DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4815

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports

- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

MF-205
(Combines and supercedes MF-201 and MF-203)
June 1956

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

RECEIVED
MAR 27 1958
D.M.E.A.

DMEA
DEPARTMENT OF THE INTERIOR

MAR 24 1958
REGION III
DENVER, COLORADO

CONSENT TO LIEN and SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of _____, State of _____, described as follows: 2/ _____

_____

_____

_____

_____,

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;

3. Subordinates the undersigned's right, title, claim, or interest in or against the land and in any production therefrom to the rights of the Government under the contract with respect to royalty on production and liens to secure same;

4. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none." Do not leave lines blank.)

_____

_____

_____

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

2/ 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.

5. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this Agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land, or any production therefrom furnishing the Government with two copies of such notice; and

6. Consents to all amendments (including an agreement of termination) and assignments of the contract without notice thereof, and undertakes and agrees that this Agreement shall extend and apply thereto.

7. Added provision: _____ (State "None" or "See Annex No.____")

Dated this 12 day of Sept., 1957.

Louis Lessing	[Seal]	Beaver-etal	[Address]
L. Lessing	[Seal]	" "	[Address]
	[Seal]		[Address]
	[Seal]		[Address]
George W Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

I, Olga C Marquardt certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Wallace R O'Keefe 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.

Olga C Marquardt
Wallace R. O'Keefe
[Corporate Seal]

MF-205
(Combines and supercedes MF-201 and MF-203)
June 1956

DMEA
DEPARTMENT OF THE INTERIOR
MAR 24 1958
REGION III
DENVER, COLORADO

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For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator
Docket No. DMEA- 4015
Contract No. Idm-E
Contract Date

CONSENT TO LIEN
and
SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of Beaver, State of Utah, ~~xxxxxxxxxxxxxxxx~~ recorded in the records of the County Recorder, Beaver County, Utah, as follows:

Claim	Book	Page
Mystery	20	347
Mystery No. 1	20	358
Mystery No. 2	20	358
Mystery No. 3	20	359
Sniffer	20	307
Sniffer No. 1	20	307
Sniffer Fraction	20	300

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;

3. Subordinates the undersigned's right, title, claim, or interest in or against the land and in any production therefrom to the rights of the Government under the contract with respect to royalty on production and liens to secure same;

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None

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2/ 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.

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6. Consents to all amendments (including an agreement of termination) and assignments of the contract without notice thereof, and undertakes and agrees that this Agreement shall extend and apply thereto.

7. Added provision: None (State "None" or "See Annex No.____")

Dated this 12 day of Sept., 1957.

Louis Lessing	[Seal]	Beaver- Utah	[Address]
I. Lessing	[Seal]	" "	[Address]
	[Seal]		[Address]
	[Seal]		[Address]
Leroy Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

I, Olga C Marquardt certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Wallace R. O'Keefe 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.

Olga C Marquardt

Wallace R. O'Keefe

[Corporate Seal]

MF-205
(Combines and supercedes MF-201 and MF-203)
June 1956

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DEPARTMENT OF THE INTERIOR

MAR 24 1958
REGION III
DENVER, COLORADO

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MAR 27 1958
D.M.E.A.

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

CONSENT TO LIEN and SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of _____, State of _____, described as follows: 2/

, 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;

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4. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none." Do not leave lines blank.)

_____

_____

_____

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6. Consents to all amendments (including an agreement of termination) and assignments of the contract without notice thereof, and undertakes and agrees that this Agreement shall extend and apply thereto.

7. Added provision: _____ (State "None" or "See Annex No.____")

Dated this 12 day of Sept., 1957.

Louis Lessing	[Seal]	Beaver - Utah	[Address]
S. Lessing	[Seal]	Do Do	[Address]
	[Seal]		[Address]
	[Seal]		[Address]
George W Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

I, Olga C Marquardt certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Wallace R O'Keefe 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.

Olga C Marquardt
Wallace R. O'Keefe
[Corporate Seal]

MF-205
(Combines and supercedes MF-201 and MF-203)
June 1956

DMEA
DEPARTMENT OF THE INTERIOR
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DENVER, COLORADO

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For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator____________________
Docket No. DMEA- 4815
Contract No. Idm-E____________________
Contract Date____________________

CONSENT TO LIEN and SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of Beaver, State of Utah, xxxxxxxxxxxxxxxxxx/ recorded in the records of the County Recorder, Beaver County, Utah, as follows:

Claim	Book	Page
Mystery	20	347
Mystery No. 1	20	356
Mystery No. 2	20	358
Mystery No. 3	20	363
Sniffer	20	367
Sniffer No. 1	20	367
Sniffer Fraction	20	388

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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;

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Dated this 12 day of Sept., 1957.

Louis Leasing	[Seal]	Beaver-weal	[Address]
L. Leasing	[Seal]	" "	[Address]
L. Leasing	[Seal]		[Address]
Thomas Harris	[Seal]		[Address]
Leroy Harris	[Seal]		[Address]
Leroy W Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

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Olga C Marquardt
Wallace R. O'Keefe
[Corporate Seal]

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Sniffer	20	387
Sniffer No. 1	20	387
Sniffer Fraction	20	388

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Louis Lessing Louis Lessing	[Seal]	Beaver - Utah	[Address]
I. Lessing I. Lessing	[Seal]	" "	[Address]
~~Thomas Harris~~	[Seal]		[Address]
Leroy Harris Leroy Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

I, Olga C. Marquardt certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Wallace R O'Keefe 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.

Olga C Marquardt

Wallace R. O'Keefe

[Corporate Seal]

MF-205
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Dated this 12 day of Sept., 1957.

Louis Lessing ~~Louis Lessing~~	[Seal]	Beaver-Utah	[Address]
I. Lessing ~~I. Lessing~~	[Seal]	" "	[Address]
~~[illegible]~~	[Seal]		[Address]
~~Leroy Harris~~	[Seal]		[Address]
Leroy W Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

I, Olga C Marquardt certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Wallace R O'Keefe 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.

Olga C Marquardt

Wallace R. O'Keefe

[Corporate Seal]

MF-205
(Combines and supercedes MF-201 and MF-203)
June 1956

DMEA
DEPARTMENT OF THE INTERIOR
MAR 24 1958
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MAR 27 1958
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For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator _____
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Contract Date _____

CONSENT TO LIEN and SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of _____, State of _____, described as follows: 2/ _____

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7. Added provision: _____ (State "None" or "See Annex No.____")

Dated this 12 day of Sept., 1957.

Louis Lessing	[Seal]	Beaver-Utah	[Address]
I. Lessing	[Seal]	" "	[Address]
	[Seal]		[Address]
	[Seal]		[Address]
George W Harris	[Seal]	" "	[Address]
	[Seal]		[Address]

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Olga C Marquardt

Wallace R O'Keefe

[Corporate Seal]

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

FILE COPY
DMEA
RECEIVED MAR 27 1958
3/27 C 320 700

224 New Customhouse
Denver 2, Colorado
March 25, 1958

Memorandum

To: Secretary to the Operating Committee

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 4815 (Uranium) Wallace R. O'Keefe Associates - Mystery Sniffer Mines, Inc. (Mystery Sniffer claims) Beaver County, Utah

Enclosed is an amendment to the subject application from Wallace R. O'Keefe dated March 12, 1958, which states that the organization has been changed from Wallace R. O'Keefe and Associates to the Mystery Sniffer Mines, Inc. Also enclosed is a map submitted with the amended application and the original and six copies of executed Consent to Lien.

Two copies of the amended application are being forwarded the field examiners and one copy is being retained in our file.

E. N. Harshman

E. N. Harshman

map in envelope

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HMC

DMEA
DEPARTMENT OF THE INTERIOR
MAR 24 1958
REGION III
DENVER, COLORADO

Beaver, Utah
March 12, 1958

DMEA
RECEIVED MAR 27 1958

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Customhouse
Denver 20, Colorado

Attention: Docket No. D.M.E.A. 4815
(Uranium) Mystery Sniffer Claims
Beaver County, Utah

AMENDMENT TO APPLICATION DMEA 4815

Dear Sirs:

This is to inform you that the present organization has been changed from Wallace R. O'Keefe and Associates to the Mystery Sniffer Mines Inc. Incorporation being in the State of Washington, with offices at Beaver, Utah in care of Wallace R. O'Keefe, President.

This is to advise you that we are still interested in receiving government aid in the exploration work that we have yet to do. As a background we have now completed 820 feet of Exploration Drift from the bottom of Indian Creek Canyon, and it is our wish to continue this drift until the DMEA aid is approved and takes over the operation.

It will then be our desire to obtain DMEA aid for further exploration work. This work will consist of cross cuts in both our present exploration tunnel at the bottom of Indian Creek Canyon and the present ore production tunnel in Grassy Canyon.

At the completion of the above mentioned phase it will be our desire to start a second phase of exploration work providing that there has been satisfactory results obtained from the first phase of work mentioned above. This second phase of exploration will consist of sinking a winze at tunnel level of the lower exploration drift at Indian Creek Canyon.

Enclosed please find map and estimates of the proposed work.

Sincerely yours,

Wallace R. O'Keefe

Wallace R. O'Keefe
President
Mystery Sniffer Mines, Inc.

INTRODUCTION MYSTERY SNIFFER PROJECT

Since the time this Company first made application for Government aid to explore the Mystery Sniffer Claims at a lower depth than the present operation in Grassy Canyon there has been a lot of valuable information found to justify changing the old application to a different program at this time.

From further exploration work recently completed in the O'Keefe Tunnel we have learned that there is a volcanic tuff formation which has faulted the East West contact off completely and all of the ore found in the last discovery area is bedded on this formation along with the andesite contact footwall. This formation has a strike of North 30° West and has a dip of 40° to the West. This corresponds with the dip of the East West contact footwall also. Since finding this condition it is our belief that the ore on the Mystery Sniffer Claims is coming up from depth from a Northwest direction. We feel that there is sufficient evidence to justify this theory.

The new exploration tunnel being driven from Indian Creek Canyon is 800 feet underground at this time. The formation in the face is rhyolite. The tunnel is 8 feet high and 7 feet wide throughout the length of it. Also 200 feet of timbering has been set in various sections of the tunnel.

Proposed Exploration Work:

We propose to keep the exploration tunnel heading going in its present direction to 950 feet and then turning the heading due North for 300 feet where we feel the East West contact will be found at this depth. We have arrived at this distance from considering the dip of the East West contact from the surface outcroppings down to the O'Keefe Tunnel level. In all, the distance from portal to contact will be approximately 1250 feet underground. Upon finding the contact we propose to back off down drift 60 feet from the contact and start to crosscut headings two the East and West paralleling the contact in both directions.

These crosscuts after the turnings are made will then parallel the contact at a 30 foot distance and from these parallel crosscuts at specified intervals short crosscuts will be run to the contact. The approximate distance of the West crosscut will be 300 feet and the distance of the East crosscut will be 205 feet; making a total distance of 1755 feet of underground work at this level in which 800 feet is now completed.

The reason for paralleling the contact with the crosscuts out in the footwall formation at a distance of 30 feet is as follows: From the conditions found from running the O'Keefe Tunnel within the contact zone we feel that it is only good judgment to keep away from these conditions which are: water, thick clay gouge materials, and a very heavy hanging wall which keeps us replacing broken timber every few months. We know from past experience that the footwall formation is our most solid formation to work in.

At this time we would also like to propose a small amount of exploration work in the O'Keefe Tunnel. This work would consist of running a crosscut from near the tunnel heading out to the Northwest following the tuff contact to the distance of 200 feet. The purpose for this work is to locate another ore shoot which we believe has come up on the tuff formation and outcrops on the surface which we call "F" cut. "F" cut is a new outcropping of ore which was uncovered by bulldozer late in the fall of 1957 and has a much better assay grade than the other three cuts.

Specifications and Costs At The Lower Exploration Tunnel.

The lower exploration tunnel at this time is equipped with the following equipment:

New 20 lb. rail with ties every 4 feet.
1 - New Gardner Denver GD9 Mucking Machine.
1 - Very good 2 ton Mancha tramer.
2 - New 1¼ ton Ore Cars.
Very good 10 inch ventilation pipe with a 5 horsepower electric suction fan at the portal of the tunnel and a 3 horsepower electric booster fan at 775 feet in the tunnel.
A three-wire rubber covered power cable back to the booster fan and lights at the ore car transfer switch.
New two inch air pipe with a 500 gallon air receiver at the tunnel portal.
1 New Gardner Denver 58 Jack-leg drill equipped to use 6 and 7 foot drill steel.

What water so far encountered is being taken care of with a ditch along the bottom side of the tunnel.

Compressed air is furnished from a 440 cubic foot deisel compressor at the O'Keefe Tunnel portal operating at 120 lb. pressure.

Electric power is furnished from a 19 KW Deisel plant at the compressor shed. Both air and electric power are transferred over the hill down to the lower tunnel, a distance of 840 feet. Both operations are run from these two units.

We recommend contracting all of the proposed exploration work under the same specifications so far itemized which will be furnished completely by the contractor for a set price per foot for his work.

Tunnel size 8 x 7 feet	450 ft. @ $26.00 per ft.	$11,700.00
Crosscuts size 8 x 7 feet	505 ft. @ $26.00 per ft.	$13,130.00
Timber Where Needed 8 x 8 post and caps with 2 in. laggen	$5.00 per ft.	
Total Costs for Tunneling and Crosscuts at Lower Tunnel Level		$24,830.00

O'Keefe Tunnel Program is as follows:

The crosscut driven from the O'Keefe Tunnel will be timbered from the starting point throughout its length.

Crosscut size 5 x 7 ft. in the clear of timber. Crosscut	200 ft. @ $26.00 per ft.	
Timber	@ $5.00 per ft.	
Total Crosscut and Timber	@ $31.00 per ft.	$6,200.00

Total Cost for both programs:

Lower exploration tunnel and crosscuts	$24,830.00
O'Keefe Tunnel Exploration crosscut with timber	6,200.00
Total	$31,030.00

The O'Keefe Tunnel operation is equipped with the following equipment:

Good 12 lb. rail with ties every 3 feet
One good 1½ ton Atlas Electric Battery Trammer
Four used 3/4 ton ore cars.
Very good 6 inch ventilation pipe, with a two horsepower blower fan, and a two horsepower booster fan at 600 ft. in the mine.
Electric power cable is at the crosscut point at this time.
Two inch air pipe with 150 gallon air receiver inside of the mine.
One new Thor Jack-leg drill equipped to use 6 ft. drill steel
One new air slusher with ramp and hoe for running drifts.

All work thus far outlined is platted on the enclosed map covering the complete operation on the Mystery Sniffer Project. It is still the full intent of the Mystery Sniffer Miners Corporation to furnish their twenty-five percent share of the outlined exploration program. If there is additional information required please let us know and we shall remit same.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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. 4815
Metal or Mineral Uranium
Date Received 8/19/57
Estimated Cost No estimate $30,770.00
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Wallace R. O'Keefe and Associates
Beaver, Utah

(*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 See attached supplement

(*b*) State any mine name by which the property is known. Mystery-Sniffer Mine

(*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. See attached lease.

(*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.

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

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

(*c*) The work will start within 30 days and be completed within 6 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)? Yes.

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated Aug - 15th, 1957

Wallace R. O'Keefe and Associates
(Applicant)

By Wallace R. O'Keefe
Trustee

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

SUPPLEMENT

to MF-103, D. M. E. A. Loan Application

for Wallace R. O'Keefe & Associates

3.

(a) Mystery

Beginning at a point approximately N. 40° E. 1,000' more or less from the SW Cor. of Sec. 28, Twp. 27 S., R. 6 W. of the S.L.B.M. in Newton Mining District, Beaver County, Utah; thence N. 10° E. 1,500'; thence S. 80° E. 600'; thence S. 10° W. 1,500'; thence N. 10° W. 600' to the point of beginning.

Mystery No. 1

Beginning at the NW Cor. of Mystery; thence N. 10° E. 1,500'; thence S. 80° E. 600'; thence S. 10° W. 1,500'; thence N. 10° W. 600' to the point of beginning.

