in Applicants drill hole #2

Bmcreath

Andrew S. McCreath & Son

Harrisburg, Pa.

Metzger Coal Co.
For Ralpho Mineing Co.

May 13, 1955
[redacted]

Gentlemen:

The Rock sample representing Metzger-Hoffman Sample # 2 received from you on May 9, 1955 shows the following Spectrographic Analysis:

| | |
|---|---|
| Si | Major |
| Fe | Minor |
| Ca | Present |
| Mg | Present |
| Ti | Present |
| U | Trace |
| Th | Trace |
| Y | Trace |
| Ce | Not Detected |
| Cb | 0.1 to 1.0 |
| Ta | 0.1 to 1.0 |

Very truly yours,

Andrew S. McCreath & Son

By Menton H. Davey

Partner

True Copy [signature]

No data by Applicant — Sheet sent in after examination without previous mention.

[signature]

MF-201
(Revised February 1953)

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

RECEIVED
FEB 23 1956

## SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

judgment note dated November 10, 1954 filed to No. 55 January Term, 1955 in the Court of Common Pleas of Union County.

upon that certain parcel of ground described in a proposed Exploration Project Contract between Ray Y. Hoffman and Fred F. Metzger, trading as Ralpho Mining Co.,

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this _____ day of November, 1955

_____ [SEAL]

_____ [SEAL]

I, _____, certify that I am the _____

(Secretary, etc.) of the corporation named herein; that _____

who signed this agreement was then _____ (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

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FEB - 8 1956

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator _____
Docket No. DMEA- _____
Contract No. Idm-E _____
Contract Date _____

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Union, State of Pennsylvania, described ~~as follows~~:1/

in a lease dated July 6, 1955 and recorded in Miscellaneous Book 17, Page 514, official records of said County.

which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. Undertakes and agrees that property in which the Government may acquire an interest or equity under the contract may be dismantled, severed from the land, and removed, as may be provided in the contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned;

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/ Judgment note in favor of S. B. Rhoads, dated November 10, 1954 and filed to No. 55 January Term 1955, Court of Common Pleas of Union County

3. Undertakes and agrees neither to commit any act nor assert any claim in conflict with the provisions of this Consent to Lien; and to give advance notice of the Government's rights under this Consent to Lien to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, or interest in the land; and

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

3/ Write "none" if that is the case. Do not leave lines blank.

4. Consents to all amendments and assignments of the contract without notice thereof, and agrees that this Consent to Lien shall extend and apply thereto.

5. Added provision: _____

_____

_____

_____

_____

_____

_____

_____

Dated this 2 day of November, 1955.

Raymond C. Bower [Seal]

Benton E. Reichenbach [Seal]

_____ [Seal]

I, _____ certify that I am the _____ _____ (Secretary, etc.) of the corporation named herein; that _____ _____ who signed this agreement was then _____ (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____

[Corporate Seal]

RECEIVED
FEB 4 8 1958

ARTICLES OF AGREEMENT

MADE AND CONCLUDED this 6th day of July, 1955, by and between RAYMOND C. BOWEN and BENTON E. REICHENBACH, both of the Borough of Selinsgrove, County of Snyder and Commonwealth of Pennsylvania, Lessors, parties of the first part,

and RAY Y. HOFFMAN and FRED F. METZGER, both of the Township of Ralpho, County of Northumberland and Commonwealth of Pennsylvania, co-partners trading and doing business as RALPHO MINING CO., Lessees, parties of the second part;

WITNESSETH: That the parties of the first part, for and in consideration of the sum of One Dollar ($1.00), and of the rents, royalties and covenants hereinafter reserved and contained, have granted, bargained, sold, demised and to mine let, and by these presents do grant, bargain, sell, demise and to mine let, unto the parties of the second part, their heirs and assigns, all of the minerals, including stone, in all of the veins and deposits, lying under and beneath the surface of the land described as follows:

being ALL THAT CERTAIN TRACT OR PIECE OF LAND, situate in the Township of Union, County of Union and Commonwealth of Pennsylvania, and being more particularly bounded and described as follows, to wit:- BEGINNING at a point at the low water mark of the Susquehanna River; thence, crossing Pa. State Highway Route No. 25, Spur, and also crossing theright of way of the Reading Company Railroad, N. 83 degrees 55 minutes W. a distance of 118 feet to a point in the center line of the County Line Road (separating Union and Snyder Counties); thence, along the center of said road the following courses and distances: N. 46 degrees 41 minutes W. 159.1 feet, N. 51 degrees 21 minutes W. 330.1 feet, N. 67 degrees 06 minutes W. 260.1 feet, N. 88 degrees 06 minutes W. 152.6 feet, S. 77 degrees 24 minutes W. 259.5 feet, S. 80 degrees 30 minutes W. 180.5 feet, S. 89 degrees 40 minutes W. 158.1 feet, N. 83 degrees 49 minutes W. 444.7 feet, S. 88 degrees 02 minutes W. 91.8 feet, S. 83 degrees 04 minutes W. 113.8 feet, S. 74 degrees 59 minutes W. 114.9 feet, S. 83 degrees 49 minutes W. 51 feet, N. 83 degrees 09 minutes W. 57 feet to a point; thence, along land of Carl G. Hubbell, N. 16 degrees 10 minutes E. 1208.7 feet to a point; thence by the same, N. 29 degrees 40 minutes E. 1155 feet to a point at land of Benjamin E. Troutman; thence, by land of Benjamin E. Troutman, S. 59 degrees 35 minutes E. 89.5 feet to a point; thence, by the same, S. 49 degrees 35 minutes E. 450.5 feet to a point; thence,

S. 40 degrees 35 minutes E. 297 feet to a point; thence, by the same, S. 34 degrees 35 minutes E. 877.8 feet to a point; thence, by the same, S. 13 degrees 35 minutes E. 306.9 feet to a point; thence, by the same, crossing the right of way of the Reading Company Railroad and Pa. State Highway Route No. 25, Spur, S. 83 degrees 38 minutes E. 256.1 feet to a point at the low water mark of the Susquehanna River; thence down the said low water mark of the Susquehanna River the following courses and distances: S. 12 degrees 23 minutes E. 349.7 feet, S. 7 degrees 32 minutes E. 219.9 feet, S. 2 degrees 43 minutes E. 195.7 feet, S. 1 degrees 26 minutes W. 204.7 feet, to the place of beginning. Containing approximately 74.84 Acres.

TO HAVE AND TO HOLD, ALL of the said minerals in and under the said tract of land, unto the said parties of the second part, their heirs and assigns, to and for the only proper use and behoof of the said parties of the second part, their heirs and assigns, for a term of one (1) year from the date of these presents, with the option in the parties of the second part to renew this lease from year to year as long as operation of the mines on the said tract are profitable or as long as the parties of the second part are actively engaged in mining operations or exploration. The said option shall be exercised by the parties of the second part by mailing a written notice of said renewal to either of the first parties, by registered mail, at least sixty (60) days prior to the expiration date of this lease or the expiration date of any renewal hereof.

