DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 2093

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This document has been recorded as

EXPLORATION LOAN

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

Routing Slip
CODE 330

To:	Minor & Rare Metals	Date	9-19-51
To:	Kerser & Hosted	Date	9-21-51
To:	Coordinating Comm	Date	9-25-51
To:	R & P	Date	10-1-51
To:	Operating Comm	Date	1-10-52
To:	CODE 700-PM.4640	Date	1-16-52
To:		Date	
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CONTROLLED DOCUMENT

700
FILE COPY
SURNAME:

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

Schmidt
Hayes
Hodges
Johnson

AIR MAIL

JAN 2 8 1952

B.H.

Mr. Robert L. McDonald, President
Rainbow Mining Company
430 Gazette Building
Reno, Nevada

Re: Docket No. [illegible]-2093 Uranium,
Rainbow Mining Company
Round Mountain, Nevada

Dear Mr. McDonald:

Your application for aid for an exploration project located near Round Mountain, Nye County, Nevada and docketed by this office under the above has been reviewed by this office.

Projects approved by the Defense Minerals Exploration Administration must in its judgement show definite promise of yielding material of acceptable grade and in quantities that will significantly improve the mineral supply position for national defense.

Your careful study of your proposal reveals that the probability of discovering a usable ore is not considered sufficiently promising to justify Government participation.

Under these circumstances your application for exploration aid to the extent of $[illegible] of $[illegible],000 is denied.

In the event that these or any further favorable developments on the property a re-examination of your application by mutual communication with this office might be considered.

Sincerely yours,

C. O. Mittendorf (for)
Acting Administrator
Defense Minerals Exploration
Administration

Schmidt/jem
1-21-52
cc to: Adm. Reading File
Docket
Messrs. Kauffman, A.J. Adm. 1348 B.M.
Butler, A. P. Adm. 3212 C.O.
Ellis
Schmidt
Field Team, Reg. III (2)

1-28
J.B.

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm Ellis, Uranium Commodity Committee
Member, DMEA

DATE: January 23, 1952

FROM : Arthur P. Butler, Jr., Uranium Commodity Committee
Member, U. S. G. S.

SUBJECT: DMEA Docket 2093, The Rainbow Mining Company, Round Mountain, Nye County, Nevada.

I concur with the report of Geo. W. Walker, U.S.G.S., dated December 28, 1951, recommending that a government loan should not be made for exploration of this property.

Arthur P. Butler, Jr.

Arthur P. Butler, Jr.

IN REPLY REFER TO:

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

E. Wm Ellis, Uranium Commodity Committee
Member, DMEA

January 23, 1952

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WASHINGTON 25, D. C.

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Rec'd 1/4/52
TPT
Butler 1/2/52

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2093, The Rainbow Mining Company

Round Mountain, Nye County, Nevada

(Uranium)

George A. Walker
U. S. Geological Survey

December 28, 1951

Summary

The Rainbow Mining Company of Reno, Nevada, has made application under DMA docket 2093 for a $25,000 loan (90 percent Government participation) to explore uranium-bearing zones on the Rainbow group of claims near Round Mountain, Nye County, Nevada.

Exploration of the mineralized zones as of October, 1951, consists of a number of surface pits, one adit over 400 feet long, a number of short crosscuts, and a steeply-inclined winze. The underground workings expose areas in which a greenish-yellow, tablet shaped, secondary uranium mineral, possibly torbernite, is erratically distributed in a highly altered rhyolite dike and in fault zones in the adjoining wall rock. Select samples assayed up to 0.050 percent U_3O_8, but the average of 15 samples collected in the underground workings average 0.013 percent U_3O_8. Because of the erratic distribution of the uranium-bearing minerals and the low content of uranium it was not feasible to estimate tonnages.

Under present economic conditions there is no rock visible on the property that can be mined commercially for uranium, nor are there reasonable expectations of finding mineable ore by additional exploration and development. Therefore, a Government loan is not recommended.

Introduction

DMA docket 2093, Rainbow group of claims, Nye County, Nevada, propose exploration by diamond drilling and underground development of uranium-bearing zones associated with a steep dipping, altered rhyolite dike, which is intrusive into granitic rocks. The property, owned by Mr. John Heneberqh of Round Mountain, Nevada, was, at the time of the examination, under lease and option to the Rainbow Mining Company of Reno, Nevada.