Mystery No. 2

Beginning at the NW Cor. of Mystery; thence N. 10° E. 1,500'; thence N. 80° W. 600'; thence S. 10° W. 1,500'; thence S. 80° E. 600' to the point of beginning.

Mystery No. 3

Beginning at a point 350' N. of the SE Cor. of Mystery and continuing along the E. line of the Mystery 1,500' N. 10° E.; thence S. 80° E. 600'; thence S. 10° W. 1,500'; thence N. 10° W. 600' to the point of beginning.

Sniffer

Beginning at a point approximately 2,000' N. 50° E. of the SW Cor. of Section 28, Twp. 27 S., R. 6 W., S.L.B.M.; thence N. 70° E. 1,500'; thence S. 20° E. 600'; thence S. 70° W. 1,500' to the point of beginning.

Sniffer No. 1

Beginning at a point 750' N. 70° E. of the SW Cor. of Sniffer and continuing N. 70° E. 1,500' along the S. line of Sniffer; thence S. 20° E. 600'; thence S. 70° W. 1,500'; thence N. 20° W. 600' to the point of beginning.

Sniffer Fraction

Beginning at a point 500' N. 70° E. from the NW Cor. of Sniffer and continuing along the N. line of Sniffer N. 70° E. 1,500'; thence N. 70° W. 600'; thence S. 70° W. 1,500'; thence S. 20° E. 600' to the point of beginning.

The above-listed claims are recorded in the records of the County Recorder, Beaver County, Utah, as follows:

Claim	Book	Page
Mystery	20	347
Mystery No. 1	20	358
Mystery No. 2	20	358
Mystery No. 3	20	363
Sniffer	20	387
Sniffer No. 1	20	387
Sniffer Fraction	20	388

4. Physical Description

(a) Exploration operations were first begun on these claims in the summer of 1950, staking and location work having been completed some time later. This preliminary work done by the owners was merely a few shallow trenches and one adit of possible 15 feet driven into the East bank of Grassy Creek.

Active exploration work was begun by the Beaver Uranium Company, with a bulldozer under contract, in the spring of 1952. On the crest of the hill, three parallel trenches were cut in a North-South direction normal to the strike of the mineralized zone. The trenches are approximately 100 feet long, and were cut at level grade to about 8 feet depth. This exposed a cross section of a mineralized zone about 30 feet in width in the first two cuts. The third trench was altered to an East-West cut directly over the mineralization; but due to the deep overburden at this point, the trench was abandoned. Two additional cuts were made on the Western slope of the hill about halfway down and at the bottom just above Grassy Creek branch. Only the bottom trench cut mineralization, and the midway cut was still in talus when stopped.

From Trench No. 1 to the bottom cut on the West, the horizontal distance exposing the mineralized formation in the various cuts is about 1,000 feet along the strike. No attempt had been made to extend the exploration to the East of No. 1 trench to date. Scintillometer readings do indicate a strong continuity, however, for at least 100 feet.

In addition to this preliminary work with the bulldozer, an adit was started on the West slope about 200 feet down from the No. 3 trench. This was driven for a distance of 40.8 feet. the first 10 feet from the surface of the slope was well mineralized and mostly ore-grade. At 10 feet in, a definite fault cut off the mineralization, and the remainder of the drift is blank.

The mineralized exposure at the base of the hill on Grassy Creek was enlarged by further bulldozer work, and a horizontal layer of ore-grade mud was opened up about 3 feet thick and 30 feet long. From this point, 4 truckloads of ore had been shipped: 10 tons assayed .20 per cent U_3O_8 and 14 tons paid at .14 per cent U_3O_8. This zone appears to strike slightly East of North, and another bulldozer cut was made on this strike about 200 feet to the North. Again, abundant mineralization was found in the form of autunite and torbernite, apparently lying in the channel of an old water course. A definite relationship between this and the mineralized zone at the top of the hill had not been established.

Attemps to uncover the mineralized mud zone in the bottom exposure and shipments of all possible ore-grade material were made. Also, an adit was started at the Northern extremity of the zone for the purpose of underground exploration but was discontinued at a short distance.

Beaver Uranium Exploration Work

A new adit was started at the Southern extremity of the zone for the purpose of underground exploration. This adit was driven for a distance of 90 feet Easterly. A cross cut was started from this point, driven North 48 feet where a mineralized zone was discovered, containing uranium in the autunite stage. This zone was formed by a low angle fault dipping to the East, inclined at about 30° to 40°. This fault zone was proven to be the source of the horizontal layer of ore-grade mud which was opened up at the base of the hill on Grassy Creek. This mineralization was carried by water under pressure up through the fault zone from greater depths under the hill. From the point of the drift where the crosscut was started the Easterly proportion of the drift was continued Northeasterly 209 feet where a very heavy faulting had occurred in the rhyolite, which was abandoned because of no mineralization and dangerous ground.

From this point the drifting operation was moved back from the Northeasterly heading 90 feet and was continued Southeasterly 62 feet where a large mineralized zone was encountered. Two drift headings were begun at this time; one heading following the hanging wall side of the zone with a general trend of North 60° East, the other continuing on South cross-cutting the mineralized zone for 37 feet where a red andesite was discovered. In this 37 foot zone uranium of autenite and torbernite stages of commercial values were found. From the sampling of this zone it was established that 18 feet would average .14 U_3O_8.

The heading on the hanging wall side of the zone was continued for a distance of 28 feet where a cross-cut was started to the South cross-cutting the mineralized zone until the red andesite was again encountered. This proved to be of the same origin as the first cross-cut discovered 28 feet previous. The Easterly heading was then continued on about 155 feet where a considerable amount of water was found. This made mining conditions extremely hazardous and costly due to the highly fractured materials consisting of clay, kaolin and altered rhyolite which upon contact with water becomes very soluable. At this stage the exploration work was discontinued and a drilling project was begun on the West slope of the hill above Grassy Creek 300 feet North of Trench 3. This drill hole was drilled to a depth of 600 feet at a Southeasterly dip of 76° where it was discontinued because of extremely faulted rhyolite which made drilling costs far greater than anticipated. Thus, operations were discontinued.

Present Mining Operations Under Wallace R. O'Keefe & Associates

This mining and development operation was begun July 18, 1956 on the information made available from the exploration work completed by the Beaver Uranium Company.

The adit of this new project is located 48 feet South of the Beaver Uranium exploration drift and 35 feet above on the West slope of Grassy Creek. This drift was driven 216 feet North 70° East. At this point it was turned North 20° East for 46 feet where a definite contact of andesite and rhyolite was established. On this contact the mineralized zone was found containing autunite and torbenite ores of commercial grade. This mineralized contact zone was then followed 68 feet in a Northeasterly direction. In doing this, a few shipments of ore were hauled to Marysvale buying station. Upon completion of this 68 feet a very good ore body was encountered. This ore body consisted of a strong fractured zone in a altered rhyolite. The general trend of this zone is North 60° East with a general zone dip of 75° Northwesterly. The andesite on the footwall or the Southerly side of the ore zone is reddish-brown. On the hanging wall side the rhyolite is a light grey color. This ore zone is extremely fractured laterally and longitudly. There are numerous low angle fractures 30° to 45° dip that trend to cut off the mineralization. Steeper fractures at about 70° to 75° appear to keep the mineralization in a more persistent course. It is apparent that there has been both post and pre-mineral fracturing and faulting.

This ore deposit averaged from 2½ feet to 15 feet in width and was approximately 65 feet in length. In this distance a winze was sunk 53 feet in ore at an angle of 30° and was cut off by a steep angled fault or fracture which may be only a displacement.

Cross-cut No. 1 was driven North 48 feet into the hanging wall which consisted of badly broken rhyolite. Raise No. 1 on an incline of 40° was driven to the height of 28 feet. At 16 feet the ore was cut off by another steep angled fault or fracture. Thus, in this area taking the width of the drift into consideration, there is a length along the depth of the vein 69 feet in ore.

Beyond this 65 feet of ore the heading was continued 40 feet following a weak mineralized fractured condition due to a very large low angled fault movement on the footwall which apparently displaced the ore

to a unknown location at this time. In the heading of this drift a strong flow of water was encountered which hindered continuation at this point. It was then bulkheaded off and the water was piped out of the drift. A new heading was again started following the andesite footwall on one side with a very extensive zone of clay, kaolin, and altered rhyolite mixed together due to a severe faulting condition. Gangue materials of pyrite, florite, and limonite were abundant but no U_3O_8 was present for a distance of 126 feet where contact was made with the second sizable amount of ore.

Crosscut No. 2 was then started, which was driven North through 28 feet of uranium ore. At the same time progress was being made in the original heading following the contact. Also, 16 feet from No. 2 crosscut, raise No. 2 was begun. This raise progressed through 26 feet of mineable ore on a 40° incline. From this point the drift was continued through badly fractured rhyolite which has a considerable amount of water running from it. This heading was then advanced North 65° for a distance of 65 feet where the contact changed to a North 40° for a distance of 25 feet where again its direction changed to its original North 65° East. Upon this last change in direction a large ore body was discovered.

Raise No. 3 was then started. This raise is 20 feet wide, 50 feet in thickness, and 70 feet high at the present time and is being mined with the square set timbering system. The ore is running at an average of .23 U_3O_8. It has been noted in the geology of this contact and its surrounding formations that wherever a sudden change takes place in the direction of the footwall or contact and then rolls back to its original position, a sizable ore body is encountered. This seems to be the occurance with both mineable ore bodies which have been discovered so far.

The ore in raise No. 3 is formed in the highly fractured rhyolite which shows both low angle faults running 40° to 45° dip and steep angle faults running 70° to 76° dip. Here the low angle faults tend to cut off the steep angle faults and upon jointing of the two faults a thick layer of clay is formed, varying in thickness from 6 inches to 2 feet. Under these shelves of clay, high grade pockets of ore are found averaging from one to seven percent uranium. These joints or clay shelves follow closely to the footwall which is still a red andesite formation

(b) Past Production

Lot No.	Wet Wgt.	%U3O8	%V2O5	%CaCO3	Shipped
879 (2 loads)	20,650	0.20	0.03	0.9	7/3/52
881 (2 loads)	27,160	0.14	-	-	7/8/52

Current Production

Lot No.	Wet Wgt.	%U3O8	%V2O5	%CaCO3	Shipped
349	43,050	0.12		0.2	8/31/56
353	40,780	0.22		0.00	9/10/56
361	42,640	0.26		0.4	9/12/56
365	57,810	0.31		0.7	9/17/56
371	55,940	0.22		0.5	9/21/56
376	72,010	0.14		0.9	9/28/56
378	94,410	0.21		0.3	10/4 /56
391	93,890	0.16		0.2	10/25/56
399	73,930	0.16		0.5	10/31/56
OP222VS	113,980	0.13		0.2	11/16/56
OP235VS	93,700	0.11		0.3	12/3 /56
OPVS250	97,380	0.11		0.3	1/14/57
OP252VS	98,240	0.12		0.2	1/16/57
GP255VS	93,540	0.10		0.7	1/28/57
OPVS262	97,000	0.10		0.2	2/19/57
OP285VS	92,980	0.10		.05	3/6 /57
OP306VS	94,340	0.19		0.1	4/22/57
OP311VS	92,080	0.23		0.3	5/6 /57
OP313VS	95,700	0.28		0.1	5/9 /57
OP315VS	96,840	0.26		0.3	5/10/57
OP316VS	97,380	0.21		0.2	5/15/57
OP320VS	100,620	0.21		0.1	5/21/57
OP325VS	96,260	0.25		0.3	5/31/57
OP326VS	97,520	0.34		0.2	6/4 /57
VAR5858	587,780	0.23			6/57

2,619,800 = 1310 tons Av. about 0.20% U_3O_8

(c) Geologic Features

The geologic features have been explained to the best of knowledge in paragraphs of 4a. Supplemental U. S. Geological Survey report is attached.

EDWIN J. POEHLMANN
MINING GEOLOGIST
P. O. BOX 35 - PHONE 440
ST. GEORGE, UTAH

July 30, 1957

Mr. Wallace O'Keefe
Beaver
Utah

Dear Mr. O'Keefe:

The following paragraphs will serve as a memorandum of the objectives set forth in our conversation following my examination of the Mystery-Sniffer Claims on July 27th, 1957.

Uranium mineralization occurs in a nearly vertical shear zone in an altered latite. The shear zone is cut by a low angled, (20 to 30 degrees dip) major fault and the lower portion of the mineralized shear zone has apparently been displaced to an unknown position down dip from the known mineralization which you have encountered. Ore grade mineralization has been encountered in the upper faulted portion of the shear zone where the low angle fault has not cut it out entirely.

It is my opinion that further exploration should be conducted in attempt to locate the faulted lower portion of the shear zone. This part should not only contain ore of at least equal grade as that found above, but because it would have a greater continuity at greater depts below the fault, it should form bodies of ore sufficiently large in size to make mining economical and profitable.

In order to prospect for this ore zone it is proposed that an exploratory adit be driven from the South side of the mountain under the present workings. An adit from the south side near the level of the stream bed would gain an additional 175 feet in depth below the present workings. This would not only provide exploration of a wide area at a greater depth, but would also provide a more economical and practical access to any ore which might be found. It would also allow you access to the ore in the winter season whereas a shaft from the upper levels would be nearly inaccessible.

A full report with maps and sections will follow at a later date.

Sincerely,

Edwin J. Poehlmann

Edwin J. Poehlmann

EJP:kb

4.

(d) Accessibility

An unnumbered county road intersecting State Highway 91 about 16 miles North of Beaver, Utah, leads up through Indian Creek Canyon to the property. This claim group is approximately 6 miles from the paved road. The county road is graveled for the most part, and will sustain continued heavy hauling. The road crosses the stream at 4 pole bridges which carry present loads exceeding about 20 tons. The present operators are owners of snow removal equipment which keeps the road passable during all winter months.

Distance

The allowable haulage distance has been certified at 100 miles. The present production is being shipped from the mine to Milford, Utah, a distance of 48 miles, and from Milford to Vitro Uranium Company in Salt Lake City, Utah.

Supplies

Mine supplies can be obtained in any quantity at Beaver, Utah.

Residence

Residence is available at Beaver in housing, hotels, and motels.

(e) Manpower is available from Beaver and surrounding towns of Minersville, Milford, etc. Experienced miners are employed at this time and more are available if needed.

Materials, such as mine timbers, have been and can be obtained in any quantity.

Water is always available in Indian Creek for any sizeable mining operation.

Nearest electric power could probably be made available from a branch power line which crosses Indian Creek Canyon about 2 miles East of these claims. Power is being generated at the present mining operation and can be transferred to a new location at any time.

5.

(a) The mineral - Uranium (See Form MF-103)

(b) Proposed Work:

The proposed work is underlined as follows:

Drifting and crosscutting with a new tunnel from the creekbed level of Indian Creek Canyon will gain an additional 175 feet in depth below the present workings. This would provide a very large area for exploration work at a greater depth which would make possible greater opportunity to explore the major fault zone and to determine the displacement of the ore vein which was discovered in the O'Keefe tunnel. It is considered, from the exploration work previously completed through sinking of a winze which is aforementioned, that the ore zone was cut off by a major displacement to an unknown position down dip from the known mineral zone which has already been established.

It is estimated that the distance from Indian Creek Canyon to the present operation will exceed 900 feet of straight tunneling in a Northerly direction with an additional 330 feet of crosscutting.

All phases of the project are planned for simultaneous operations to expedite the program.

(c) Time element (See Form MF-103)

(d) This operation is currently being sponsored by Wallace R. O'Keefe and Associates. Each individual's interest is being personally

represented by Wallace R. O'Keefe. The experience of Mr. O'Keefe embraces a wide variety of mining supervision.

Present operation is under contract with an individual mining contractor known as "Hollingshead Mining & Contracting Company". All mining and development work is set up on a footage and tonnage basis. Mr. Hollingshead has had an extensive variety of mining experience. He also has Edwin J. Pullman as his consulting mining geologist whose reputation covers a wide field of mining geology. Both are very well acquainted with the type of formation and mining problems which are encountered in the proposed exploration project.