AND the said parties of the first part do also, for the consideration aforesaid, hereby grant unto and confer upon the said parties of the second part, their heirs and assigns, all of the rights and privileges necessary for the advantageous mining of the said minerals, with the right to remove and dispose of the same, provided, however, that the said parties of the second part shall not have the right to use the surface of the said land except for the purpose of opening and maintaining necessary airshafts, pumphouses, buildings, and other equipment, and for the deposit and storage of ore, or minerals.

THE above covenants and restrictions are made and concluded under and subject to the following provisions, which shall be binding upon the parties hereto, their heirs and assigns:

1. The parties of the second part shall begin exploratory proving of the tract with a tunnel or core drilling within sixty (60) days from

the date of these presents.

2. The rent reserved hereunder by the parties of the first part is the one-half portion of the net profit realized by the parties of the second part in the mining and sale of minerals and ores of all kinds recovered from the demised premises. True and complete records shall be maintained by the parties of the second part of the income and expenditures accruing from and chargeable to the mining operations carried on under the terms of this lease. The net profit arising from the operation shall first be computed, and the one-half portion thereof paid over to the parties of the first part, on December 31, 1955. Thereafter, the parties of the second part shall quarterly present to the parties of the first part a financial report showing, inter alia, the net profit of the operation, and shall pay over the said one-half portion of the said net profit. The books and records of the parties of the second part shall be subject to inspection by the parties of the first part, or their agents, at any reasonable time.

3. The parties of the second part shall procure, and shall keep in force by the payment of the premiums therefore, adequate public liability and property insurance, insuring both the parties of the first part and the parties of the second part.

4. It is agreed that the operations carried on by the parties of the second part under the terms of this lease shall be as independent contractors, and the parties of the second part shall be responsible for Workmen's Compensation insurance and for compliance with the Mining Laws of the Commonwealth of Pennsylvania.

5. The parties of the first part shall not under any circumstances be responsible for, or be required to pay, any portion of any losses incurred in the exploration or mining on the said tract. However, losses may be carried forward any length of time in computing net profits.

6. Any taxes levied and assessed on the minerals or mineral rights on the demised premises shall be borne equally by the parties of the first part and the parties of the second part.

7. On and after the showing of a profit from the mining operation carried on in and about the demised premises, the parties of the second part may make a reasonable charge for supervision of the said operation, which shall be based on the time actually spent in supervision, but which shall not, in any event, exceed the sum of $5,000.00 annually.

8. In the event that the mining operations, or explorations, carried on on the demised premises shall interfere with and deplete the flow of water from the well now on the premises, the parties of the second part shall drill and case a new well with a flow equal to the flow of the present well.

9. The allowance for depletion for income tax purposes shall be computed on the gross receipts before the net profit is calculated and the advantage of the said allowance shall inure equally to both the parties of the first part and the parties of the second part.

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

$ Raymond C. Bowen (SEAL)
Raymond C. Bowen

$ Benton E. Reichenbach (SEAL)
Benton E. Reichenbach

$ Ray Y. Hoffman, Co-partner (SEAL)
Ray Y. Hoffman, Co-partner

$ Fred F. Metzger, (SEAL)
Fred F. Metzger, Co-partner
Trading as Ralpho Mining Co.

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF SNYDER ss.:

On this 6th day of July, 1955, personally appeared before me, the undersigned officer, Raymond C. Bowen, Benton E. Reichenbach, Ray Y. Hoffman and Fred F. Metzger, known to me (or satisfactorily proven) to be the persons who signed the foregoing Agreement, and acknowledged the same to be their act and deed for the purposes therein contained.

In witness whereof I have hereunto set my hand and official seal.

S Aberdeen Phillips
Notary Public

My commission exp. Jan. 7, 1956

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

RECEIVED
NOV - 3 1955

November 1, 1955

Ralpho Mining Company
P.O. Box 92
Chamokin, Pennsylvania

Re: Docket No. DMA-4019 (columbium and tantalum) Tract No. 1
Union Township, Union County, Pa.

Gentlemen:

We have been requested by our Washington office to provide additional information on your application, which can be best obtained by a field examination on the site, in company with your own geologists and engineers.

Mr. W. P. Miller of the U. S. Bureau of Mines, College Park, Maryland, will write you shortly to arrange a time for the field examination, as a Bureau engineer from College Park and a geologist from the U. S. Geological Survey from that area will make the examination. Any assistance you can give the field men will be greatly appreciated.

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

RAL/sm

cc:
Lynch
Aillsgaard
Miller
Allsman
Opr. Com.
Files

Surname copy

700

Murphy
Ellis
Rilsgaard
Geehan
Selfridge

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

OCT 28 1955

Ralpho Mining Co.
P. O. Box 92
Shamokin, Pennsylvania

Re: Docket No. DMEA-4019
(Columbium and tantalum)
Tract No. 1, Union Township
Union County, Pennsylvania

Gentlemen:

The application for assistance in exploring the subject property in Union County, Pennsylvania, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region V at the following address:

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room No. 13, P. O. Building
Knoxville 2, Tennessee

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

Frank E. Johnson

Acting Administrator

FMMurphy/gla
10-27-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region V (2)

R.S.G.

Surname copy

Murphy
Ellis
Selfridge
Fleman

700

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

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room No. 13, P. O. Building
Knoxville 2, Tennessee

OCT 28 1955

Re: Docket No. DMEA-4019
(Columbium and tantalum)
Ralpho Mining Company
Tract No. 1, Union Township
Union County, Pennsylvania

Dear Mr. Laurence:

The captioned application is referred to Region V Field Team for investigation, a field examination, and recommendation. A copy of the application was forwarded to your office on October 17, 1955.

Enclosed are copies of memoranda, dated October 19 and 20, 1955, by H. T.Reno, USBM, and N. E.Nelson, USGS, respectively, relating to the subject application.

The application lacks considerable supporting data and the estimates of the cost of the proposed work are unrealistic. We have not requested the Applicant to submit the additional information or to revise the cost estimates. The application is referred to the Field Team with the thought that it could more readily obtain the required additional information and that if a project was recommended, the proposed exploration work would be modified.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

Enclosures

EMMurphy/gla
10-27-55

APPROVED:

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

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. Horace T. Reno, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
Code 700
Mr. Murphy

R.G.S.

10/21/55 glc

IN REPLY REFER TO:

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

RECEIVED
OCT 21 1955

October 20, 1955

Re: DMEA 4019
Ralpho Mining Co.
Union Co., Pennsylvania
$58,093.25 - Columbium and tantalum

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of application.

This application concerns exploration of a bed of grey sandstone reported to contain columbium and tantalum.

The work would consist of bulldozing, 250 hours, and core drilling, 10,000 feet.