At the request of Mr. H. C. Miller, Executive Officer, Field Team, Region III, an examination of the property was made by George W. Walker of the U. S. Geological Survey on October 17 and 18, 1951. The results of an investigation of the property in October, 1948, by R. U. King and W. A. Roberts of the Federal Survey, are contained in Special Report of Field Examination No. 12, dated June, 1949. Their report briefly describes the geology, the distribution of the uranium-bearing minerals, a number of analyses for uranium, and an evaluation of the property. A map (scale 1 inch - 40 feet) of the underground workings located on the Rainbow No. 1 claim is included with the report.

Location and Accessibility

The Rainbow group of claims, in the Round Mountain Mining District, Nye County, Nevada, is in sec. 31 and 32, T. 10 N., R. 44 E., Mt. Diablo base and meridian, on the western flank of the Toquima Range. The deposit is 1 mile southeast of the town of Round Mountain and is 58 miles north of Tonopah, Nevada. It is accessible from Round Mountain by 1 mile of dirt road. The nearest railroad shipping point is at Mina, Nevada, approximately

130 miles from the property by paved roads.

Ownership, and description of workings and equipment

The Rainbow group consists of seven unpatented claims - Rainbow claims No. 1 to 7 - which are under lease from Mr. John Heneborgh of Round Mountain, Nevada, to the Rainbow Mining Company. Mr. Robert L. McDonald, 430 Gazette Building, Reno, Nevada, is president of the Rainbow Mining Company.

The mine workings, as shown on the accompanying plan, consist of one adit 420 feet long, a number of short crosscuts, and a steeply-inclined winze. The winze has a depth of 202 feet below the adit floor and a connecting 56 foot raise to the surface. The winze and the raise are solidly lagged so that little information in them could be obtained. In addition, approximately 60 feet of water was standing in the winze at the time of the examination.

Surface exploration consists of 5 or 6 small prospect pits and a bulldozer trench which are aligned in a northeast direction roughly following the mineralized zone exposed in the adit. Sufficient buildings and tools are present on the property to carry on the proposed underground exploration; this equipment is the property of Mr. Henebergh. Mr. Henebergh has indicated his willingness to use the equipment for the proposed exploration at no expense to the Government other than operating expenses. Diamond drilling, if warranted, would be done on a contract basis.

Geology and Ore deposits

Rocks exposed in the vicinity of the mine workings are medium-grained granite, or locally quartz monzonite and granodiorite, of probable Cretaceous age. 1/ Dikes of aplite from 1 inch to 2 feet in thickness commonly trend N. 35° E. and dip steeply westward parallel to a sheeting in the granite. The trend of these dikes is not constant and, locally, they are nearly at right angles to the sheeting. Small irregular masses of pegmatite, which is similar mineralogically to the aplite, also cut the granite.

A 5- to 15 foot, highly altered rhyolite dike intrudes the granitic rocks. The dike has a general strike of N. 45° E., dips steeply southeast, and is discontinuously exposed on the surface for nearly 2,000 feet. Exposures in the underground workings indicate that the contacts on both sides of the dike are faulted and that other faults of unknown magnitude intersect the dike at small angles. Near the southwest face in the adit, one fault -- or possibly a group of small, nearly parallel faults -- has cut off the rhyolite dike; the southwest extension of the dike is not exposed in the present workings.

1/ Ferguson, H. G., The Round Mountain district, Nevada; U. S. Geol. Survey Bull. 725 I, 1921

The uranium-bearing minerals consists of greenish-yellow flakes and tabular, fluorescent crystals (1-2 mm.) which are probably torbernite and some autunite. This mineral is largely confined to coatings on fractures and fault surfaces in the rhyolite and in the hanging wall south of the dike; however, some crystals are disseminated in the dike and in crushed zones in the granite. A total of 15 samples, some of which were taken by H. U. King and W. A. Roberts at the time of their examination in October, 1948, were collected at places in the underground workings where radioactivity was highest or where maximum fluorescence was observed. The U_3O_8 content of these samples ranged from 0.001 percent to 0.090 percent (see accompanying plan); an average of all samples taken is about 0.013 percent U_3O_8. No estimates of the tonnage of uranium-bearing rock has been made because of the erratic distribution of the uranium minerals and because assays indicate that none of the rock is of commercial grade.

Commonly hydrated iron oxides are present along fractures and faults in the dike and in the granite. In addition, it is reported by Mr. Heneborgh that mineralized zones also contain $5.00 to $10.00 per ton in silver and gold, with silver predominating.