6.

(a) Independent Contracts

It is proposed that the described exploration work will be let out on a independent contract. The costs stated below will be comparable with the expended costs reported from the O'Keefe operation established on knowledge gained through mining operation.

Stage 1

Drifting - estimated distance - 900 feet A tunnel 7 feet high, 6 feet wide into solid ground with 20 lb. mine rail, 2 in. air pipe, 12 in. ventilation tube, and 4 in. water drainage line @ $24.00 per foot	$21,600.00

Stage 2

Crosscut work - estimated distance - 330 feet Crosscut tunnels 7 feet high, 6 feet wide into solid ground with 16 lb. mine rail, 2 in. air pipe, 8 in. ventilation tube, and 4 in. water drainage line. Also all crosscut work will be timbered throughout. - @ $29.00 per foot	$8,570.00
Total drifting and crosscutting cost	$30,170.00

$32,770.00

The Contractor will furnish all materials stated above. He will also furnish all labor, mining supervision, mining equipment and insurance to undertake the above proposed work.

(b) Labor Supervision and Consultants

Labor classes and rates of wages will be rated as follows:

Mine Foreman	$16.00 per day
Miners	$15.00 per day
Helpers	$14.90 per day
Electric locomotive Operator	$15.00 per day
Mucking machine Operator	$15.00 per day

Geological Consultant will be furnished by O'Keefe and Associates @ $45.00 per day when needed.

(c) Operating Materials and Supplies

Will be furnished by the contractor.

(d) Operating Equipment

Equipment will be furnished by the contractor.

(e) Rehabilitation and Repairs

None

(f) New Buildings, Improvements, Installations

All buildings and installations will be furnished by O'Keefe and Associates and contractor.

(g) Miscellaneous

Furnished by Contractor.

(h) Contingencies

It is advisable that precautions be taken at this time to provide funds for a drainage sump which may be necessary in the latter part of the exploration project. This drainage sump will take care of all seepage water which the main line cannot pick up. A pump will then be installed to force the water into the main line.

Proposed Work:

Sump - 4 feet x 6 feet wide, 15 feet deep with lagging, @ $40.00 per foot	$600.00
Total sump cost	$600.00

7.

(b) Wallace R. O'Keefe and Associates propose to furnish their share (25%) which will contribute to the total cost of $30,770.00 which amount is $5,770.00.

MINING LEASE AGREEMENT

THIS MINING LEASE AGREEMENT, made and entered into this 1st day of November, 1955, by and between Louis Lessing, I. Lessing, Thomas Harris and LeRoy Harris, all of Beaver, Utah, hereinafter designated as party of the first part, and Wallace R. O'Keefe, of Portland, Oregon, hereinafter designated as party of the second part,

WITNESSETH:

That the said parties of the first part, for and in consideration of the sum of One ($1.00) Dollar, receipt of which is hereby acknowledged, and of the royalties, covenants, and agreements hereinafter reserved, and by the said party of the second part to be paid, kept and performed, has granted, demised and let unto the said party of the second part the following described unpatented mining claims situate in Newton Mining District of Beaver County, State of Utah, as follows, to-wit:

MYSTERY
MYSTERY NO. 1
MYSTERY NO. 2
MYSTERY NO. 3
SNIFFER
SNIFFER NO. 1
SNIFFER FRACTION

TO HAVE AND TO HOLD unto the said party of the second part for the term of Five (5) years from and after date hereof, unless sooner forfeited through the violation of any covenant hereinafter against the said party of the second part reserved; and expressly granting to the party of the second part the exclusive right of extending this lease of an additional term of Five (5) years if at the end of the first term hereof the said lease is then in good standing;

And in consideration of the said demise, the said party of the second part does COVENANT and AGREE to and with the said parties of the first part as follows, to-wit:

1. The said party of the second part will do all work upon said premises with due regard to the safety, development, and preservation of the said mining claims and premises as a workable mine, and to securely and properly timber all openings made, where timbering shall be necessary and proper, in accordance with good mining.

2. To keep at all times the drifts, shafts, tunnels, and other workings being worked by said party of the second part thoroughly drained and clear of loose rock and rubbish, unless so prevented by extraordinary mining casualty.

3. That said party of the second part shall be solely responsible for all labor, materials, and supplies purchased by the said party of the second part and used in the operations herein contemplated, and will indemnify and save harmless said party of the first part from any and all liability by reason of this lease, and will notify all persons with whom said party of the second part incurs any obligation, of such responsibility, and will post a notice at all said workings relieving the party of the first part of all responsibility for the same, and will take any and all steps necessary and prescribed by law to give notice to creditors of such responsibility.

4. To carry and pay for compensation on all persons employed by said party of the second part when required to do so by the laws of the State of Utah, and to carry and pay all social security and assessments, unemployment insurance, or other taxes taxes or assessments required by the laws of the State of Utah or the United States Government.

5. To pay whatsoever personal property taxes are assessed against the personal property and mining machinery and equipment placed upon the premises by the pa rty of the second part, and that the party of the first part will pay any real estate taxes assessed against said mining claims.

6. To allow the parties of the first part or his agents at any and all reasonable times to enter upon the demised premises, and any and all parts thereof, for the purpose of inspection.

7. To commence work upon the said premises on or before the 7th day of November, 1955, and thereafter to do and perform not less than fifty (50) one-man shifts of labor each calendar month during the term of this lease, or in lieu thereof to pay to parties of the first part the sum of One Hundred Dollars ($100.00) for each month that the fifty (50) one man shifts of ø work are not performed during the life of this lease. Failure to either perform the fifty shifts each and every month or in lieu thereof to pay the one hundred dollars will be considered a breach of this lease.

8. To pay and deliver to the parties of the first part as royalty for all ores marketed from said premises, ten per cent (10%) of the Net mill or smelter value, "Net mill or smelter Value" being defined as the mill or smelter schedule value per dry ton, less treatment, freight, drayage, control assaying and sampling charges. The said ro yalty to be paid on all ores of every kind and nature that is recovered from the said premises; That the same percent of royalty shall be paid out of premium and bonus payments that mey be paid under government regulations.

9. It is understood that there is at present a government lien against the property to secure a D.M.E.A. loan , and the government is at the present time determining whether or not this loan must be repaid. If it is determined that this loan must be repaid the party of the second part agrees to pay the lien off on terms required by the government, but in no way to interfere with the ten percent which is to be paid to parties of the first part.

10. That the purchasing mill or smelter shall be advised and notified of the royalty interest of the said parties of the first part in all ores shipped, and party of the second part shall direct said purchaser to remit all royalties directly to the said parties of the first part, to gether with a copy of all settlement sheets.

11. That all mining equipment and machinery brought upon the said premises by the party of the second part shall constitute and remain personal property, which may be removed from the said premises at the option of party of the second part, at any time during the term of this lease, or within ten days thereafter, upon notice from the party of the first part so to do; that any buildings or other improvements placed upon the said premises, upon the surface thereof, shall constitute and remain personal property, and shall be subject to removal as hereinsetforth; and that timber, rails, pipe or other property placed underground and in any mine workings and permanently affixed thereto shall constitute a part and portion of the realty, and may not be thereafter removed by the party of the second part without written consent of party of the first part.

12. That it is expressly agreed, understood and declared by all parties hereto that the relationship of the parties is and shall continue to be that of lessor and lessee, and not that of employer and employee; and that such lessee is customarily engaged in the independent, established trade, occupation and business of mining under leases for his own profit and benefit.

13. That it is further specifically agreed, understood and declared by all parties hereto that the party of the first part does not control or direct the work of said party of the second part, and that the party of the second part is free from control or direction over the performance of the work, or any work, which he may choose to

do by virtue of and under this lease, excepting that such work must be done as hereinabove stated, that is to say, in a good and workmanlike manner, and as particularly hereinbefore stipulated; and that a failure to comply with each and every term and condition in this lease, hereinbefore more particularly set forth, shall constitute a breach of this lease.

14. That the parties of the first part agree to give to the party of the second part thirty (30) days notice in writing of his intention to cancel the within lease, by reason of default made in any of the conditions herein contained, and if the default has not been satisfactorily corrected within the said thirty (30) day period, the parties of the first part shall have the right to declare this lease forfeited, and shall have the right to enter into possession of said premises, without due process of law.

15. And it is further understood and agreed that this lease shall be binding upon and shall inure to the benefit of the heirs, executors, administrators, successors or assigns of the respective parties hereto.

16. It is understood that if party of the second part transfers this contract or subleases the aforementioned property, all the conditions and covenants of this lease must be maintained by third party.

17. That time is of the essence of this Lease Agreement.

18. It is agreed that the One Hundred Dollar payment in lieu of the the fifty working shifts per month as stated in Par.#7, shall not apply after June 1st, 1956, and the fifty monthly shifts must be performed thereafter, except when conditions beyond control of second party such as Act of God, default of sub-contractor, fires, floods or unusually severe weather prevent performing of the same.

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

STATE OF WASHINGTON)
COUNTY OF SPOKANE) ss.

On this 4th day of November, 1955, personally appeared before me WALLACE R. O'KEEFE, who signed the foregoing instrument, and who duly acknowledged to me that he executed the same.

Ben E. Myers
Notary Public residing at
Spokane, Washington

My commission expires:
Oct. 28, 1958

Louis Lessing
Louis Lessing

I. Lessing
I. Lessing

Thomas Harris
Thomas Harris

LeRoy Harris
LeRoy Harris

Parties of the First Part

Wallace R. O'Keefe
Wallace R. O'Keefe

Party of the Second Part.

STATE OF UTAH,)
COUNTY OF BEAVER.) ss.

X Louis Lessing - I. Lessing - Thomas Harris + LeRoy Harris Parties of The First Part,

On this 2 day of November, 1955, personally appeared before me the signers of the within and foregoing instrument, who duly acknowledged to me that they executed the same.

C Victor Smith
Notary Public.

My Commission Expires:
Sept. 2, 1959

No. 83718

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UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

INDIAN CREEK URANIUM PROSPECTS

BEAVER COUNTY, UTAH

by

Donald G. Wyant

and

Frederick Stugard, Jr.

This report and accompanying illustrations are preliminary and have not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.

1950

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INDIAN CREEK URANIUM PROSPECTS

BEAVER COUNTY, UTAH

by

Donald G. Wyant

and

Frederick Stuggard, Jr.

ABSTRACT

The secondary uranium minerals metatorbernite (?) and sutunite (?) were discovered at Indian Creek in the spring of 1950. The deposits, in sec. 28, T. 27 S., R. 6 W., Beaver County, Utah, are 20 miles west of Marysvale, and about three-eights of a mile east of a quartz monzonite stock.

The uranium minerals are sparsely disseminated in argillized and silicified earlier Tertiary Bullion Canyon latite and related volcanic rock beneath, but close to, the contact of the overlying later Tertiary Mount Belknap gray rhyolite. The prospects are in a landslide area where exposures are scarce. Therefore, trend and possible continuity of the altered and the uraniferous zones cannot be established definitely.

The occurrence of secondary uranium minerals in beidellite-montmorillonite rock, formed by alteration of earlier Tertiary rocks near a quartz monzonite stock, is similar to that in some of the deposits in the Marysvale uranium district.

INTRODUCTION

Secondary uranium minerals were found in the vicinity of Indian Creek in May 1950. The deposits are at altitudes of 7,600 to 7,900 feet on the west side of the Tushar Mountains about 20 miles west of Marysvale, in the center of sec. 28, T. 27 S., R. 6 W., Salt Lake base and meridian, Beaver County, Utah (fig. 1). They are in the old Newton mining district from which some gold was produced in the early days. They may be reached from Beaver, Utah, the nearest town, by travelling 8 miles north on U. S. Highway 91, and then east for about 6-1/2 miles on a good graded Forest Service road up Indian Creek Canyon. The deposits are about half a mile north of the road, between Grassy and Twitchell Creeks - tributaries of Indian Creek.

The deposits are on the Sniffer and Mystery groups of claims located in May and June 1950 by Thomas Harris, Le Roy Harris, and Louis Lessing of Beaver, Utah. They adjoin the Deer Trail group of claims of Littlefield, Hodges, Peterson, and Hodges, and other claims staked by David Arnold, Allen Taylor, and William Baldwin. All of these claims are under lease to Arnold and Baldwin who, in October 1950, were attempting to interest mining companies in exploring the deposits on a lease basis. The prospects are developed by two shafts, 6 to 12 feet deep, and by two prospect pits. Exposures are poor and the bedrock is largely covered with talus and thick undergrowth.

The geology of the surrounding area has been mapped by Callaghan _/.

_/ Callaghan, Eugene, Beaver quadrangle, Utah: U. S. Geol. Survey Prelim. Map Series, in preparation, 1951.

The deposits were examined in September 1950 as part of the Geological Survey's program for the evaluation of the uranium resources of the Marysvale region _/.

_/ Wyant, D. G., Stugard, F., Jr., and Kaiser, E. P., The uranium resources of the Marysvale region, Utah - an interim report -: U. S. Geol. Survey Trace Elements Memorandum Rept. 169, September 1950.

GEOLOGY

The uranium deposits on Indian Creek are in altered Bullion Canyon latite and related extrusive rocks of the earlier Tertiary group of Callaghan _/. They are about one-quarter to three-eights of a mile

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_/ Callaghan, Eugene, Volcanic sequence in the Marysvale region in southwest-central Utah: Am. Geophys. Union Trans., pt. 3, pp. 438-452, 1939.

---

east of the eastern end of a large stock of older Tertiary quartz monzonite. The deposits are beneath, but close to, the contact of Bullion Canyon latite with the overlying later Tertiary Mount Belknap

rhyolite, as mapped by Callaghan _/. These two rock types are overlain

---

_/ Callaghan, Eugene, op. cit., 1951.

---

and partially obscured by Pleistocene and Recent talus in the vicinity of the deposits (fig. 2). The Bullion Canyon latite, in the area mapped, is a more or less argillized silicified granular rock stained by limonite. It is composed of hornblende and feldspar phenocrysts in a glassy gray-green to buff-brown matrix. According to field tests, the beidellite-montmorillonite group comprises at least part of the clay minerals. Small flakes of secondary uranium minerals are sparsely disseminated in the intensely argillized Bullion Canyon rock. Many veinlets and irregular blebs of purple fluorite cut the altered Bullion Canyon latite.

The later Tertiary Mount Belknap rhyolite is a gray, thinly laminated rock. The laminae are commonly separated by vugs, as much as a quarter of an inch wide, containing drusy quartz. The attitude of the lamination is parallel or subparallel to the base of the Mount Belknap rhyolite and strikes within 10 degrees of east and, where measured, dips from 18° to 31° N.

STRUCTURE

The deposits are in an area underlain by at least one, and probably two, landslide blocks. The upper landslide block, above the two prospect shafts (fig. 2), drops the Bullion Canyon-Mount Belknap contact down to the south. The prospect shafts themselves are probably in the

second, or lower, landslide block. It is possible, however, because of the poor exposures, that the shafts are in the down-faulted segment of a normal fault rather than a landslide block. They must be near the Mount Belknap-Bullion Canyon contact, because of the distribution of Mount Belknap float, and because of the small outcrop of Mount Belknap rhyolite 220 feet northeast of the eastern shaft.

ORE DEPOSITS

Apple-green metatorbarnite (?) and yellow autunite (?) crystals are sparcely disseminated in the argillized and silicified Bullion Canyon latite. Most of the rock in the lower landslide block is probably argillized and silicified latite _/. Fluorite-bearing float is co

---

_/ Callaghan classes this as the "pyritic type of alteration."

---

extensive with float of this altered rock. The maximum width and length of the altered zone on the surface are unknown, but float indicates that the zone is at least 1,000 feet long and 300 feet wide. Fresh Bullion Canyon latite crops out 400 feet southeast of the eastern shaft. The altered zone appears to trend approximately east. By analogy with similar zones near Marysvale, it is probable that the altered zone is vertical. There was insufficient development work at the time of the examination to establish definitely the trend or possible continuity of the uraniferous zones between prospect pits and shafts, but the exposures suggest an east trend and a vertical dip. As in most secondary mineral

deposits the distribution of autunite (?) and metatorbernite (?) is irregular, but continuity between exposures may be established by further exploration.