Probably this is a relatively new discovery and I have no information regarding it. The data given in the application concerning the results of drifting 18 feet and drilling 2 holes are not such as to permit evaluation of that preliminary work. Probably more is known of the prospect than is given us and further information might be asked for.

Referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
OCT 21 1955

October 20, 1955

Re: DMEA 4019
Ralpho Mining Co.
Union Co., Pennsylvania
$58,093.25 - Columbium and tantalum

Memorandum

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

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Referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-10/20/55
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
H. T. Reno, 3641

10/26/55 gla

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

October 19, 1955

Memorandum

To: E. W. Ellis, Director, Rare and Miscellaneous Metals Division, DMEA

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

Subject: Application for Exploration Aid, received October 17, 1955, from Ralpho Mining Co., DMEA Docket No. 4019, estimated cost $58,093.25 (columbium), Union County, Pennsylvania

Mr. Ray Y. Hoffman of Elysburg, Pa., one of the partners of the company, brought a sample of the ore to my office on September 8, 1955. I was not able to identify columbium minerals in the sample and suggested that he send it to the Bureau of Mines at College Park, Maryland, and ask them to identify the minerals and indicate whether or not the ore was commercial. The petrographic laboratory at College Park has not yet received the sample. The mineral form in which columbium and tantalum occur in the ore is important in determining the possibilities of exploiting the deposit. If the two metals are in distinct minerals that can be concentrated economically by gravity methods, and if the applicants' statement as to the size and grade of the deposit is correct; the deposit warrents exploration.

The applicants have not fully described the proposed work as requested under section 5(b) of the application form, and their cost estimate is excessive. It is suggested that the application be returned with a request that they (1) furnish a petrographic analysis of the ore, (2) furnish a complete description of the proposed project with maps or sketches, and (3) revise the cost estimate to include all bulldozer operations, supervision, engineering, geological consultants, service trucks, new buildings and improvements, and miscellaneous costs except analytical costs in the unit cost per linear foot of diamond drilling.

Horace T. Reno

Horace T. Reno

Attachment

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

October 19, 1955

Memorandum

To: F. A. Ellis, Director, Rare and Miscellaneous Metals Division, DMEA

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

Subject: Application for Exploration Aid, received October 17, 1955, from Ralphe Mining Co., DMEA Docket No. 4019, estimated cost $58,093.25 (columbium), Union County, Pennsylvania

Mr. Ray I. Hoffman of Flysburg, Pa., one of the partners of the company, brought a sample of the ore to my office on September 8, 1955. I was not able to identify columbium minerals in the sample and suggested that he send it to the Bureau of Mines at College Park, Maryland, and ask them to identify the minerals and indicate whether or not the ore was commercial. The petrographic laboratory at College Park has not yet received the sample. The mineral form in which columbium and tantalum occur in the ore is important in determining the possibilities of exploiting the deposit. If the two metals are in distinct minerals that can be concentrated economically by gravity methods, and if the applicants' statement as to the size and grade of the deposit is correct; the deposit warrants exploration.

The applicants have not fully described the proposed work as requested under section 5(b) of the application form, and their cost estimate is excessive. It is suggested that the application be returned with a request that they (1) furnish a petrographic analysis of the ore, (2) furnish a complete description of the proposed project with maps or sketches, and (3) revise the cost estimate to include all bulldozer operations, supervision, engineering, geological consultants, service trucks, new buildings and improvements, and miscellaneous costs except analytical costs in the unit cost per linear foot of diamond drilling.

Horace T. Reno

Attachment

HTReno:jtmc
Copy to: DMEA (3 copies)
Division of Minerals
Branch of Rare and Precious Metals
H. T. Reno
FILES

October 17, 1955

Subject: Exploration
Re: DMEA-4019

Ralpho Mining Co.
P.O. Box 92
Shamokin, Pa.

Gentlemen:

The receipt of your application dated October 10, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number 4019 and referred to the Rare & Miscellaneous Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
OCT 17 1955

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

*Not to be filled in by applicant.*

Docket No. 4019
Metal or Mineral Columbium
Date Received Oct 17, 1955
Estimated Cost 58,093.25
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:

Ralpho Mineing Co. Partnership Pennsylvania
P.O. Box 92 Ray Y. Hoffman Elysburg, Pa.
Shamokin, Pa. Fred F. Metzger R # 2 Shamokin, Pa.

(*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 Description attatched

(*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 Lessee

(*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

(*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 Columbium Tantalum

(*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 10 days and be completed within 18 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 Oct. 10, 1955

Ralpho Mineing Co.
(Applicant)

By [signature]

**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

RALPHO MINING COMPANY
LAND DESCRIPTION
T RACT NO. 1

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ALL THAT CERTAIN TRACT OR PIECE OF LAND, situate in the Township of Union, County of Union and Commonwealth of Pennsylvania, and being more particularly bounded and described as follows, to wit:- Beginning at a point at the low water mark of the Susquehanna River; thence, crossing Pa. State Highway Route No.25, Spur, and also crossing the right of way of the Reading Company Railroad, N. 83 degrees 55minutes W. a distance of 118 feet to a point in the center line of the County Line Road (separating Union and Snyder Counties); thence, along the center of said road the following courses and distances: N. 46 degrees 41 minutes W. 159.1 feet, N. 51 degrees 21 minutes W. 330.1 feet, N. 67 degrees 06 minutes W. 260.1 feet, N. 88 degrees 06 minutes W. 152.6 feet, S. 77 degrees 24 minutes W. 259.5 feet, S. 80 degrees 30 minutes W. 180.5 feet, S. 89 degrees 40 minutes W. 158.1 feet, N. 83 degrees 49 minutes W. 444.7 feet, S. 88 degrees 02 minutes W. 91.8 feet, S. 83 degrees 04 minutes W. 113.8 feet, S. 74 degrees 59 minutes W. 114.9 feet, S. 83 degrees 49 minutes W. 51 feet, N. 83 degrees 09 minutes W. 57 feet to a point; thence, along land of Carl G. Hubbell, N. 16 degrees 10 minutes E. 1208.7 feet to a point; thence, by the same, N. 29 degrees 40 minutes E. 1155feet to a point at land of Benjamin E. Troutman; thence, by land of Benjamin E. Troutman S. 59 degrees 35 minutes E. 89.5 feet to a point; thence, by the same, S. 49 degrees 35 minutes E. 450. 5 feet to a point; thence, S. 40 degrees 35 minutes E. 297 feet to a point; thence, by the same, S. 34 degrees 35 minutes E. 877.8 feet to a point; thence, by the same, S. 13 degrees 35 minutes E. 306.9 feet to a point; thence, by the same, crossing the right of way of the Reading Company Railroad and Pa. State Highway Route No. 25, Spur, S. 88 degrees 38 minutes E. 256.1 feet to a point at the low water mark of the Susquehanna River; thence down the said low water mark of the Susquehanna River the following courses and distances: S. 12 degrees 23 minutes E. 349. 7 feet, S. 7 degrees 32 minutes E. 219.9 feet, S. 2 degrees 43 minutes E. 195.7 feet, S. 1 degrees 26 minutes W. 204.7 feet, to the place of beginning. Containing approximately 74.84 Acres.