Samples

Four vertical channel samples (table 1) were taken in the shafts and pits exposing the uranium minerals. The location and assays of these samples are shown on figure 2. The highest assay (locality A., fig. 2) obtained was 0.016 percent equivalent uranium, 0.017 percent uranium. This sample was taken in the western pit across 2 feet of silicified argillized red Bullion Canyon latite. A sample, 6 feet long, taken across the vertical face in the westernmost shaft (locality B., fig. 2), contained 0.015 percent equivalent uranium, 0.010 percent uranium.

Table 1. - - Analyses of samples, Indian Creek uranium prospects.

Reference letter (fig. 2)	Locality and Sample No.	Description	Equivalent uranium (percent)	Uranium (percent)
A	FS-32-56	2.0 feet, silicified argillized red Bullion Canyon latite; visible autunite (?); includes some soil.	0.016	0.017
B	FS-31-55	6.0 feet, argillized Bullion Canyon latite, with autunite (?), fluorite.	0.015	0.010
C	FS-31-54	8.0 feet, silicified altered rock, probably Bullion Canyon latite.	0.008	0.005
D	FS-31-53	3.2 feet, altered Bullion Canyon latite; texture obliterated.	0.003	0.003

OUTLOOK AND GUIDES TO PROSPECTING

Insufficient development work makes it impossible to evaluate adequately the potentialities of the deposits at the present time. The occurrence of secondary uranium deposits in argillized Bullion Canyon latite near intrusive quartz monzonite in a new district 20 miles from Marysvale indicates that uranium deposits of the Marysvale type are widespread and that other zones of alteration, especially if they are in Bullion Canyon volcanic rock, near quartz monzonite, should be carefully prospected. Clues to uranium mineralization in this area are: 1) deep-purple fluorite in the altered Bullion Canyon latite, and 2) beidellite-montmorillonite clay. As in the Marysvale uranium district, pitchblende may be found at depth.

Further prospecting of the Indian Creek deposits should be undertaken to test the possibilities of finding commercial ore between known exposures of uranium minerals. This could be accomplished most readily by bulldozer trenches, oriented at right angles to and across the southern fault.

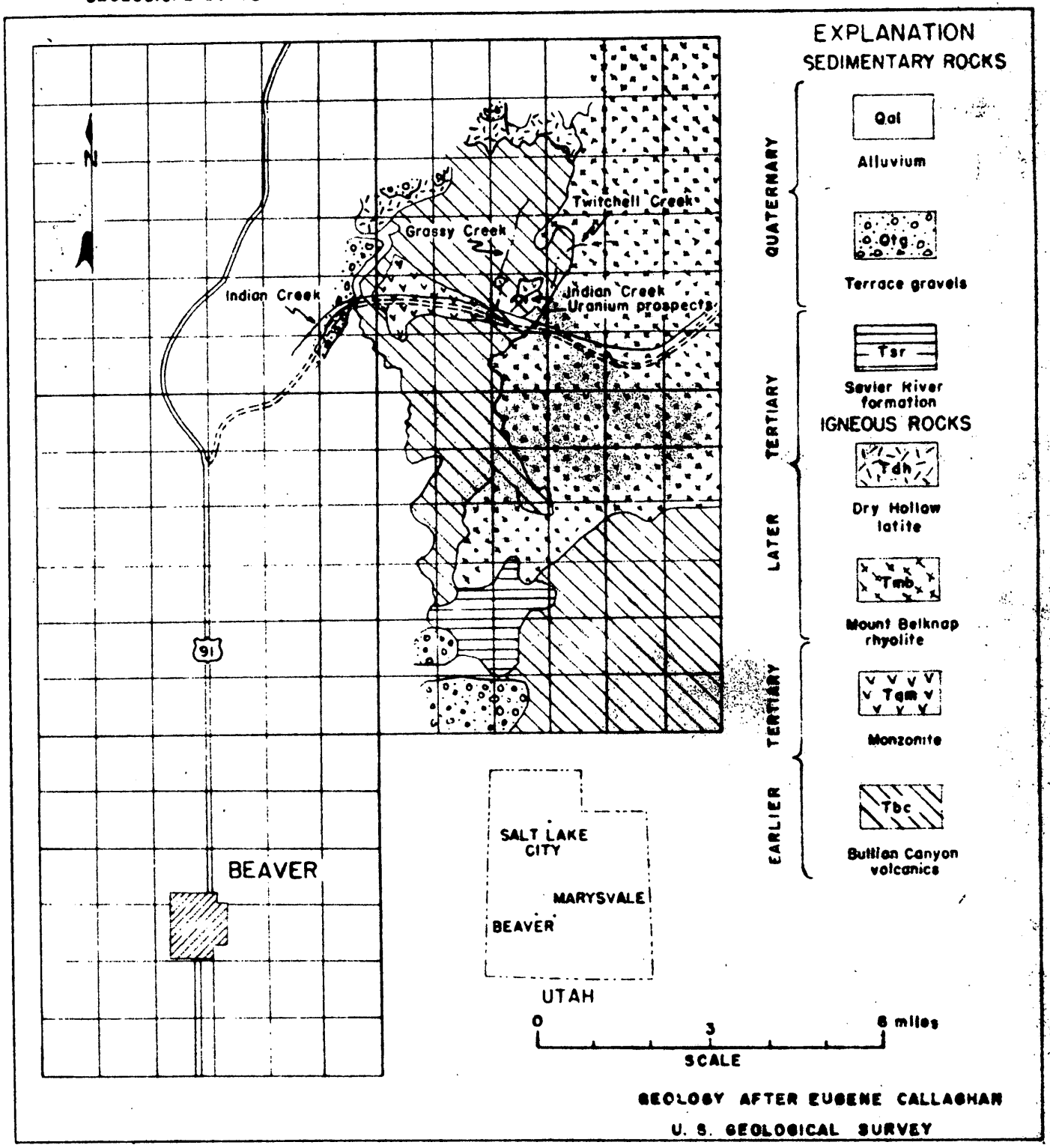

FIGURE 1. — INDEX MAP OF UTAH AND THE INDIAN CREEK URANIUM PROSPECTS

This map is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.

1950

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Docket

Ching Kuan

July 2, 1958

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-4815

Commodity: Uranium

Applicant: Mystery Sniffer Mines, Inc.
Beaver, Utah

Property: Seven unpatented lode mining claims, the Mystery, Mystery Nos. 1-3, Sniffer, Sniffer No. 1 and Sniffer Fraction, all located in sec. 28, T. 27 S., R. 6 W., S.L.M.&B., Beaver County, Utah. Applicant is the Lessee.

Date of Application: Original - Aug. 15, 1957. Amended - March 12, 1958.

Amount of Application: $31,030 (as amended).

Processing Data: Referred to Region III: August 28, 1957
Date of field examination: September 13, 1957 & April 22, 1958
Field Team Report received: June 27, 1958

Work Proposed: (As amended): Extend the Indian Creek adit in a northeasterly and northerly direction for a distance of 450 feet to cut an east-west trending fault zone. From a point south of the fault zone drift to the east and west, paralleling the fault zone, and at specified intervals along the drift drive short crosscuts to the fault zone. Drifting and crosscutting to the west would total 300 feet and drifting and crosscutting to the east would total 205 feet. Total drifting and crosscutting on this level would amount to 955 feet.

On the O'Keefe tunnel level crosscut northerly from a point near the heading for a distance of 200 feet, following the contact of tuff and rhyolite.

Estimated Cost:

955 ft. drifting & crosscutting @ $26/ft.	$24,830.00
200 ft. crosscutting & timbering @ $31/ft.	6,200.00
Total	$31,030.00
Government Participation @ 75%	$23,272.50

Field Team Report: June 23, 1958, by Paul V. Fillo, USBM & Fred R. Shawe, USGS:

A previous DMEA project under Docket No. 2710 explored along the east-west trending fault zone at the 7226 level. Drifting and

crosscutting revealed only submarginal uranium mineralization. An attempt to intersect the mineralized zone at depth by diamond drilling from the surface was unsuccessful.

Following the DMEA project considerable drifting was done at the 7250 level along the O'Keefe tunnel. Some 4,200 tons of ore averaging about 0.18% U_3O_8 was extracted to the end of March, 1958.

Uranium minerals in near-ore-grade concentrations are found along the main east-west fault. The rocks along the ore-bearing zone are intensely altered. Distribution of the uranium minerals is extremely spotty within the ore shoots; and the latter are small, irregular in shape, and discontinuous. One mineralized block, consisting of small pods of ore separated by weakly mineralized or barren ground contains about 6,800 tons of material. Two other mineralized blocks are known. Total ressrves may amount to 13,400 tons of material averaging much less than 0.18% U_3O_8. Since the Applicant's contract with Vitro Chemical Company calls for an average grade of 0.23% U_3O_8 the indicated reserves would not be of acceptable grade. Selective mining of the ore blocks would be prohibitive in cost.

It is concluded that there is not a reasonable chance of making a significant discovery and denial of the application is recommended.

Commodity Group Comments:

USGS, N. E. Nelson, July 2, 1958:

Concurs in the Field Team recommendation for denial.

USBM, James Paone, July 2, 1958:

Agrees with the Field Team and recommends denial.

Div. of Rare & Misc. Metals, Michael Ching, July 2, 1958:

Results of the DMEA project under Docket No. 2710 were unencouraging. The Applicant appears to have had some success in operations on the O'Keefe tunnel level, having shipped some 4,200 tons of material averaging 0.18% U_3O_8. However, the work has given good indication that deposits of economical grade material are quite limited in size and the chances of finding a worthwhile deposit by the proposed exploration are not good.

Conclusions and Recommendations:

The potential of the property is limited. Any ore bodies found would not be worth the cost of exploration, development, and mining. It is recommended that the application be denied.

F. L. Knouse

F. L. Knouse, Acting Director
Div. of Rare and Miscellaneous Metals

Form 7
(12-56)

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Date	Surname	Code
	Rubin	140
	Dwyer	140
	Ching	700
7/15	Kusnak	700
7/15	Martin	130
"	Johnson	140
"	Mittendorf	100
		~~XA~~
		220

JUL 15 1958

Mr. Wallace R. O'Keefe
President
Mystery Sniffer Mines, Inc.
Beaver, Utah

Re: Docket No. DMEA-4815 (Uranium) 7/15 Lamb (130)
Mystery Sniffer Claims
Beaver County, Utah 7/15 Kilsgaard (130)

Dear Mr. O'Keefe:

We regret that we were unable to completely process your application for exploration aid prior to June 30, 1958, the termination date for approving new contracts, as announced by the enclosed copy of a news release of June 6, 1958.

However, had the processing been completed, we would have been unable to approve a project based upon the information available to us in Washington concerning your property.

We wish to thank you for your interest in the DMEA program and for bringing the exploration plan to our attention.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

FROM SOLICITOR
JUL 14 1958
FOR SIGNATURE

Enclosure

GCSelfridge 7/10/58
HCRubin/hm 7/11/58
cc: Admr's reading file
Operating Committee
Mr. Ching
T. H. Kilsgaard, 5224
DMEA FT Reg. 3 (2)
Mr. Dwyer
Mr. Rubin
Chron.

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7/9	Ching	700
7/9	Knowd	700
		136
		110
		100
		~~212~~
		220
		225

Mr. Wallace R. O'Keefe, President
Mystery Sniffer Mines, Inc.
Beaver, Utah

Re: Docket No. DMEA-4815 (Uranium)
Mystery Sniffer Claims
Beaver County, Utah

Dear Mr. O'Keefe:

As announced by the enclosed news release of June 6, 1958, the termination date for consideration of applications under the Defense Minerals Exploration program was June 30, 1958. Unfortunately, the processing of your application for aid in an exploration project on the above-named property could not be completed prior to such termination date.

All information available to us in Washington concerning your property has since been carefully reviewed. Despite the fact that you have mined and shipped a considerable amount of low-grade ore during the past three years, it is our conclusion that the probability of making a significant discovery by further exploration is not sufficiently promising to justify Government participation. Therefore, had final action been taken prior to June 30, your application would have been denied.

We wish to thank you for your interest in the DMEA program and for bringing the new exploration plan to our attention.

Sincerely yours,

Administrator

Enclosure
MChing/izm 7-9-58 (7-2-58)
cc: Mr. Ching
Admr's Reading File
Operating Committee
THKiilsgaard, 5224
DMEA FT Reg. 3 (2)

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7/2	Ching	700
7/2	Kouste	700
7/7	Lefbridge	130
7/6	Johnson	110
	Hattendorf	100
		220
	7/7	225
	7/7 Hopes	130
	7/7 Gilsgaard	(130)

Mr. Wallace R. O'Keefe, President
Mystery Sniffer Mines, Inc.
Beaver, Utah

Re: Docket No. DMEA-4815 (Uranium)
Mystery Sniffer Claims
Beaver County, Utah

Dear Mr. O'Keefe:

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

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

Careful study of all our information, although noting some uranium mineralization on your property, indicates that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. 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 Exploration Program and for bringing your property to our attention.

Sincerely yours,

Administrator

Has you have mined & shipped ore during the past 3 years from

Had a previous contract

MChing/izm 7-2-58
cc: Mr. Ching
Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
DMEA FT Reg. 3 (2)

8623

IN REPLY REFER TO:

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

7/3/58 B 22B
7/9 700
Cling
Irene

July 2, 1958
Re: DMEA 4815
Wallace R. O'Keefe & Associates
Mystery-Sniffer Mines, Inc.
Beaver County, Utah
$31,030 - 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 applicants requested assistance in doing further exploratory work in a uranium-bearing fault zone separating Tertiary volcanics and intrusive rocks.

The property has been explored by DMEA assisted work and shipments of sub-grade ore have been made. Work under Contract ?, DMEA 2710, (1953-54) which cost $25,945.36 revealed only sub-marginal material. Mining during 1956-57 and '58 apparently failed to find material in quantity assaying over 0.18% U_3O_8, a product not acceptable to the buyer. (Vitro)

In addition to the stoping, upwards of 1,800 feet of drifting and crosscutting, have been done on two levels in the main fault zone. Three ore blocks are indicated containing, as estimated, 13,400 tons of material.

The ore shipped, 4,250 tons, came from the blocks and averaged 0.18% U_3O_8. Therefore, it appears probable the original ore did not contain more than 0.18% U_3O_8 and as high-grading has occurred the remaining ore probably contains less than 0.18% U_3O_8.

The applicants' proposal consists essentially of a long lower crosscut adit to the fault zone and work in the zone. The proposed 1,200-foot adit would be only 150 feet below the DMEA 2710 adit.

Because only small orebodies of sub-grade material have been found to this time, the examiners conclude it is improbable the proposed work would find better material and they recommend that the application be denied.

I concur with the conclusion and the recommendation.

N. E. Nelson

N. E. Nelson

Official

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DATE | FILE | CODE | CHECK
7/2 | C | 220 | 700

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

Date July 2, 1958

DMEA Docket No. 4815
DMEA Contract No.
Commodity Uranium
Name of Applicant Wallace R. O'Keefe & Associates
Name of Property Mystery Saiffer Mines, Inc.
Location of property Beaver County, Utah
Estimated cost of project $31,030.00

Memorandum

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

1. Date of subject document: 6/25/58 2. Date received by reviewer: 6/27/58

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

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

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

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

7. Explain items marked 'yes' above:

8. Factors meeting special consideration:

a. Location ☐
b. Ownership ☐
c. Evidence of mineralization ☐
d. Geology ☐
e. Proposed exploration method ☐
f. Alternate exploration method ☐
g. Costs
h. ☐

9. Action advised:

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

10. Remarks: (Use back of page if necessary)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado
June 25, 1958

ORIGINAL FILE COPY
DMEA
RECEIVED JUN 27 1958

		CODE
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6/30	HB	130
6/30	C	220
7/1	Chiez	700

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 4815 (Uranium) Wallace R. O'Keefe and Associates, Mystery Sniffer Mines, Inc. (Mystery-Sniffer claims) Beaver County, Utah - Joint Report of Examination

Enclosed are the original and two copies of the Joint Report of Examination on the subject property by Paul V. Fillo, USBM, and Fred R. Shawe, USGS.

The field examiners found the mineralized ground to be spotty and generally discontinuous and the shoots of near-ore-grade material are small. They conclude that there is not a reasonable chance of making a significant discovery and they recommend that the application for DMEA assistance be denied.

We concur in the findings and recommendation of the field examiners.

J. W. Townsend

E. N. Harshman

Reviewed by
DMEA OPERATING COMMITTEE
6-30-58
(date)

ON-SITE EXAM. REPORT

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA REGION III

INTERMOUNTAIN EXPERIMENT STATION

DEPARTMENT OF THE INTERIOR

1600 EAST 1ST SOUTH STREET
SALT LAKE CITY, UTAH

June 23, 1958

JUN 24 1958
REGION III
DENVER, COLORADO

ORIGINAL FILE COPY
DMEA
RECEIVED JUN 27 1958

DATE		
6/30	2/B	130
		220

Memorandum

To: E. N. Harshman, Acting Executive Officer, DMEA Field Team, Region III

From: P. V. Fillo

Subject: Docket No. DMEA-4815 (Uranium), Wallace R. O'Keefe and Associates, Mystery Sniffer Mines, Inc. (Mystery-Sniffer claims), Beaver County, Utah

Transmitted herewith is the routing-control sheet covering the subject docket. Also enclosed are 10 copies of a report of examination by P. V. Fillo, Bureau of Mines, and Fred R. Shawe, Geological Survey.

The applicant applied for a loan of $31,030 to explore for uranium ores on the Mystery-Sniffer claims in Beaver County, Utah. An examination of the property was made April 22, 1958. The examining engineer and geologist recommend that Government assistance be denied. Known mineralization is marginal in grade and too limited in extent to indicate that the proposed exploratory work would result in discovery of a significant quantity of minable uranium ore. An exploratory project, therefore, does not appear warranted.

P. V. Fillo
P. V. Fillo

TRANSMITTED
JUN 25 1958

Enclosures

cc: J. B. Clemmer

Reviewed by
DMEA OPERATING COMMITTEE
6-30-58
(date)

FOR GOVERNMENT USE ONLY

WALLACE R. O'KEEFE AND ASSOCIATES
MYSTERY SNIFFER MINES, INC.
(MYSTERY-SNIFFER CLAIMS)
BEAVER COUNTY, UTAH
DMEA-4815
Uranium

TRANSMITTED

JUN 25 1958

Engineering and Geologic Report

By Paul V. Fillo
Mining Engineer
Bureau of Mines

and

Fred R. Shawe
Geologist
Geological Survey

June 23, 1958

Reviewed by
DMEA OPERATING COMMITTEE
6-30-58
(Date)

WALLACE R. O'KEEFE AND ASSOCIATES
MYSTERY SNIFFER MINES, INC.
(MYSTERY-SNIFFER CLAIMS)
BEAVER COUNTY, UTAH

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CONTENTS

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Engineering and geologic report	
Introduction	2
Location, topography and climate	2
Ownership and extent	3
History and production	4
Geology	5
Ore deposits	7
Ore reserves	8
Proposed exploration and costs	8
Conclusions and recommendations	9

ILLUSTRATIONS

Fig. 1. Location map, Wallace R. O'Keefe and Associates, Mystery Sniffer Mines, Inc., Beaver County, Utah
Fig. 2. Claim map
Fig. 3. Geologic map, Mystery-Sniffer mine
Fig. 4. Mine map

INTRODUCTION

Wallace R. O'Keefe and Associates of Beaver, Utah, submitted an application dated August 19, 1957, for Government aid in an exploratory project on uranium property situated northeast of Beaver. The application was referred to the field team and an examination was made September 13, 1957, by J. William Hasler, Geological Survey, and M. M. Gilkey, Bureau of Mines. At the time of the examination Mr. O'Keefe had arranged for work proposed in the DMEA application to be performed by a contractor. Therefore, the examining team requested Mr. O'Keefe to ask that the present application be held in abeyance pending results of the work.

On March 12, 1958, the applicant submitted a request for alteration of the application to allow organizational change from Wallace R. O'Keefe and Associates to Mystery Sniffer Mines, Inc. A request was also made to permit a drifting and crosscutting program in two phases.

Examination of the property was made April 22, 1958, by Fred R. Shawe of the Geological Survey and P. V. Fillo of the Bureau of Mines. Mr. L. Hollingshead, mine superintendent of the Mystery-Sniffer mine, and Robert Osterstock, geologist, accompanied the examining team.

The applicant has proposed a drifting and crosscutting program estimated to cost $31,030.

LOCATION, TOPOGRAPHY AND CLIMATE

The Mystery-Sniffer claim group is located in sec. 28, T. 27 S., R. 6 W., Salt Lake Base and Meridian, Beaver County, Utah (fig. 1). The property is reached from Beaver by driving 7.5 miles north on U. S. Highway 91; thence northeasterly on a county road for 3 miles to the

mouth of Indian Creek Canyon; thence 4 miles east up Indian Creek to the portal of the exploratory tunnel (fig. 4). The Mystery-Sniffer property lies in the rugged terrain of the Tushar Mountains at an altitude of approximately 7,000 feet. The Tushar Mountains are in the border zone between the High Plateaus and Basin and Range province, and have a maximum relief of about 12,000 feet. The area is covered with juniper, pinon pine, scrub oak, mountain mahogany, aspen, and stands of pine timber. All supplies and mine timber must be hauled from Beaver or Cedar City, Utah. The nearest highway point is U. S. Highway 91, about 6 miles west of the mine, and the nearest railroad point is Milford, Utah, 48 miles west of the deposit, via Beaver, Utah.

Annual precipitation is moderate, but winter snow conditions are often severe. Water for culinary and mine uses can be obtained from Indian Creek.

OWNERSHIP AND EXTENT

The property included in the Wallace R. O'Keefe and Associates application consists of 7 unpatented lode claims (fig. 2). The claims are recorded at Beaver, Utah, county seat of Beaver County, as follows:

Claim	Book	Page
Mystery	20	347
Mystery No. 1	20	358
Mystery No. 2	20	358
Sniffer	20	387
Sniffer No. 1	20	387
Sniffer Fraction	20	388
Mystery No. 3	20	363

HISTORY AND PRODUCTION

The Mystery-Sniffer uranium deposit was discovered in 1950 and 12 claims were located in that year by Louis Lessing and associates. The discovery resulted from excavation of test pits in areas of abnormal radioactivity.

During the first year some exploration was done by bulldozer trenching. In February 1953, 6 large trenches and several short adits totaling 220 feet, and about 1 mile of access road were completed. Weak uranium mineralization was exposed in five of the trenches. In 1952, 35 tons of ore averaging 0.17 percent U_3O_8 was mined from a trench near the portal of the present adit driven under docket No. DMEA-2710. On October 15, 1953, a DMEA project was started to explore along an east-west-trending fault zone separating Tertiary volcanics and intrusives. The objective was to intersect these zones at depth by drifting and crosscutting. The underground workings revealed only submarginal uranium mineralization. A final effort to intersect the zone by diamond drilling was attempted. After drilling 600 feet, results were unfavorable, and it was recommended that the project be terminated without further drilling. The total project expenditures amounted to $25,945.36, of which 90 percent was Government participation. No Certification of Discovery or Development was issued.

The Mystery-Sniffer mine has been in intermittent production since late 1952, and in continuous production since early in 1957.

Records of the Atomic Energy Commission show ore production from the Mystery-Sniffer group as follows:

Year	Tons	U_3O_8, percent
1952	52	0.14
1956	585	.16
1957	2,857	.18
(1st quarter) 1958	747	.17
Total	4,250	
Weighted average		0.18

According to the applicant, a grade of 0.23 percent U_3O_8 or higher must be maintained to permit profit and to comply with the contract with Vitro Chemical Co.

GEOLOGY

The Mystery-Sniffer mine is in an area underlain principally by volcanic rocks of Tertiary age (fig. 3). Two volcanic rock units are present--an older Bullion Canyon series and a younger Mount Belknap rhyolite. The two units are separated by a marked unconformity. Both the Bullion Canyon rocks and the Belknap rhyolite are extensively faulted and, at the Mystery Sniffer mine, the faulted areas are highly altered; details of faulting are obscure. A small monzonite stock, intrusive into the Bullion Canyon rocks, is exposed in Indian Creek Canyon a short distance southwest of the mine.

Uranium minerals, principally autunite and torbernite, are localized in altered areas near faults, mostly in the Bullion Canyon series. Ore-grade material is confined to a small area along an E-W fault that has dropped the Mount Belknap rhyolite against the Bullion Canyon series.

The Bullion Canyon series is composed mainly of andesitic to latitic flows, tuffs, and flow-breccias; one unit exposed in the Indian Creek adit (fig. 3) may be rhyolitic and is referred to by the miners as the "lower rhyolite." These rocks are intensely altered to clay and chlorite in the mine area and it is difficult to determine the original rock types. Taylor, Powers, and Emmett (docket DMEA No. 2710, Report of Examination) called these rocks latites and latite tuffs and described two units: a lower unit consisting of a series of green to brown argillized and silicified latite tuffs, and an upper unit consisting of dark-green, chloritized latite flows that are in places porphyritic. The Bullion Canyon sequence exposed in the Indian Creek adit is: 130+ feet of porphyritic andesite; 220 feet of "lower rhyolite," 190 feet of porphyritic andesite, 40 feet of tuff, and 100+ feet of red andesite porphyry. This section apparently does not correlate with the Bullion Canyon section exposed at the surface and the spatial relationship between the two sections is not known.

The Mount Belknap rhyolite overlies the Bullion Canyon series with a marked unconformity just east of the subject property; at the Mystery-Sniffer mine, the two units are in fault contact. According to Taylor, Powers, and Emmett (docket DMEA No. 2710, Report of Examination), the Mount Belknap rhyolite consists of a lower rhyolite flow-breccia and an upper light gray, thin-banded rhyolite flow. These rhyolites are also intensely argillized in the mine workings.

The Mystery-Sniffer mine area is intensely faulted. Displacement across most of the faults is minor; however, displacement across a few may be considerable. The amount of displacement across the faults is masked by intense clay alteration. Along one major fault the Mount Belknap is downdropped and is in contact with the Bullion Canyon series for at least 200 feet. This main fault strikes from east to about N. 60° E. and dips about 40°-50° north. Minor rolls and pitches are plentiful along the fault. Uranium minerals are localized along this fault and clay alteration along the fault is pronounced.

Landslide material obscures much of the surface geology.

ORE DEPOSITS

Uranium minerals in near-ore-grade concentrations are found along the main fault, and at these places the rocks are intensely altered to clay; this zone of alteration defines the "ore-" bearing zone. Autunite and torbernite, associated with fluorite and minor pyrite, are disseminated in the gangue along the fault, as well as in argillized rocks in both the footwall and hanging wall. In one place in the O'Keefe adit, a trace of uraninite disseminated in altered rhyolite was noted. Distribution of the uranium minerals is extremely spotty within the "ore" shoots, and the shoots are small, irregular in shape, and discontinuous. The largest block of "ore" exposed is 100 feet long, will average 8-1/2 feet wide, and is about 112 feet high, and contains about 6,800 tons of material. This block consists of small pods of ore separated by weakly mineralized or barren ground, but because of difficulty or impossibility of selective mining, the block must be

considered as a single unit. The other two blocks are smaller, but similar in occurrence as shown in the table. The shoots bear no special relationship to the type of host rock nor to the minor changes in strike or dip of the fault.

The grade of material shipped from the workings ranges from 0.08 to 0.23 percent U_3O_8.

ORE RESERVES

The three known "ore" shoots have been partly explored and have a total indicated reserve of 13,400 tons, as estimated by the DMEA examining team. Since the higher grade material has been mined, this reserve probably will average much less than 0.18 percent U_3O_8 and thus would not constitute ore. Reserves of the three known "ore" blocks are given below:

Block	Tonnage
A	6,800
B	600
C	6,000
Total	13,400

PROPOSED EXPLORATION AND COSTS

The applicant's proposed exploratory work on the Mystery-Sniffer mine group is divided into two stages (fig. 4).

The first stage of exploratory work consists of 955 feet of cross-cutting and drifting. The second stage consists of 200 feet of cross-cutting in the O'Keefe tunnel to follow the contact of tuff and rhyolite as a possibility of locating an ore shoot.

The applicant proposes to contract the exploratory work on a fixed-cost-per-foot basis as follows:

Stage I

Crosscutting and drifting, 955 feet, size 7' x 8'

at $26 per foot (untimbered) ---------- $24,830.00
at $31 per foot (timbered)

Stage II

Crosscutting, 200 feet, size 7' x 8'

at $26 per foot (untimbered) ---------- 6,200.00

Total cost, Stages I and II ---------- $31,030.00

No changes in the proposed program were suggested to the applicant inasmuch as no exploration seems warranted. A denial of the applicant's request for assistance is recommended.

CONCLUSIONS AND RECOMMENDATIONS

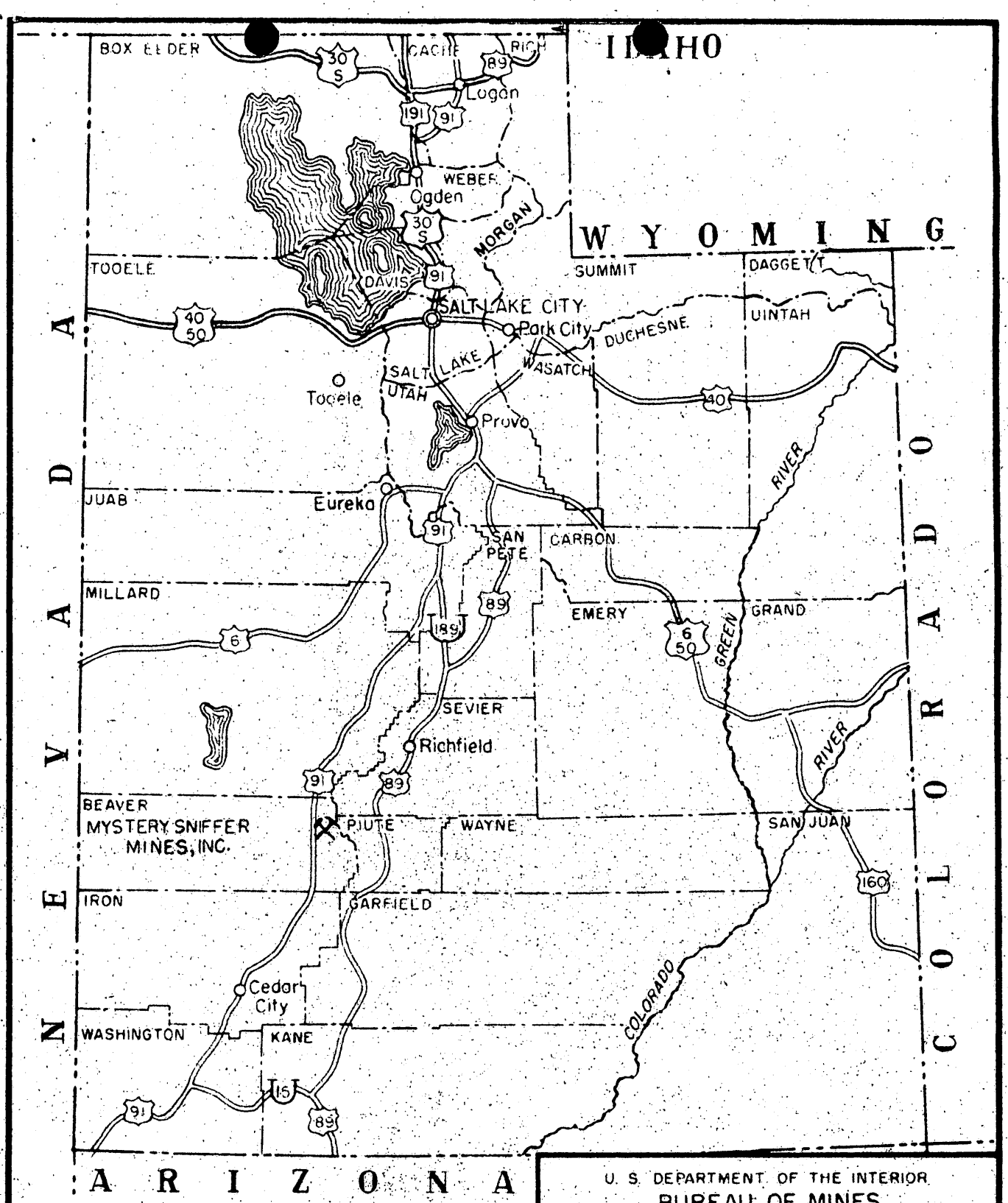
Exposure of the uraniferous zone in the underground workings of the Mystery-Sniffer mine has revealed submarginal uranium mineralization.