TRACT #2

Being all that certain tract of land situate in the Township of Monroe, County of Snyder and Commonwealth of Pennsylvania, and being bounded on the North by lands of Bowen and Reichenbach, Known as Shikellamy Park; East by lands of Max W. Wolf and Grace E. Wolf, Robert Leiby and Susquehanna River; South by lands of Max W. Wolf and Grace E. Wolf and Robert Leiby; and West by land of William Treas, formerly Daniel Lesher, Containing 146 ACRES, more or less.

FRED F. METZGER

RAY Y. HOFFMAN

Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

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Physical description

(a) Exploration of tract # 1 have been in progress for several months, a 18 ft. drift was driven into a 8ft layer of blue-grey sandstone which assayed .1tol.0 of columbium and .1 to 1.0 of tantalum. Two core drill holes have been drilled, a core sample shows columbium. See enclosed assay.

(b) No past or present production, ore reserves unknown, grade shown on enclosed assay.

(c) Exploration to date shows columbium and tantalum in 8 ft. layer of blue - grey sandstone believed to be catskillor chemung rock.

(d) Accessibility is very good as Pa. highway # 25 and railroad are on boundary of property. The distance to residence points less than 3 miles

(e) A surplus of manpower is available for exploration and mineing from the anthracite region 12 miles distant. Most necessary equipment is already on the job. Water and power are also in plentiful supply.

FRED F. METZGER RAY Y. HOFFMAN
Shamokin 8-9795 - Phones - Elysburg 2-3101

# RALPHO MINING CO.

P. O. Box 92
SHAMOKIN, PA.

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The exploration project

(b) We propose to do 10000 Ft core drilling to establish the quality and quanity of ore on property. The mineralized layer has about 20 degree pitch into the hill and is exposed only for about 50 ft. Drill holes will be from 50 to 500 ft. as the elevations vary. The exploration will be in a westerly direction from drift shown on map.

(c)

(d) Ralpho Mineing Co. is a recently formed company primarly intrested in prospecting for and mineing rare earths, its owners both own and operate mines in the anthracite coal fields as individuals. We have many years of mineing experience, and feel well qualified to supervise the project.

FRED F. METZGER

Shamokin 8-9795 - Phones - Elysburg 2-3101

RAY Y. HOFFMAN

# RALPHO MINING CO.

P. O. Box 92

SHAMOKIN, PA.

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## Cost Estimate

| | | | |
|---|---|---|---|
| (a) Independent contracts | | | |
| Bulldozer operations | 250 Hrs @ 7.00 | 1750.00 | |
| Air Compressor | 200 Hrs @ 2.75 | 550.00 | |
| | | 2300.00 | 2300.00 |
| (b) Labor, supervision, consultants. | | | |
| Supervision | 300 days @ 18.00 | 5400.00 | |
| Engineer | 150 days @ 20.00 | 3000.00 | |
| Geological Consultants | 12 Days @ 50.00 | 600.00 | |
| | | 9000.00 | 9000.00 |
| (c) Operating Material and supplies | | 00 | |
| Included in unit costs. | | | |
| (d) Operating equipment | | | |
| Diamond core drill | 10000 Ft. @ 4.00 | 40000.00 | |
| Service truck | 300 days @ 6.00 | 1800.00 | |
| | | 41800.00 | 41800.00 |
| (e) Rehabilitation and repairs | | | |
| None required | | | |
| (f) New buildings, improvements, installations. | | | |
| Portable tool shed | | 226.25 | 226.25 |
| (g) Miscellaneous. | | | |
| Analytical | 20 samples @ 70.00 | 1400.00 | |
| | 15 samples @ 15.00 | 225.00 | |
| Accounting | 600 Hrs. @ 1.40 | 840.00 | |
| Workmens Comp. insurance | | 530.00 | |
| Employers liability insurance | | 180.00 | |
| Payroll taxes | | 592.00 | |
| | | 3767.00 | 3767.00 |
| (h) Contingencies. | | | |
| | | 1000.00 | 1000.00 |
| | | Estimated total$ | 58093.25 |

Return

ARTICLES OF AGREEMENT

(SUBLEASE)

MADE AND CONCLUDED this 27th day of September, 1955, by and between BENTON E. REICHENBACH, SIMON B. RHOADS AND RAYMOND C. BOWEN, all of the Borough of Selinsgrove, County of Snyder and Commonwealth of Pennsylvania, Lessors, parties of the first part;

and RAY Y. HOFFMAN AND FRED F. METZGER, both of the Township of Ralpho, County of Northumberland and Commonwealth of Pennsylvania, co-partners trading and doing business as RALPHO MINING CO., Lessees, parties of the second part;

WITNESSETH: That the parties of the first part, for and inconsideration of the sum of One Dollar ($1.00), the receipt of which they acknowledge, and of the rents, royalties and covenants hereinafter reserved and contained, have granted, bargained, sold, demised and to mine let, and by these presents do grant, bargain, sell, demise and to mine let, unto the parties of the second part, their heirs and assigns, all of the minerals and mineral ores, in all of the veins and deposits, lying under and beneath the surface of the land described as follows, to wit:-

> Being all that certain tract of land situate in the Township of Monroe, County of Snyder and Commonwealth of Pennsylvania, and being bounded on the North by lands of Bowen and Reichenbach, known as Shikellamy Park; East by lands of Max W. Wolf and Grace E. Wolf, Robert Leiby and Susquehanna River; South by lands of Max W. Wolf and Grace E. Wolf and Robert Leiby; and West by land of William Treas, formerly Daniel Lesher, Containing 146 Acres, more or less.
>
> Being the same premises which the parties of the first part hold as Lessees under a certain Mineral Lease from John Markel, Merrill F. Markel and Betty Jane Markel, dated May 11, 1955, and recorded in the Office for the Recording of Deeds in and for Snyder County in Miscellaneous Docket 23, Page 249.

TO HAVE AND TO HOLD, all of the said minerals and mineral ores in and under the said tract of land, unto the said parties of the second part, their heirs and assigns, to and for the only proper use and behoof of the said parties of the second part, their heirs and assigns, for a term of one (1) year from the date of these presents, with the option in the parties of the second part to renew this lease from year to year as long as operation of the mines on the said tract are profitable or as long as the parties of the second part

are actively engaged in mining operations or exploration. The said option shall be exercised by the parties of the second part by mailing a written notice of said renewal to any party of the first part, by registered mail, at least sixty (60) days prior to the expiration date of this lease or the expiration date of any renewal hereof.

AND the said parties of the first part do also, for the consideration aforesaid, hereby grant unto and confer upon the said parties of the second part, their heirs and assigns, all of the rights and privileges necessary for the advantageous mining of the said minerals, with the right to remove and dispose of the same.

THE above covenants and restrictions are made and concluded under and subject to the following provisions, which shall be binding upon the parties hereto, their heirs and assigns:

1. The parties of the second part shall begin exploratory proving of the tract with a tunnelor core drilling within ninety (90) days from the date of these presents.

2. The rent reserved hereunder by the parties of the first part is the one-half portion of the net profit realized by the parties of the second part in the mining and sale of minerals and ores of all kinds recovered from the demised premises. True and complete records shall be maintained by the parties of the second part of the income and expenditures accruing from and chargeable to the mining operations carried on under the terms of this lease. The mine rent or royalty reserved to John Markel et. al. in the above mentioned lease shall be paid out of the income accruing from the said mining operations. The net profit arising from the operation shall first be computed and the one-half portion thereof paid over to the parties of the first part, on December 31, 1955. Thereafter, the parties of the second part shall quarterly present to the parties of the first part a financial report showing, inter alia, the net profit of the operation, and shall pay over the said one-half portion of the said net profit. The books and records of the parties of the second part shall be subject to inspection by the parties of the first part, or their agents, at any

reasonable time.

3. The parties of the second part shall procure, and shall keep in force by the payment of the premiums therefore, adequate public liability and property damage insurance, insuring both the parties of the first part and the parties of the second part.

4. It is agreed that the operations carried on by the parties of the second part under the terms of this lease shall be as independent contractors, and the parties of the second part shall be responsible for Workmen's Compensation Insurance and for compliance with the Mining Laws of the Commonwealth of Pennsylvania.

5. The parties of the first part shall not be responsible for, or required to pay, any portion of any losses incurred in the exploration or mining of said tract. However, losses may be carried forward any length of time in computing net profits.

6. Any taxes levied and assessed on the minerals or mineral rights on the demised premises shall be borne equally by the parties of the first part and the parties of the second part.

7. On and after the showing of a profit from the mining operation carried on in and about the demised premises, the parties of the second part may make a reasonable charge for supervision of the said operation, which shall be based on the time actually spent in supervision, but which shall not, in any event, exceed the sum of $5,000.00 annually.

8. The allowance for depletion for income tax purposes shall be computed on the gross receipts before the net profit is calculated and the advantage of the said allowance shall inure equally to both the parties of the first part and the parties of the second part.

9. This sublease is subject to all of the terms, covenants and restrictions of the lease from John Markel, et. al. to the parties of of the first part above mentioned.

10. The parties of the first part may at anytime bargain, sell and assign their lease fram John Markel, et. al., above mentioned, and said sale and assignment shall carry all of the right, title and interest of all of the parties hereto, and this sublease shall immediately cease and determine. Upon any such sale and assignment there shall first be paid out of the sale price the exploration costs incurred and unpaid, both to the parties of the second part and the United States of America. The balance of the purchase price shall be divided and paid twenty per centum (20%) to the parties of the second part, and eighty (80) per centum to the parties of the first part.

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

Benton E. Reichenbach (SEAL)
Benton E. Reichenbach

Simon B. Rhoads (SEAL)
Simon B. Rhoads

Raymond C. Bowen (SEAL)
Raymond C. Bowen

Ray Y. Hoffman (SEAL)
Ray Y. Hoffman

Fred F. Metzger (SEAL)
Fred F. Metzger
Co-partners trading as Ralpho Mining Co.

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF SNYDER SS.:

On this 27th day of September, 1955, personally appeared before me, the undersigned officer, Benton E. Reichenbach, Simon B. Rhoads, Raymond C. Bowen, Ray Y. Hoffman and Fred F. Metzger, known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within lease, and who in due form of law acknowledged the said lease to be their act and deed for the purposes therein contained.

Witness my hand and official seal.

J. B. Bulick

J. B. BULICK
SELINSGROVE, PA.
JUSTICE OF THE PEACE
MY COMMISSION EXPIRES 1st Monday, 1960

Return

ARTICLES OF AGREEMENT

MADE AND CONCLUDED this 6th day of July, 1955, by and between RAYMOND C. BOWEN and BENTON E. REICHENBACH, both of the Borough of Selinsgrove, County of Snyder and Commonwealth of Pennsylvania, Lessors, parties of the first part,

and RAY Y. HOFFMAN and FRED F. METZGER, both of the Township of Ralpho, County of Northumberland and Commonwealth of Pennsylvania, co-partners trading and doing business as RALPHO MINING CO., Lessees, parties of the second part;

WITNESSETH: That the parties of the first part, for and in consideration of the sum of One Dollar ($1.00), and of the rents, royalties and covenants hereinafter reserved and contained, have granted, bargained, sold, demised and to mine let, and by these presents do grant, bargain, sell, demise and to mine let, unto the parties of the second part, their heirs and assigns, all of the minerals, including stone, in all of the veins and deposits, lying under and beneath the surface of the land described as follows,

being ALL THAT CERTAIN TRACT OR PIECE OF LAND, situate in the Township of Union, County of Union and Commonwealth of Pennsylvania, and being more particularly bounded and described as follows, to wit:- BEGINNING at a point at the low water mark of the Susquehanna River; thence, crossing Pa. State Highway Route No. 25, Spur, and also crossing the right of way of the Reading Company Railroad, N. 83 degrees 55 minutes W. a distance of 118 feet to a point in the center line of the County Line Road (separating Union and Snyder Counties); thence, along the center of said raod the following courses and distances: N. 46 degrees 41 minutes W. 159.1 feet, N. 51 degrees 21 minutes W. 330.1 feet, N. 67 degrees 06 minutes W. 260.1 feet, N. 88 degrees 06 minutes W. 152.6 feet, S. 77 degrees 24 minutes W. 259.5 feet, S. 80 degrees 30 minutes W. 180.5 feet, S. 89 degrees 40 minutes W. 158.1 feet, N. 83 degrees 49 minutes W. 444.7 feet, S. 88 degrees 02 minutes W. 91.8 feet, S. 83 degrees 04 minutes W. 113.8 feet, S. 74 degrees 59 minutes W. 114.9 feet, S. 83 degrees 49 minutes W. 51 feet, N. 83 degrees 09 minutes W. 57 feet to a point; thence, along land of Carl G. Hubbell, N. 16 degrees 10 minutes E. 1208.7 feet to a point; thence, by the same, N. 29 degrees 40 minutes E. 1155 feet to a point at land of Benjamin E. Troutman; thence, by land of Benjamin E. Troutman, S. 59 degrees 35 minutes E. 89.5 feet to a point; thence, by the same, S. 49 degrees 35 minutes E. 450.5 feet to a point; thence,

S. 40 degrees 35 minutes E. 297 feet to a point; thence, by the same, S. 34 degrees 35 minutes E. 877.8 feet to a point; thence, by the same, S. 13 degrees 35 minutes E. 306.9 feet to a point; thence, by the same, crossing the right of way of the Reading Company Railroad and Pa. State Highway Route No. 25, Spur, S. 88 degrees 38 minutes E. 256.1 feet to a point at the low water mark of the Susquehanna River; thence down the said low water mark of the Susquehanna River the following courses and distances: S. 12 degrees 23 minutes E. 349.7 feet, S. 7 degrees 32 minutes E. 219.9 feet, S. 2 degrees 43 minutes E. 195.7 feet, S. 1 degrees 26 minutes W. 204.7 feet, to the place of beginning. Containing approximately 74.84 Acres.