In considering the ore shipped to Vitro Chemical Co., Salt Lake City, Utah, under their present contract, it is doubtful if the mine could maintain 500 tons per month with an average grade of 0.23 percent U_3O_8.

The higher grade ore occurs in small pods, and to mine 500 tons with an average grade of 0.23 percent U_3O_8 will require a selective mining operation with resulting higher mining costs. Although the ore from the Mystery-Sniffer mine is amenable to processes of Vitro Chemical Co., the applicant is required to maintain a grade and tonnage that will be profitable to both parties. Records of the Atomic Energy Commission show the grade of ore from Mystery Sniffer Mines, Inc., to average lower than acceptable grade.

The Mystery-Sniffer ore-bearing structure has been explored both by private enterprise and by the Government under docket No. DMEA-2710, Contract Idm-E585, and has shown only submarginal concentrations of uranium minerals. The mineralized ground that has been found is spotty and generally discontinuous; shoots of near-ore-grade material are small.

Therefore, the examining team concludes that there is not a reasonable chance of making a significant discovery and recommends a denial of the application for DMEA assistance.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

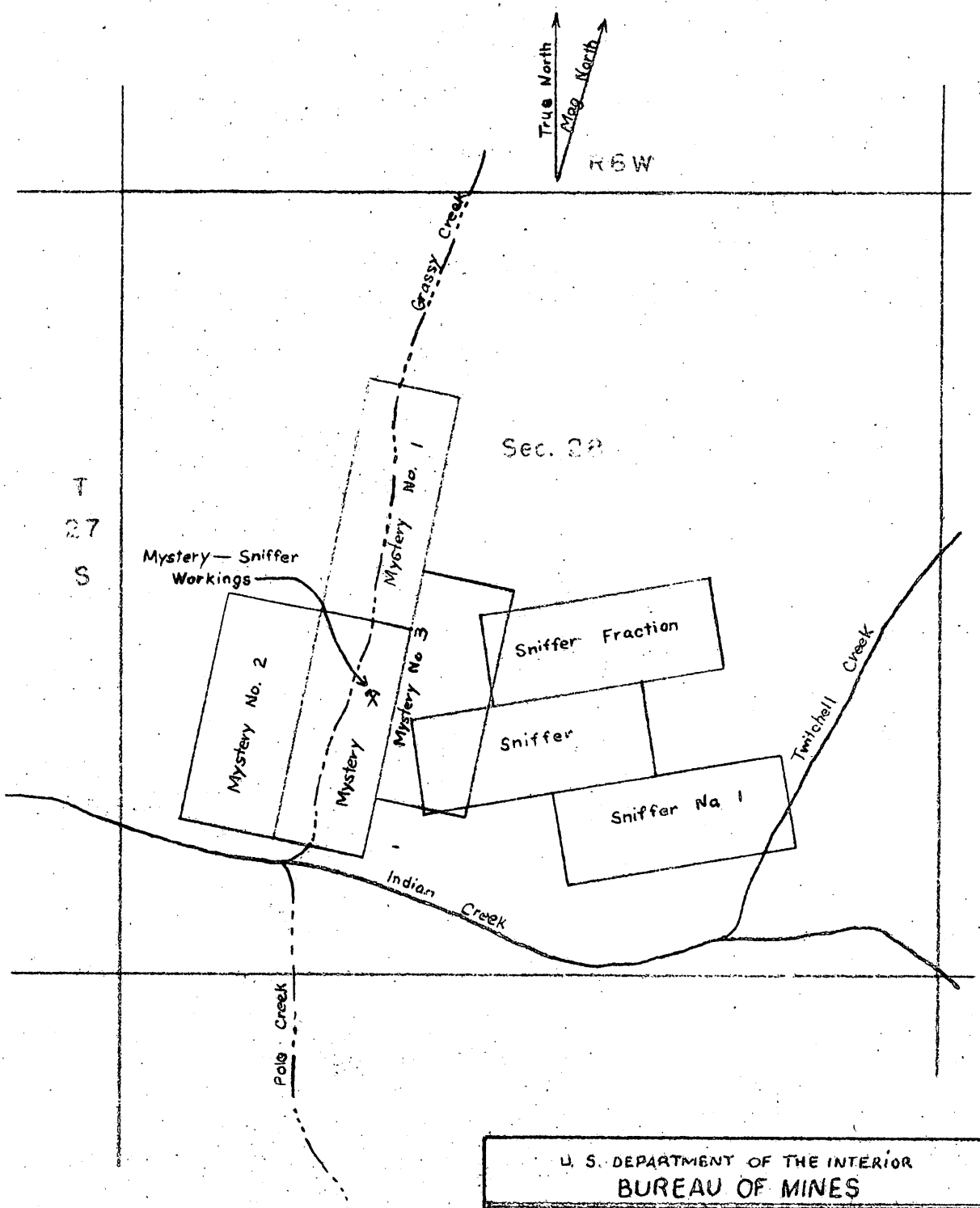
FIG. 1 DMEA DOCKET No. 4815

LOCATION MAP

MYSTERY SNIFFER MINES, INC.

BEAVER COUNTY, UTAH

ENGINEER P.V. FILLO	DATE JUNE 20, 1958
TRACED JUNE, 1958 PVF	1900-448 G
CHECKED	



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

FIG. 2 DMEA DOCKET No. 4815

CLAIM MAP

MYSTERY SNIFFER MINES, INC.

BEAVER COUNTY, UTAH

ENGINEER P.V. Fillo	DATE June 20, 1958
TRACED: P.V.F.	1900-449 G
CHECKED	

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/19/58	Knouse	700
		225

June 18, 1958

Memorandum

To: The File

From: F. L. Knouse, Acting Director
Division of Rare and Miscellaneous Metals

Subject: Docket No. DMEA-4815 (Uranium)
Mystery Sniffer Mines, Inc.
Mystery-Sniffer Claims
Beaver County, Utah
Telephone call from Wallace R. O'Keefe

O'Keefe: We submitted an amendment to our application, dated August 18, 1957, on March 12, 1958, after exploring the property. This work changed the original proposed program and I am interested in learning the status of the amended application.

Knouse: I have checked our records and find we do not have the Field Team report on your proposed amended application. Has the field examination been made?

O'Keefe: Yes, about two months ago. I have just talked with Mr. Townsend of your Denver, Colorado, office and he advised it was out of his hands and their report had been sent to you in Washington.

Knouse: The report undoubtedly is in the mail en route to this office, and we will not be able to take further action on your case until the report is received.

O'Keefe: Will you please check your records to make sure the report is not in your office and call me back, as we have expended about all our funds exploring this property and have been banking on aid from you to carry on this work.

Knouse: You can expect a call from me this afternoon. You should know that, unless new legislation is enacted to continue the DMEA program, by June 30, 1958, we will not be able to enter into contracts after that date. If, however, new legislation is enacted, any pending applications will be processed, at the request of the Applicant, under rules and regulations that would be established.

Telephone call to Mr. O'Keefe, Beaver, Utah, Hemlock 8-2254, 2:30 p.m., June 18

Knouse: As you requested, I have made a thorough check of our records and find we do not have the Field Team report.

O'Keefe: I have just talked with Mr. Townsend and he said he was mistaken, and the report had not been mailed. Would you be able to process my application if you had the report before June 30?

Knouse: I doubt that there will be enough time before June 30, but we will do what we can.

O'Keefe: Thank you, and goodbye.

F. L. Knouse

224 New Customhouse
Denver 2, Colorado
March 25, 1958

Memorandum

To: J. W. Ensler, w/amended application and copy of map
DMEA/SLC Att: Howes, w/amended application

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 4815 (Uranium) Wallace R. O'Keefe Associates - Mystery Sniffer Mines, Inc. (Mystery Sniffer claims) Beaver County, Utah

Enclosed is an amendment to the subject application from Wallace R. O'Keefe dated March 18, 1958, stating that the organization has been changed from Wallace R. O'Keefe and Associates to the Mystery Sniffer Mines, Inc. Also enclosed is a map submitted with the amended application showing the proposed tunnel and cross cuts.

The property can now be re-examined in light of added evidence.

Original signed by
E. N. HARSHMAN

E. N. Harshman

ENH:dp

Enclosures

cc: Sec. Oper. Comm. (2)
Harshman
Docket
Chron.

224 New Customhouse
Denver 2, Colorado

March 25, 1958

Mr. Wallace R. O'Keefe, President
Mystery Sniffer Mines, Inc.
Beaver, Utah

Re: Docket No. DMEA 4815
(Uranium) Wallace R.
O'Keefe Associates
(Mystery Sniffer claims)
Beaver County, Utah

Dear Mr. O'Keefe:

This will acknowledge receipt of four copies of an amendment to the captioned application, two copies of a map showing the proposed tunnel and cross cuts, and the original and seven copies of Consent to Lien on the Mystery and Sniffer claims.

Your amended application is being placed in line for further processing. Should additional information be required, you will be advised.

Very truly yours,
Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

HMC:dp

cc: Sec. Oper. Comm. (2)
Harshman
Hasler
DMEA/SLC Att: Howes
Docket
Chron.

RECEIVED MAR 24 1958
DATE

224 New Customhouse
Denver 2, Colorado

March 21, 1958

Mr. Wallace R. O'Keefe
Wallace R. O'Keefe Associates
Beaver, Utah

Re: Docket No. DMEA 4815 (Uranium)
(Mystery-Sniffer claims) Beaver
County, Utah

Dear Mr. O'Keefe:

This has further reference to our telephone conversation of February 27, 1958. We have not received the letter you were to write requesting changes in your original proposed exploration.

If you are still interested in continuing the exploration of your property, will you please advise us the results of your exploration to date. Also please include any changes you may wish to make in your original proposed exploration program which are necessitated by the results of your work since the date of the original application.

An early reply will be appreciated so that we may schedule a field examination.

Very truly yours,
Original signed by
J. W. TOWNSEND

W. H. King
Executive Officer, DMEA
Field Team, Region III

HMC:dp

cc: Sec. Oper. Comm. (2)
Harshman
Hasler
DMEA/SLC
Docket
Chron.

RECEIVED FEB 24 1958		
DATE	INITIALS	CODE
2/24	C	220
"	[illegible]	700

224 New Customhouse
Denver 2, Colorado

February 20, 1958

Mr. Wallace R. O'Keefe
Wallace R. O'Keefe and Associates
Beaver, Utah

Re: Docket No. DMEA 4815
(Uranium) Mystery-
Sniffer Claims Beaver
County, Utah

Dear Mr. O'Keefe:

Our letter to you dated October 15, 1957, requested that you notify this office, upon completion of some exploration work on your own account, whether or not you wished to continue exploration on the Mystery-Sniffer Claims with Government assistance.

We are unable to carry your application on an inactive status indefinitely. Will you please advise this office the results of your exploration to date and if you are still interested in obtaining DMEA aid on the captioned property.

Yours very truly,

Original signed by
W. H. KING

W. H. King
Executive Officer

HMC:dp

cc: Sec. Oper. Comm. (2)
Harshman
Hasler
DMEA/DFC
DMEA/SLC
Docket
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 18 1957

DATE	INITIALS	CODE
10/18	B	220
"	[illegible]	700

224 New Customhouse
Denver 2, Colorado

October 15, 1957

Mr. Wallace R. O'Keefe
Wallace R. O'Keefe and Associates
Beaver, Utah

Re: DMEA Docket 4815 (Uranium)
Wallace R. O'Keefe and Associates
Mystery-Sniffer Claims
Beaver County, Utah

Dear Mr. O'Keefe:

As requested in your letter October 10, 1957, we will hold your application in abeyance pending the results of the work you now have underway.

After completion of your current program of exploration, please notify this office whether or not you wish to continue exploration on the Mystery-Sniffer claims, with Government assistance. If such assistance is desired by you, we will schedule a re-examination of your property.

Yours very truly,

E. N. Harshman

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

ENH:eh
cc: Sec. Op. Comm. (2)
Harshman
Hasler
DMEA/DFC
DMEA/SLC Att: Gilkey
Docket
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 4 1957

DATE		CODE
10/4	C	220
"	Chang	700

224 New Customhouse
Denver 2, Colorado

October 1, 1957

Mr. Wallace R. O'Keefe
Wallace R. O'Keefe and Associates
Beaver, Utah

Re: Docket No. DMEA 4815 (Uranium)
Wallace R. O'Keefe and Associates
Mystery-Sniffer Claims
Beaver County, Utah

Dear Mr. O'Keefe:

During the examination of the land described in the subject docket the field examiners understood that you intend to proceed at once with work proposed in the captioned application regardless of their findings.

If this still be your intention, please direct a written request to this office that the present application be held in abeyance pending results of the work. If at that time, you wish to obtain Government assistance the property can be re-examined in light of added evidence.

Should you no longer be interested in Government assistance you should request that the captioned application be withdrawn.

Further processing of the application will be deferred pending your reply.

Very truly yours,
Original signed by
J. W. TOWNSEND

J. W. Townsend
Alternate Acting Executive Officer

MHM:eh

cc: Sec. Op. Comm. (2)
Harshman
Hasler
DMEA/DFC
DMEA/SLC Att: Gilkey
Docket
Chron.

W/cy of Field Examiners' 9/19/57 Memorandum

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
DEPARTMENT OF THE INTERIOR
SEP 30 1957
REGION III
DENVER, COLORADO

P. O. Box 360
Grand Junction, Colorado

September 19, 1957

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: J. William Ehsler
M. M. Gilkey

Subject: DMEA docket No. 4815 (Uranium), Wallace R. O'Keefe and associates (Mystery-Shiffer claims), Beaver County, Utah

Mr. Wallace R. O'Keefe and associates applied for Government assistance to explore for uranium on the Mystery-Shiffer claims in Beaver County, Utah, on August 19, 1957. The application was referred to the field and an examination was made on Friday, September 13, by J. William Ehsler, U. S. Geological Survey, and M. M. Gilkey, U. S. Bureau of Mines.

The DMEA has completed a project on the subject property under DMEA docket 2710, contract Ida-E 585. The work completed by this project was essentially negative and this application was terminated without a certificate of a discovery.

The present mine operator, Wallace R. O'Keefe and associates, have since completed work in a new adit some 40 feet above the DMEA work and have shipped some 1,300 tons of ore that has been mined along a shear zone. The present workings were examined. The DMEA adit was inaccessible due to excessive cave and, consequently, could not be re-examined.

In a conversation with the applicant, Mr. O'Keefe, we were informed that contract work had already been negotiated for completing the work proposed in the present DMEA application and that work would progress immediately regardless of the decisions of a DMEA examining team. The examining team, therefore, requested Mr. O'Keefe to ask that the present application be held in abeyance pending results of the work. If at that time he wishes to obtain Government assistance, the property can be re-examined in light of added evidence.

EMBA 4815 9/19/57

We will hold the application and material in this office pending further instructions from the Field Team, Region III.