TO HAVE AND TO HOLD, ALL of the said minerals in and under the said tract of land, unto the said parties of the second part, their heirs and assigns, to and for the only proper use and behoof of the said parties of the second part, their heirs and assigns, for a term of one (1) year from the date of these presents, with the option in the parties of the second part to renew this lease from year to year as long as operation of the mines on the said tract are profitable or as long as the parties of the second part are actively engaged in mining operations or exploration. The said option shall be exercised by the parties of the second part by mailing a written notice of said renewal to either of the first parties, by registered mail, at least sixty (60) days prior to the expiration date of this lease or the expiration date of any renewal hereof.

AND the said parties of the first part do also, for the consideration aforesaid, hereby grant unto and confer upon the said parties of the second part, their heirs and assigns, all of the rights and privileges necessary for the advantageous mining of the said minerals, with the right to remove and dispose of the same, provided, however, that the said parties of the second part shall not have the right to use the surface of the said land except for the purpose of opening and maintaining necessary airshafts, pumphouses, buildings, and other equipment, and for the deposit and storage of ore, or minerals.

THE above covenants and restrictions are made and concluded under and subject to the following provisions, which shall be binding upon the parties hereto, their heirs and assigns:

1. The parties of the second part shall begin exploratory proving of the tract with a tunnel or core drilling within sixty (60) days from

the date of these presents.

2. The rent reserved hereunder by the parties of the first part is the one-half portion of the net profit realized by the parties of the second part in the mining and sale of minerals and ores of all kinds recovered from the demised premises. True and complete records shall be maintained by the parties of the second part of the income and expenditures accruing from and chareable to the mining operations carried on under the terms of this lease. The net profit arising from the operation shall first be computed, and the one-half portion thereof paid over to the parties of the first part, on December 31, 1955. Thereafter, the parties of the second part shall quarterly present to the parties of the first part a financial report showing, inter alia, the net profit of the operation,, and shall pay over the said one-half portion of the said net profit. The books and records of the parties of the second part shall be subject to inspection by the parties of the first part, or their agents, at any reasonable time.

3. The parties of the second part shall procure, and shall keep in force by the payment of the premiums therefore, adequate public liability and property insurance, insuring both the parties of the first part and the parties of the second part.

4. It is agreed that the operations carried on by the parties of the second part under the terms of this lease shall be as independent contractors, and the parties of the second part shall be responsible for Workmen's Compensation insurance and for compliance with the Mining Laws of the Commonwealth of Pennsylvania.

5. The parties of the first part shall not under any circumstances be responsible for, or be required to pay, any portion of any losses incurred in the exploration or mining on the said tract. However, losses may be carried forward any length of time in computing net profits.

6. Any taxes levied and assessed on the minerals or mineral rights on the demised premises shall be borne equally by the parties of the first part and the parties of the second part.

7. On and after the showing of a profit from the mining operation carried on in and about the demised premises, the parties of the second part may make a reasonable charge for supervision of the said operation, which shall be basedoon the time actually spent in supervision, but which shall not, in any event, exceed the sum of $5,000.00 annually.

8. In the event that the mining operations, or explorations, carried on on the demised premises shall interfere with and deplete the flow of water from the well now on the premises, the parties of the second part shall drill and case a new well with a flow equal to the flow of the present well.

9. The allowance for depletion for income tax purposes shall be computed on the gross receipts before the net profit is calculated and the advantage of the said allowance shall inure equally to both the parties of the first part and the parties of the second part.

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

Raymond C. Bowen (SEAL)
Raymond C. Bowen

Benton E. Reichenbach (SEAL)
Benton E. Reichenbach

Ray Hoffman (SEAL)
Ray I. Hoffman, Co-partner

Fred F. Metzger (SEAL)
Fred F. Metzger, Co-partner,
Trading as Ralpho Mining Co.

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF SNYDER ss.:

On this 6th day of July, 1955, personally appeared before me, the undersigned officer, Raymond C. Bowen, Benton E. Reichenbach, Ray Y. Hoffman and Fred F. Metzger, known to me (or satisfactorily proven) to be the persons who signed the foregoing Agreement, and acknowledged the same to be their act and deed for the purposes therein contained.

In witness whereof I have hereunto set my hand and official seal.

Andrew Phillips

NOTARY PUBLIC

My Comm. exp. Jan 6, 1957

No 193

Raymond C. Bowen and Benton E.
Reichenbach, Lessors

to

Ray Y. Hoffman and Fred F. Metzger,
t/a Ralpho Mining Co., Lessees

Cissing. Pa.

ARTICLES OF AGREEMENT

(Mining Lease on "Blue Hill")

State of Pennsylvania } ss:
County of Schuylkill

Recorded on the 23 day of Sept A.D. 1955
in the Recorder's Office for said County, in Book 514
Page 17