J. William Hasler

J. William Hasler,
U. S. Geological Survey

M. M. Gilkey

M. M. Gilkey,
U. S. Bureau of Mines

JWH/mlr

Enclosures

224 New Customhouse
Denver 2, Colorado

September 9, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 12 1957
DATE | INITIALS
9/12 | P | 220
700

Mr. Wallace R. O'Keefe
Wallace R. O'Keefe and Associates
Beaver, Utah

Re: Docket No. DMEA 4815 (Uranium)
Wallace R. O'Keefe and Associates
Mystery-Sniffer Claims
Beaver County, Utah

Dear Mr. O'Keefe

In accordance with your telephone conversation Friday, September 6, with this office, we enclose the original and seven copies of Form MF-205, Consent to Lien and Subordination Agreement.

Please obtain the signature and the address of the persons whose names are listed on the reverse side of the form and return the original and six copies to this office. The remaining copy is for your files.

Very truly yours,

E. N. Harshman

E. N. Harshman
Acting Executive Officer

Enclosures

MHM:eh

cc: Sec. Op. Comm. (2)
DMEA/SLC
Hasler
Harshman
Docket
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 9 1957
CODE
220
700

224 New Customhouse
Denver 2, Colorado

9/9 Q

September 4, 1957

Memorandum

To: J. W. Hasler

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-4815 (Uranium) Wallace R. O'Keefe and Associates (Mystery-Sniffer claims) Beaver County, Utah

As per our telephone conversation this morning, I am forwarding to you the subject application for field examination. Although we could examine it out of Denver, your familiarity with the property at the time of the prior DMEA work on it and your planned trip to Utah in the immediate future make you the logical choice for the examination.

Please contact the U. S. Bureau of Mines' group in Salt Lake City, and arrange an examination date satisfactory to all parties concerned.

I am enclosing a copy of the examination report and final report on the prior DMEA project (DMEA Docket 2710, Contract Idm-R585) for use in appraising the present application. Please return them to me when you forward your report.

Original signed by
E. N. HARSHMAN

E. N. Harshman

Enclosures

ENH:jy
cc: Sec. Op. Comm. (2)
DMEA/SLC
Harshman
Docket 4815
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 5 1957
DATE | INITIAL
9/5 | 220
" | 700

224 New Customhouse
Denver 2, Colorado

September 3, 1957

Memorandum

To: DMEA/SLC) W/enclosures, Items 1-5 Below
E. N. Harshman) " " "

From: DMEA Field Team, Region III

Subject: Docket DMEA 4815 (Uranium) Wallace R. O'Keefe and Associates (Mystery-Sniffer Claims) Beaver County, Utah

Enclosed is the following material relating to the subject docket:

1. Copy of application for Government assistance in exploration work under the DMEA program.
2. Memorandum of Review by James Paone, USBM.
3. Memorandum of Review by W. P. Williams, USGS.
4. Letter of transmittal of the foregoing to this office, dated August 28, 1957, from the Chairman, Operating Committee, DMEA.
5. Routing Control Sheet.

A field examination of the property and a joint report of findings and recommendations pertaining to the Applicant's work proposal are requested.

If the field examiners view the project proposal favorably, the Applicant should be advised that a Consent to Lien and Subordination Agreement form must be executed by the four owners listed in the Mining Lease Agreement dated November 1, 1955.

Eleven extra copies of each map used in the joint report which show the land to be subordinated and the location and extent of recommended work, relative to property boundaries, should be submitted if Government participation is recommended.

The Bureau of Mines' copy of the application should not be returned to this office, but is to be kept for the Examining Engineer's file. The Routing Control Sheet, however, is to be completed, detached from the application, and forwarded to the Executive Officer with the Joint Examination Report. The Survey's copy of the application is to be returned to Mr. Harshman's office.

E. N. Harshman

E. N. Harshman
Acting Executive Officer

Enclosures

MHM:eh
cc: Sec. Op. Comm. (2)
Docket
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8/27	Ching	700
8/27	Ellis	700
8/28	GCS	130
"	Johnson	110
"	Mathews	100
		510
8/28	G	220
		700

Mr. William H. King
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

AUG 28 1957

Re: Docket No. DMEA-4815 (Uranium)
Wallace R. O'Keefe and Associates
Mystery-Sniffer Claims
Beaver County, Utah

Dear Mr. King:

The subject application is being referred to you for investigation, a field examination if warranted, and recommendations.

Enclosed for your information are memoranda, dated August 20 and 22, 1957, by James Paone, USBM, and W. P. Williams, USGS, respectively, relating to the application. Also enclosed are two complete copies of the application and an extra set of maps for the use of the Field Team.

We note that this property was explored under Docket No. DMEA-2710 with disappointing results. The Applicant has apparently done a considerable amount of underground work since the DMEA project and has shipped about 1,300 tons of low-grade ore which may average 0.20% U_3O_8.

In the event a contract is recommended, the Applicant should be advised that a Consent to Lien and Subordination Agreement form must be executed by the four owners listed in the Mining Lease Agreement, dated November 1, 1955.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures
APPROVED:

P. F. Yopes
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

MChing/izm 8-27-57
cc to: Mr. Ching
Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8/27	Ching	700
8/27	Ellis	700
8/28	Selbrede	130
"	Jordan	110
"	Mittendorf	100
		210
		220
	8/28	700
	8/28	(130)
	8/28	(130)

AUG 28 1957

Wallace R. O'Keefe and Associates

Beaver, Utah

Re: Docket No. DMEA-4815 (Uranium)
Mystery-Sniffer Claims
Beaver County, Utah

Gentlemen:

The application for assistance in exploring your property, under the captioned docket number, has been reviewed by the Division of Rare and Miscellaneous Metals of the Defense Minerals Exploration Administration. It has been referred to:

Mr. William H. King
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

In the event a project is approved for the subject property, it will be necessary for you to furnish the required Consent to Lien and Subordination Agreement forms properly signed and dated, and the addresses of the interested parties shown. An early submission of these forms may save time.

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

Sincerely yours,

E. O. Mittendorf (for)

Administrator

MChing/izm 8-27-57
cc to: Mr. Ching
Admr.'s Reading File
DMEA FT Reg. 3 (2)

8623

IN REPLY REFER TO:

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

OFFICIAL FILE COPY
D M E A
RECEIVED AUG 22 1957
DATE | INITIALS | CODE
220
700

August 22, 1957

Memorandum

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

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

Subject: Review of application, DMEA 4815, (uranium), Wallace R. O'Keefe and Associates, Mystery-Sniffer Mine, Beaver County, Utah

The applicant proposes to explore for uranium ore deposits in the Indian Creek area of Utah. The known small deposits there are found as veinlets in shear zones and are associated with igneous rocks.

The applicant's property comprises six and a fraction mining claims. The proposed work would consist of 900 feet of adit drifting and 330 feet of crosscutting at a total estimated cost of $30,770. Presumably the objective of the work would be to seek for extensions of the known deposit.

From the applicant's written description, the underground mine openings on the property are extensive. He submits shipping records that show that about 1,334 tons of ore have been produced.

In view of the work that has already been done on the property and the amount of ore produced, the claims warrant field examination for complete evaluation. The application is incomplete, in that maps have not been submitted that show property boundaries, geologic formations, and present and proposed mine openings. Cost estimates are undetailed and generalized.

W. P. Williams

W. P. Williams

OFFICIAL FILE COPY DMEA RECEIVED AUG 21 1957		
DATE	INITIALS	CODE
8/21	P	220
"	[illegible]	700

August 20, 1957

4815

Uranium

Wallace R. O'Keefe & Associates
Mystery-Sniffer Mine
x Beaver County, Utah
$30,770.00

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Member
Uranium Commodity Committee

Subject: Application

1. Date of original application: 8/15/57 2. Date received by DMEA: 8/20/57

3. Prior reports on this property or previous applications: Yes [ ] No [ ]

4. Prior reports on adjacent properties to be referred: Yes [ ] No [ ]

5. Information over which on this property: Yes [ ] No [ ]

6. Other confidential factors to be considered: Yes [ ] No [ ]

7. Details [illegible]

8. Further reading geologist recommendations:
a. Continue [ ]
b. Discontinue [ ]
c. Evidence of [illegible] [ ]
d. Doubtful [ ]
e. Proposed exploration method [ ]
f. Alternate exploration method [ ]
g. Other [ ]
h. [illegible] [ ]

9. Action advised:
a. Obtain [illegible] of applicant [ ]
b. Refer to field [illegible] [x]
c. Denial [ ]
d. Agree with [illegible] [ ]
1. Contact [illegible]
e. Discuss with field team [ ]
f. Suggest alternate plan [ ]
g. Propose [illegible] [ ]
h. Approval [ ]

[illegible]

10. Remarks: (Use back of page if necessary)

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

August 19, 1957

Wallace R. O'Keefe and Assoc.
Beaver, Utah

Subject: DMEA 4815

Gentlemen,

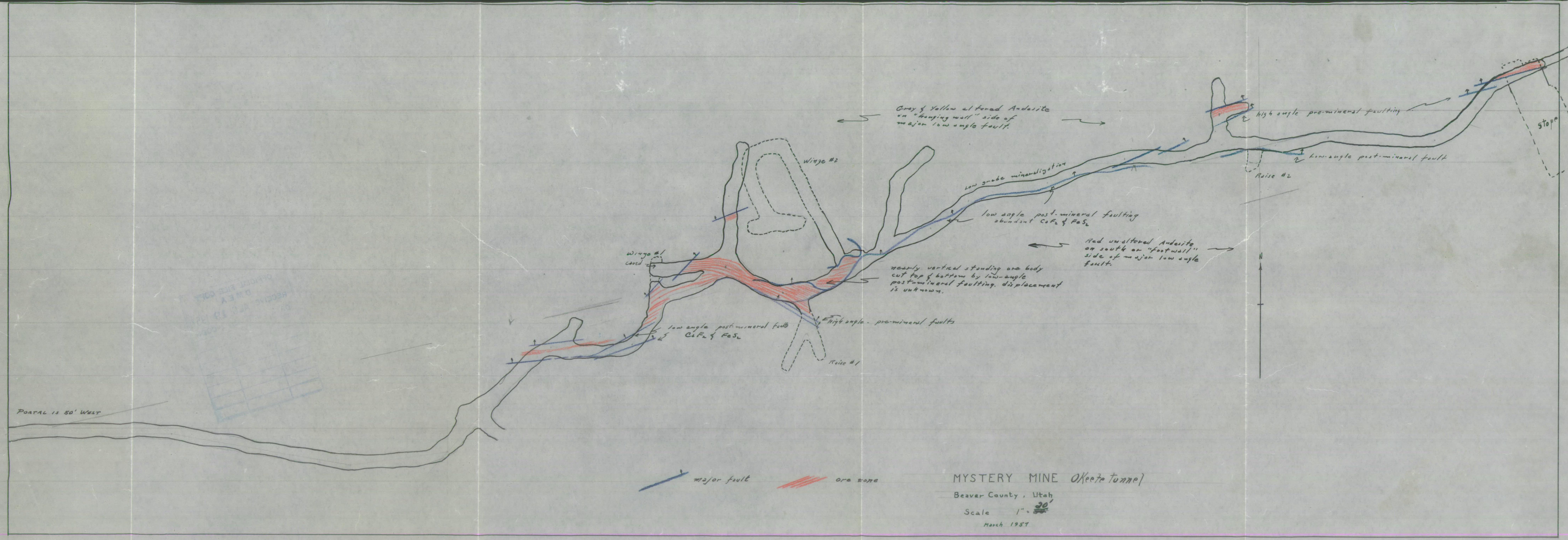
Your application for exploration assistance, dated August 15, 1957 submitted to our office at Washington, D.C. has been assigned Docket Number 4815 and referred to the Division of Rare & Miscellaneous Metals in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

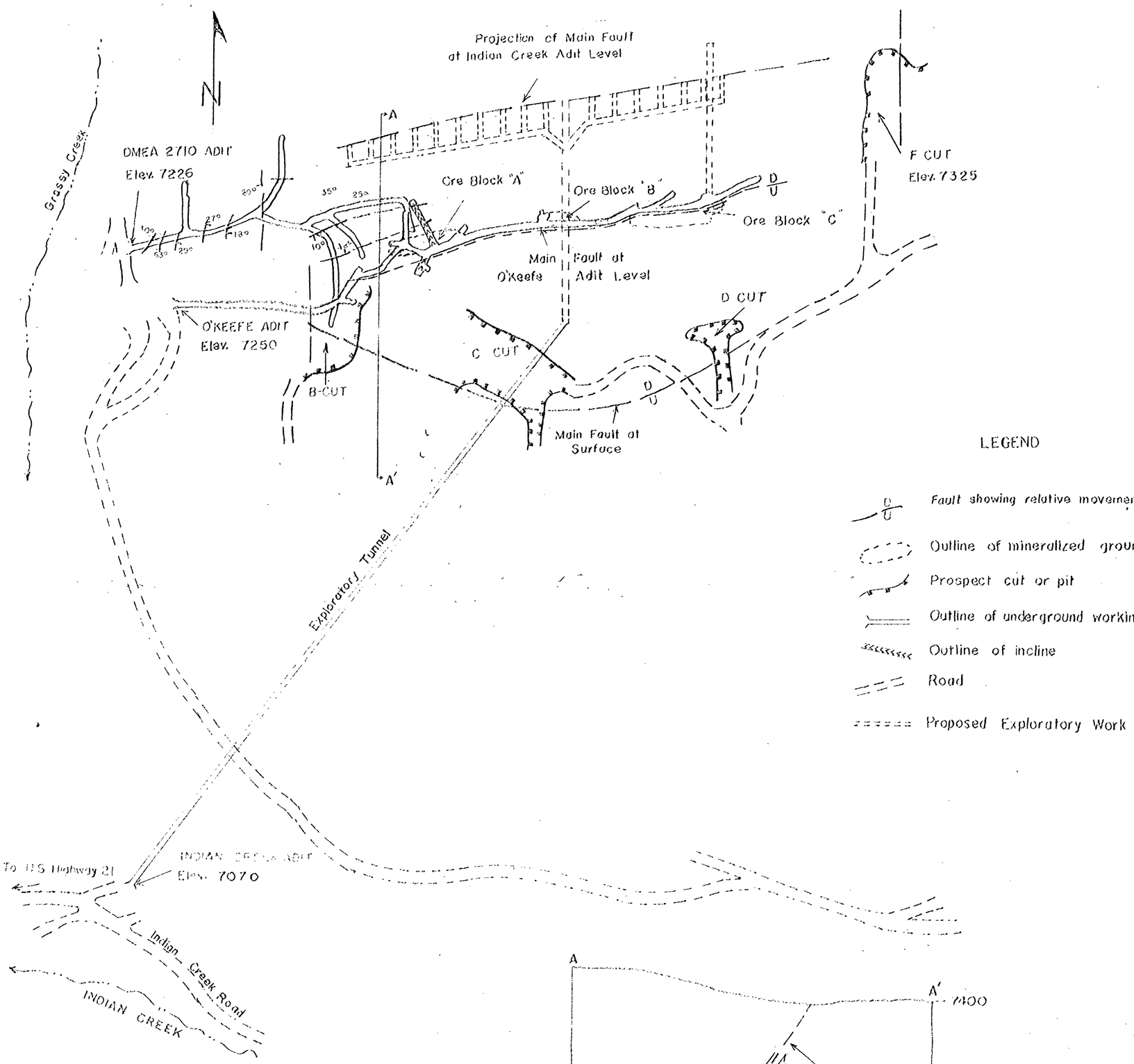
Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:
Region III