Given under my hand and seal of said office

J. Millard Wagner
Recorder

5.00 Paid

# PLAN

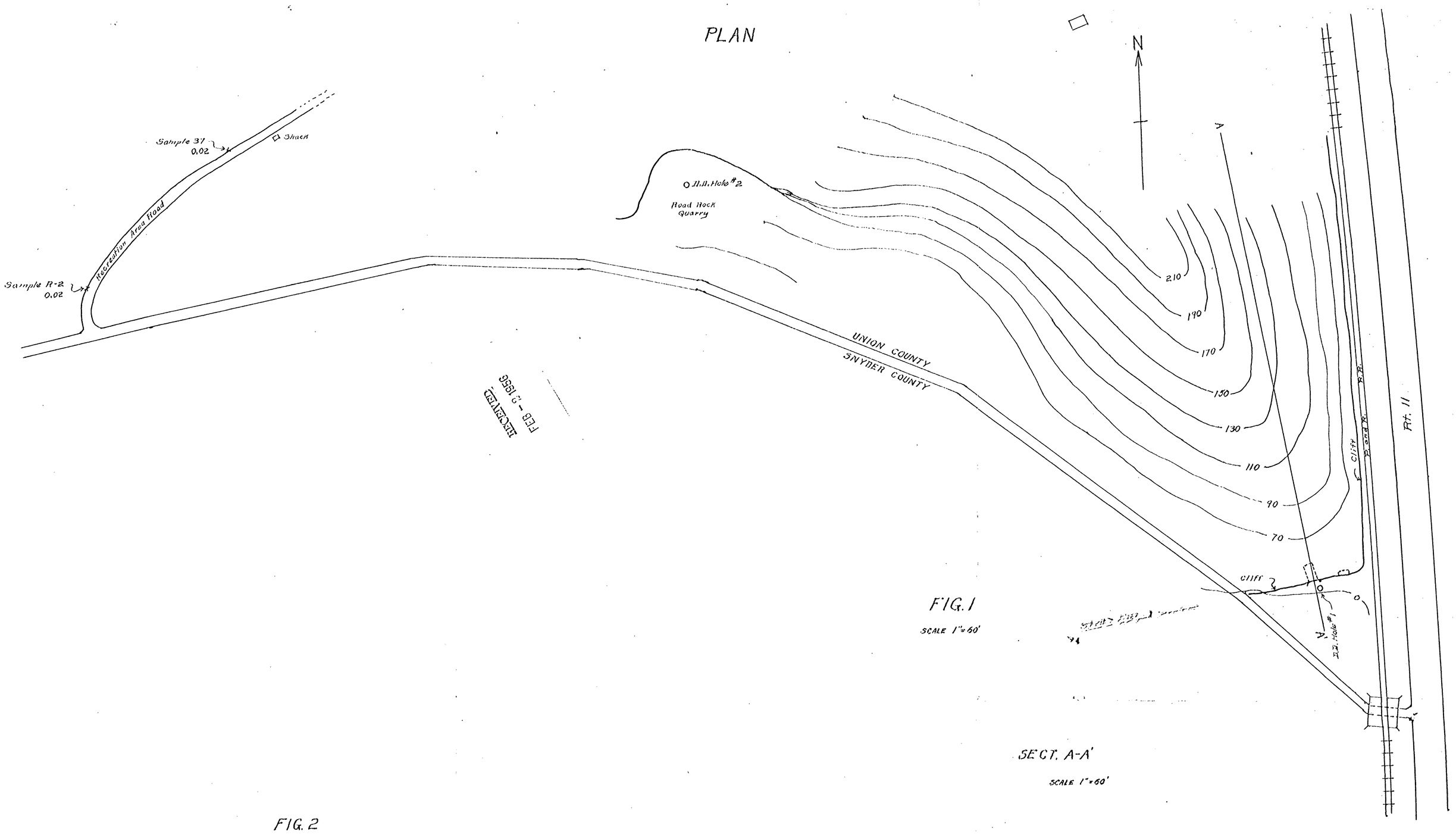


FIG. 1

SCALE 1" = 60'

SECT. A-A'

SCALE 1" = 60'

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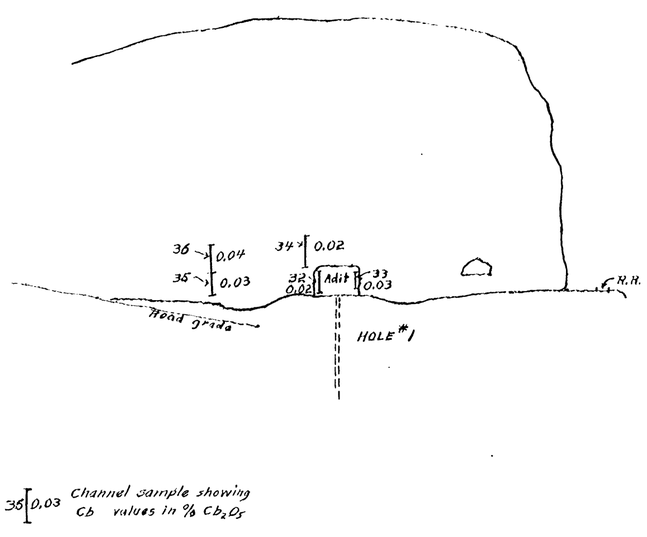
FIG. 2

CLIFF FACE AT PORTAL

scale 1" = 20'




36 [ 0.03 Channel sample showing Cb values in % $Cb_2O_5$

RALPHO MINING CO.
UNION COUNTY, PA.
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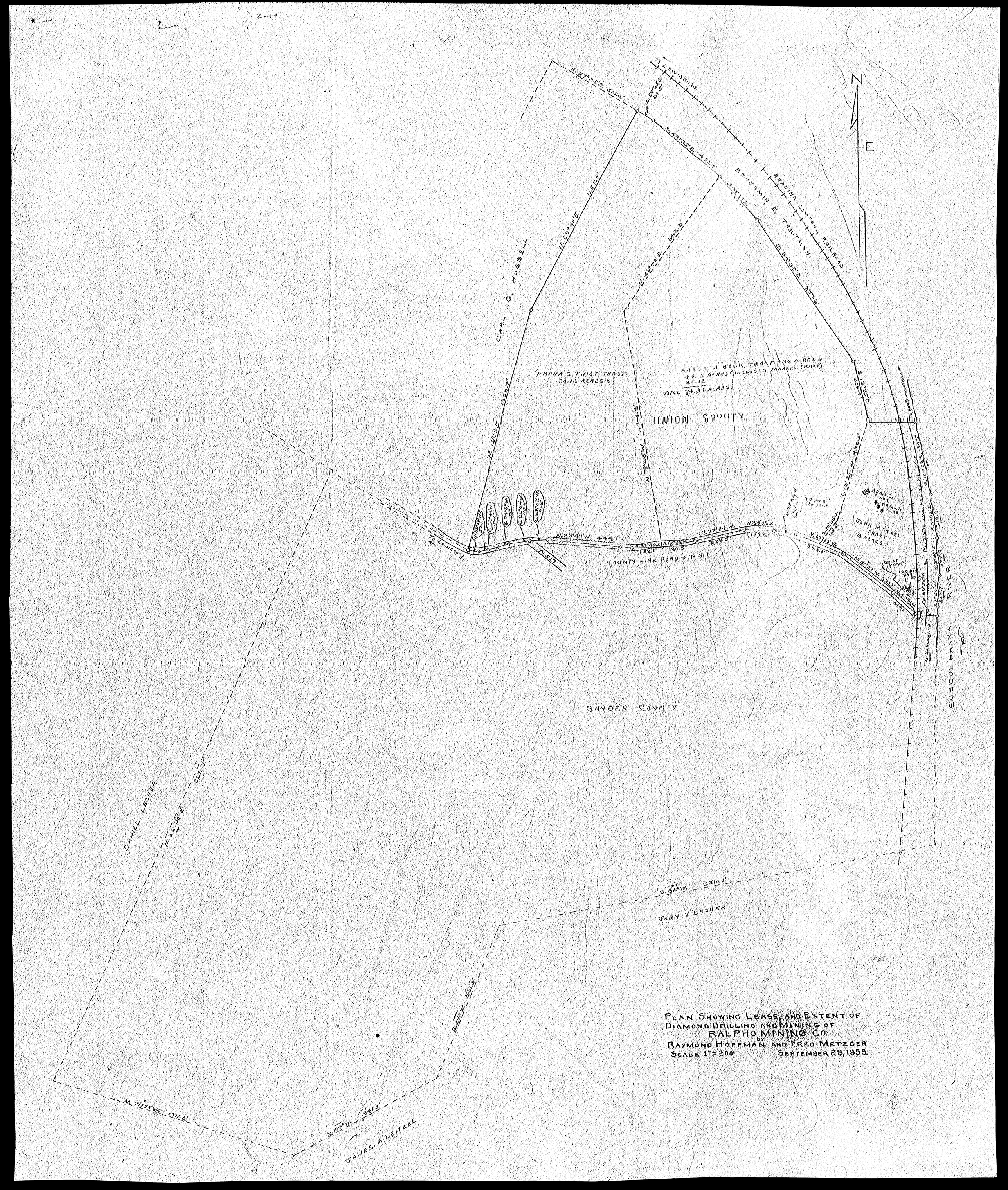
USBM DEC. 1955