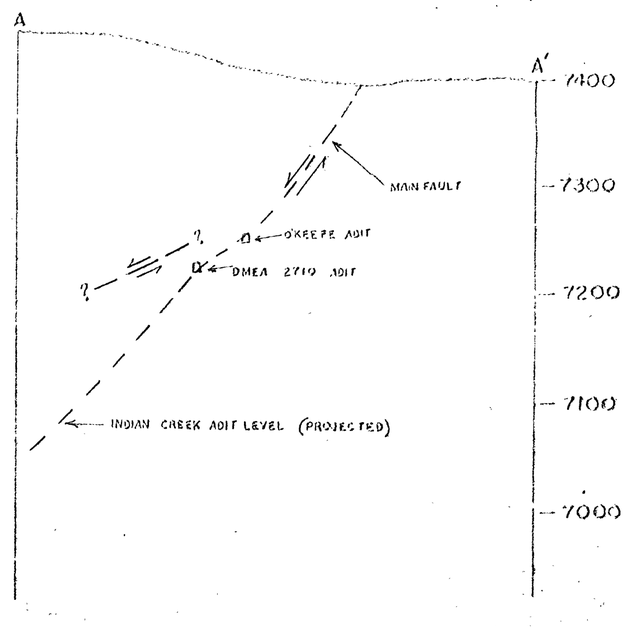
OFFICIAL FILE COPY
RECEIVED
D M E A
AUG 19 1957
DATE
CODE


Gray & Yellow altered Andesite on "hanging wall" side of major low angle fault.
high angle pre-mineral faulting
Stope
Raise #2
low-angle post-mineral fault
Winze #2
low grade mineralization
low angle post-mineral faulting abundant CuFe2 & FeS2
Red unaltered Andesite on south or "footwall" side of major low angle fault.
Winze #1
Caved
nearly vertical standing ore body cut top & bottom by low-angle post-mineral faulting. displacement is unknown.
low angle post-mineral fault CuFe2 & FeS2
High angle - pre-mineral faults
Raise #1
PORTAL IS 50' WEST
major fault
ore zone
MYSTERY MINE (Keefe Tunnel)
Beaver County, Utah
Scale 1" = 30'
March 1957



LEGEND

- Fault showing relative movement (D/U)
- Outline of mineralized ground
- Prospect cut or pit
- Outline of underground workings
- Outline of incline
- Road
- Proposed Exploratory Work



NOTE

ALL DATA OBTAINED FROM TAYLOR et al, DMEA 2710 FINAL REPORT AND APPLICANT

0 100 200 300
SCALE OF FEET

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

FIG. 4 DMEA DOCKET No 4815

MINE MAP

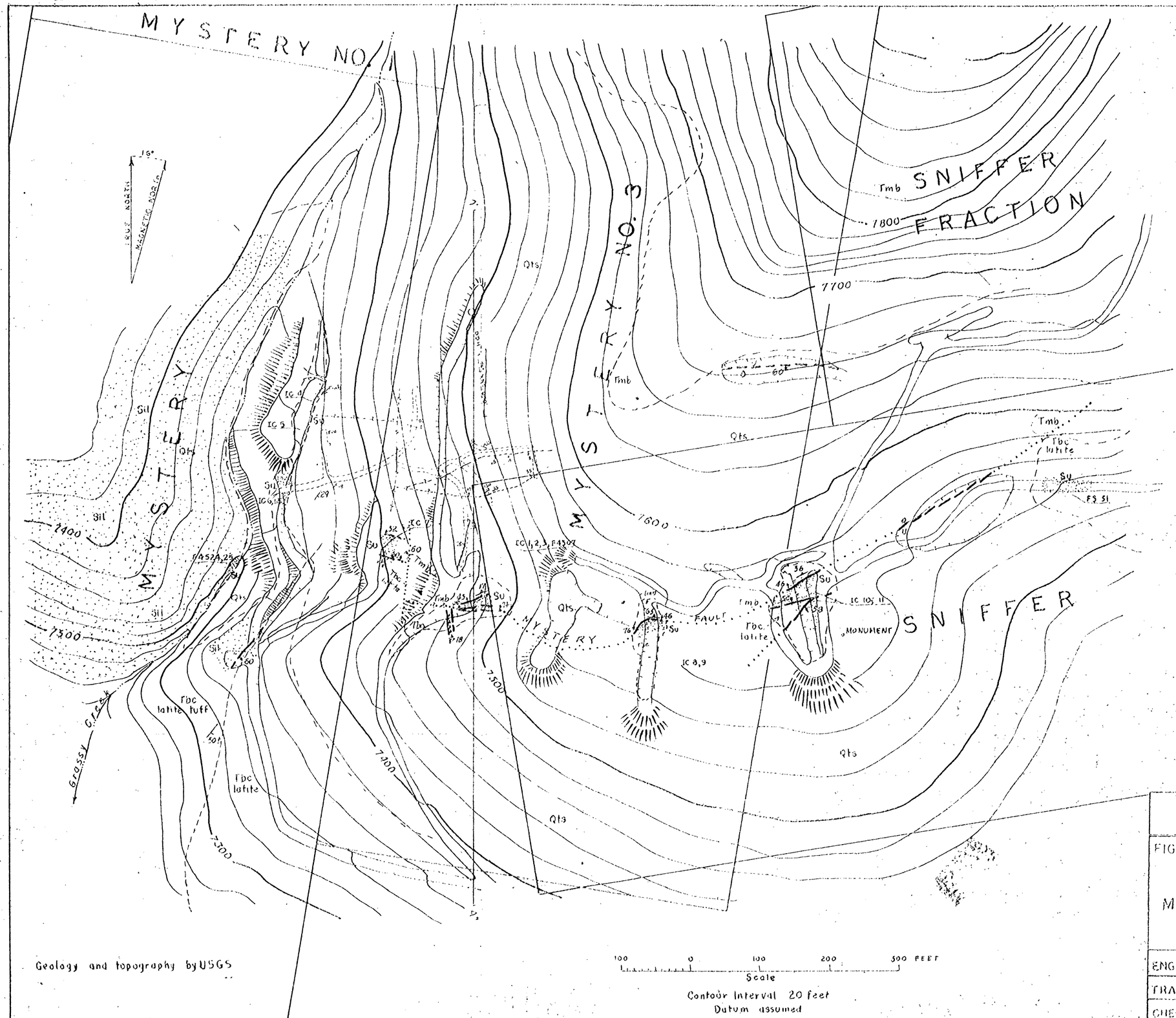
MYSTERY SNIFFER MINES, INC.

BEAVER COUNTY, UTAH

ENGINEER: P.V. FILLO	DATE JUNE 20, 1958
TRACED: JUNE PVF	1900-451 B
CHECKED	

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 2110



EXPLANATION

Qts — Talus and soil mantle (QUATERNARY)

Tmb — Mt. Belknap rhyolite (Includes rhyolite flow breccia and rhyolite with thin flow banding.) (TERTIARY, Upper)

Tbc — Bullion Canyon volcanic rocks (Includes red latite and latite tuff) (TERTIARY, Lower)

Su — Zone of intense argillic alteration with generally minor silicification (Contains secondary uranium minerals, mainly autunite with subordinate torbernite and small amounts of purple fluorite)

Sil — Area of intense silicification (Apparently without uranium mineralization)

Inferred contact

Fault, showing dip (Dashed where approximately located) (U, upthrown side; D, downthrown side)

Concealed fault

Probable fault

Strike and dip of beds

Strike and dip of flow banding in Tmb

Road

Bulldozer cut

Underground workings (Underground geology illustrated by solid wall plan of mines)

Dump

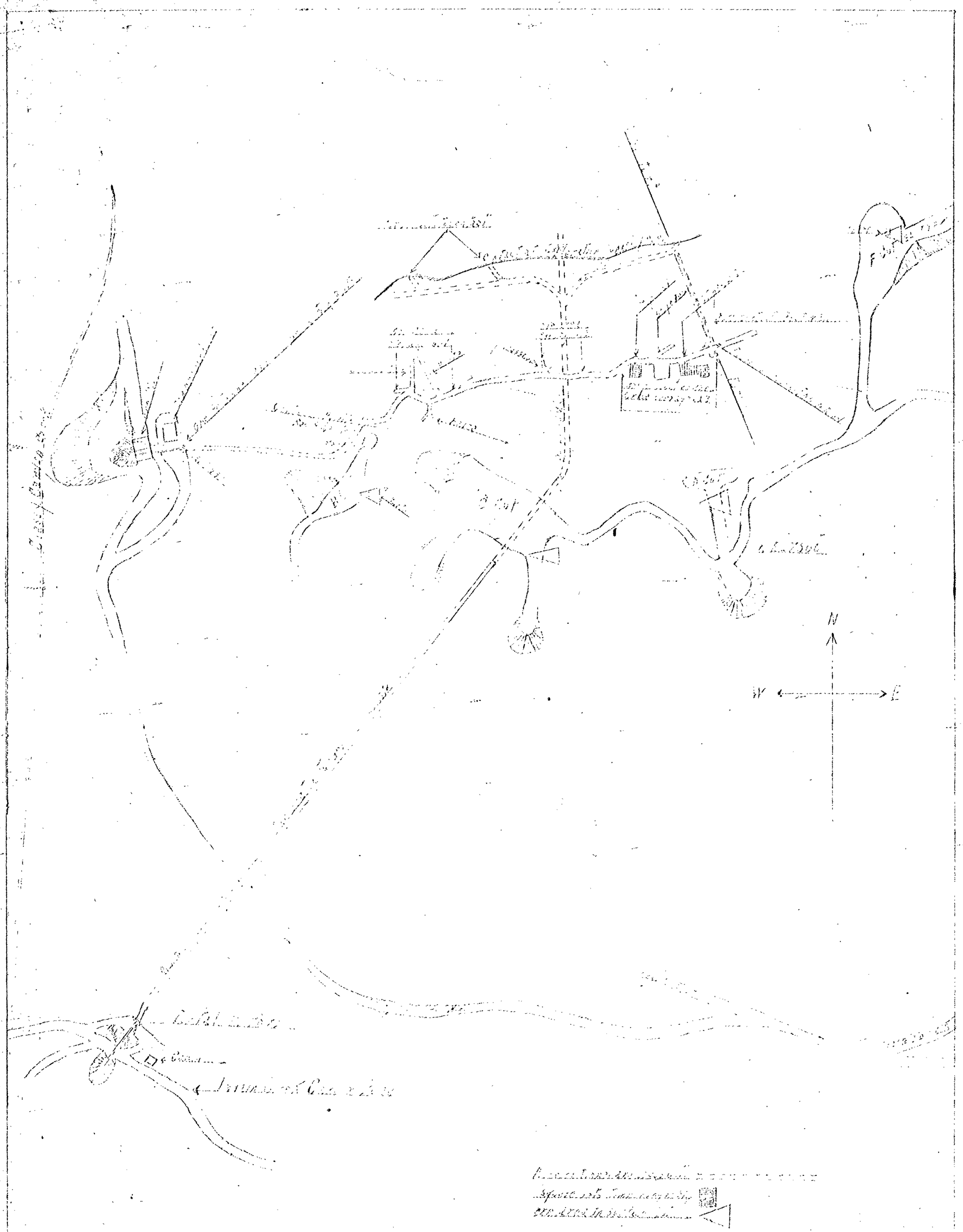
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

FIG. 3 DMEA DOCKET No. 4615

GEOLOGIC MAP
MYSTERY SNIFFER MINES, INC.
BEAVER COUNTY, UTAH

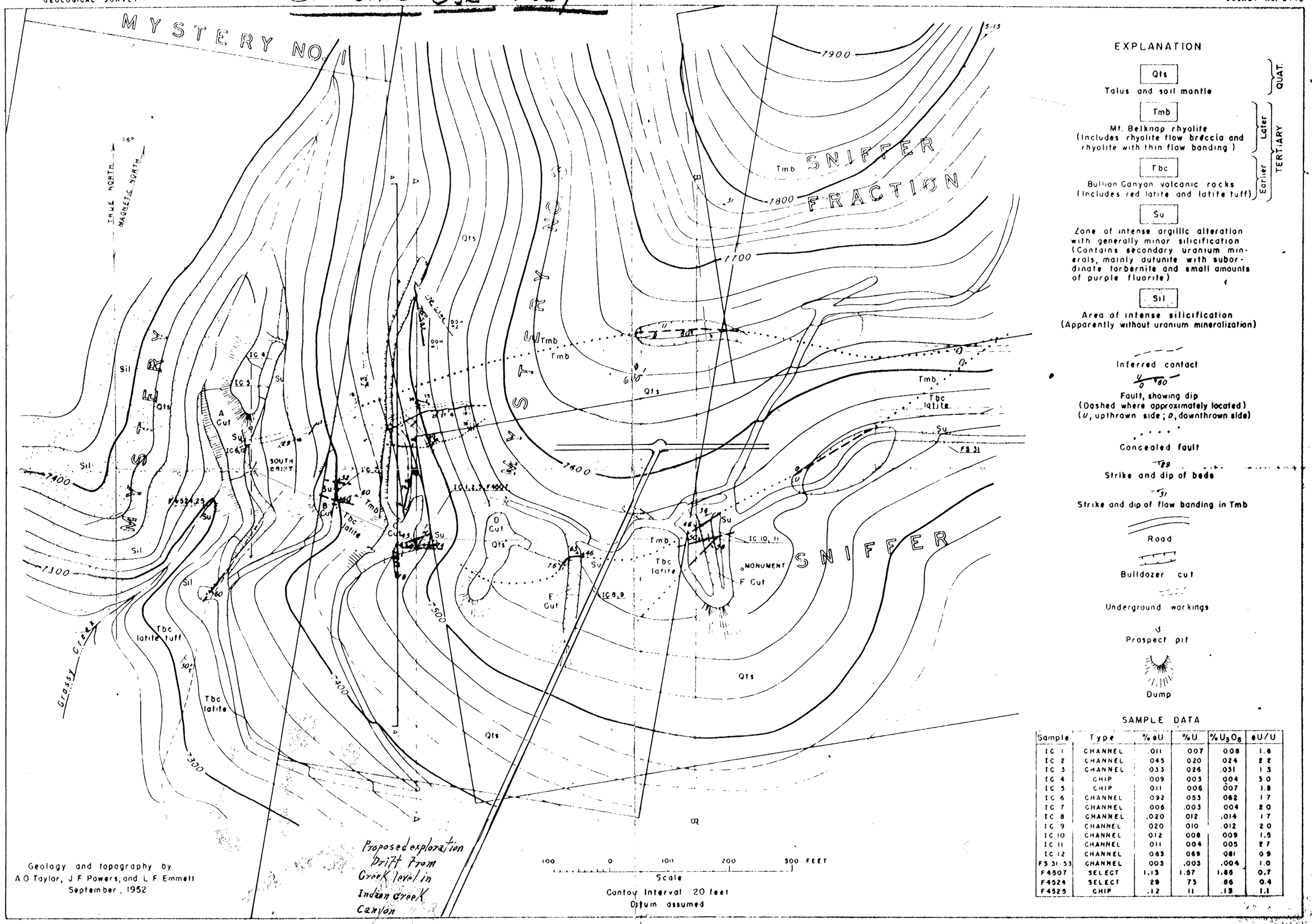
ENGINEER: E. VARILLO	DATE JUNE 20, 1958
TRACED: JUNE, 1958, R.V.E.	1000-450 C
CHECKED:	

GEOLOGIC MAP OF THE MYSTERY-SNIFFER URANIUM DEPOSIT, BEAVER COUNTY, UTAH



Mystic Smelter Mines Inc.
Beaver County, Utah
Wallace R. Keele Project
1 inch per 100 feet

OFFICIAL USE ONLY



SAMPLE DATA

Sample	Type	%eU	%U	$\%U_3O_8$	eU/U
IC 1	CHANNEL	.011	007	008	1.6
IC 2	CHANNEL	045	020	024	2.2
IC 3	CHANNEL	033	026	.031	1.3
IC 4	CHIP	009	003	004	3.0
IC 5	CHIP	011	006	007	1.8
IC 6	CHANNEL	092	053	062	1.7
IC 7	CHANNEL	006	.003	004	2.0
IC 8	CHANNEL	.020	012	.014	1.7
IC 9	CHANNEL	020	010	.012	2.0
IC 10	CHANNEL	012	008	009	1.5
IC 11	CHANNEL	011	004	005	2.7
IC 12	CHANNEL	063	069	081	0.9
FS 31-53	CHANNEL	003	.003	.004	1.0
F4507	SELECT	1.13	1.87	1.86	0.7
F4524	SELECT	29	73	.86	0.4
F4525	CHIP	.12	11	.13	1.1

FIG. 3 GEOLOGIC MAP OF THE MYSTERY-SNIFFER URANIUM DEPOSIT, BEAVER COUNTY, UTAH