PLAN SHOWING LEASE AND EXTENT OF
DIAMOND DRILLING AND MINING OF
RALPHO MINING CO.
BY
RAYMOND HOFFMAN AND FRED METZGER
SCALE 1" = 200'  SEPTEMBER 28, 1955.

# PLAN

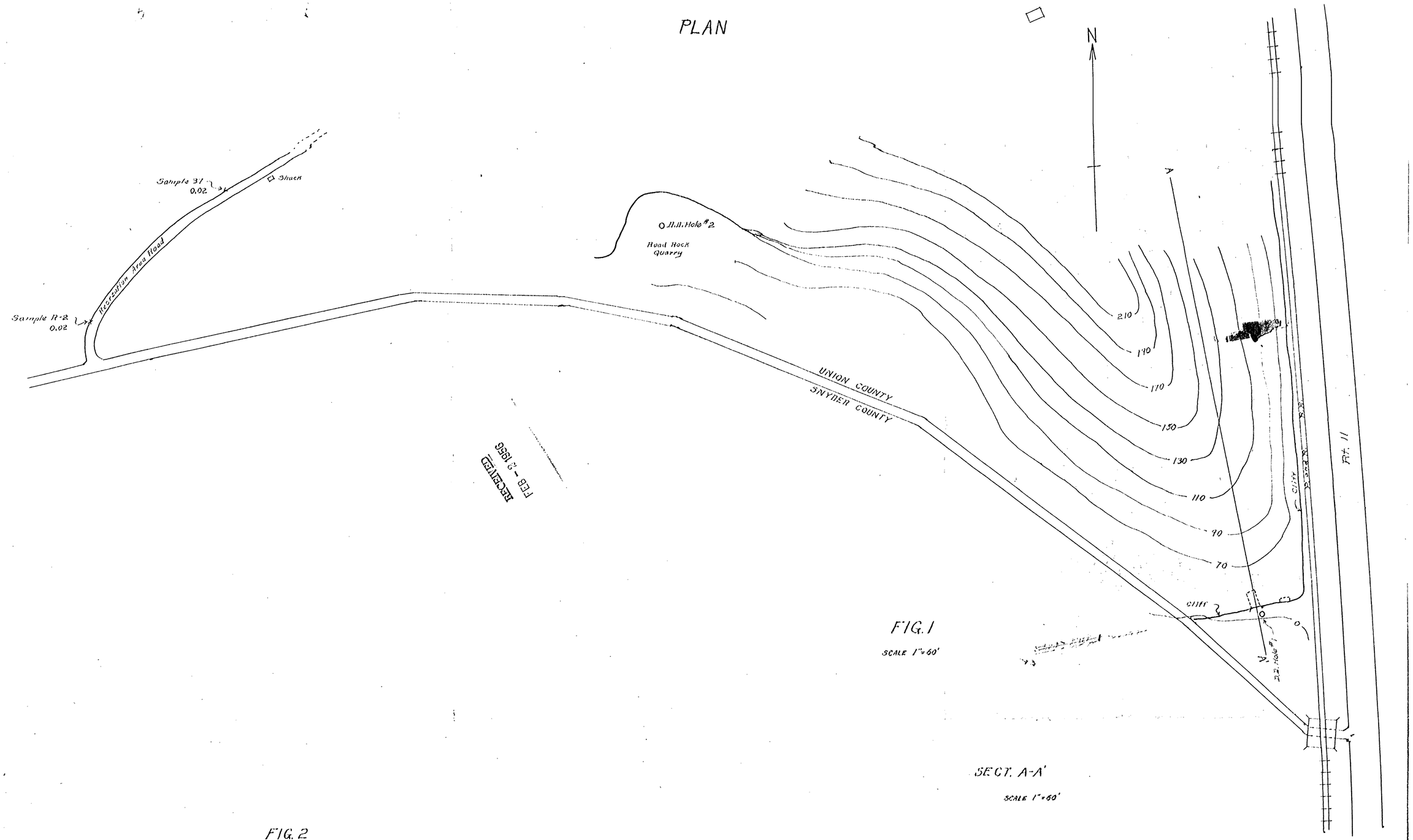



FIG. 1

SCALE 1"=60'

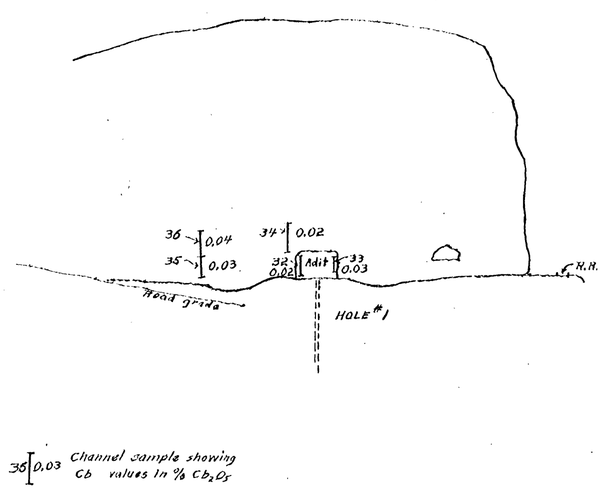
SECT. A-A'

SCALE 1"=60'

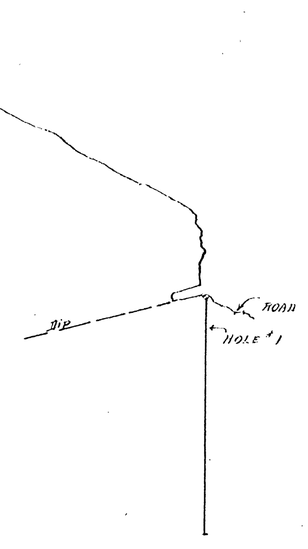
FIG. 2

CLIFF FACE AT PORTAL

scale 1"=20'




36 0.03 Channel sample showing Cb values in % $Cb_2O_5$

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