Recommendations

In view of the low uranium content of the mineralized zones on the Rainbow claims, it is believed that there is little possibility of developing an economic source of uranium from this deposit. Therefore, a Government loan for exploration and development is not recommended.

IN REPLY REFER TO:

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

January 23, 1952

E. Wm Ellis, Uranium Commodity Committee
Member, DMEA

Arthur P. Butler, Jr., Uranium Commodity Committee
Member, U. S. G. S.

DMEA Docket 2093, The Rainbow Mining Company, Round Mountain, Nye County, Nevada.

I concur with the report of Geo. W. Walker, U.S.G.S., dated December 28, 1951, recommending that a government loan should not be made for exploration of this property.

Arthur P. Butler, Jr.

cc: E.Wm.Ellis-2
Dir. Reading
Div. Files
Min. Dep.
APButler,Jr.:am 1-23-52
File: DMEA applicant
DMEA Docket
ARU Reading
TEPCO Reading

IN REPLY R

FILE COPY
Surname:

Butler
Ellis

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

E. Wm Ellis, Uranium Commodity Committee
Member, DMEA

January 23, 1952

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ARU Reading
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Note:
Amount of loan - - $25,000.

Min. Dep.

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GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

January 23, 1952

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File: DMEA applicant
DMEA Docket
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TEPCO Reading

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

OCT 1 1951

Mr. Robert L. McDonald, President
Rainbow Mining Company
430 Cassette Building
Reno, Nevada

Re: Round Mountain, Nevada
Uranium - DMA Docket 2093

Dear Mr. McDonald:

Your application, docket 2093, for an exploration project in the amount of $25,000, has been received by the Minor and Rare Metals Branch of the Supply Division.

Before a decision can be reached on your request we find it is necessary to obtain additional information on your property. Your application therefore is being referred to the office of the Executive Officer of DMA Field team III, Mr. H. S. Miller, 1012 Flood Building, 870 Market Street, San Francisco 2, California, who will get in touch with you if necessary.

Yours very truly,

SIGNED

Tom Lyon, Director
Supply Division

Gordon/ch 9-25-51
cc: Adm. Reading File
Lyon
Bourrot
Keiser - USGS
Hosted
Field Team III
DMA docket File

OFFICE OF THE ADMINISTRATOR

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

Reviewed by
DMEA OPERATING COMMITTEE
1/15/52 (date) HB

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 9 1952

Office of
Executive Officer
DMEA Field Team
Region III

January 5, 1952 gea 1/16/52

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2093 (Uranium) - Rainbow Mining Company, 430 Gazette Building, Reno, Nevada.

Reference is made to your "Review of Application for Exploration Assistance", covering subject property near Round Mountain, Nevada, dated October 1, 1951.

Herewith are transmitted four copies of a report, "DMEA-2093, The Rainbow Mining Company, Round Mountain, Nye County, Nevada, (Uranium)", by George W. Walker, U. S. Geological Survey, dated December 28, 1951.

Samples collected on the property assayed up to 0.050 percent U_3O_8, but the average of 15 samples was less than 0.015 percent U_3O_8. Mr. Walker reports that because of the erratic distribution of the uranium-bearing minerals and the low tonnage of uranium in mineralized zones, it is not feasible to estimate tonnages. Under present economic conditions there is no rock visible that can be mined commercially for uranium, nor are there expectations of finding mineable ore by additional exploration and development. Therefore a Government loan is not recommended. The docket is being returned herewith.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

Copy to E. H. Bailey, USGS

Reviewed by
DMEA OPERATING COMMITTEE
1/15/52
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2093, The Rainbow Mining Company

Round Mountain, Nye County, Nevada

(Uranium)

George W. Walker
U. S. Geological Survey

December 28, 1951

Summary

The Rainbow Mining Company of Reno, Nevada, has made application under DMA docket 2093 for a $25,000 loan (90 percent Government participation) to explore uranium-bearing zones on the Rainbow group of claims near Round Mountain, Nye County, Nevada.

Exploration of the mineralized zones as of October, 1951, consists of a number of surface pits, one adit over 400 feet long, a number of short crosscuts, and a steeply-inclined winze. The underground workings expose areas in which a greenish-yellow, tablet shaped, secondary uranium mineral, possibly torbernite, is erratically distributed in a highly altered rhyolite dike and in fault zones in the adjoining wall rock. Select samples assayed up to 0.050 percent U_3O_8, but the average of 15 samples collected in the undergound workings average 0.013 percent U_3O_8. Because of the erratic distribution of the uranium-bearing minerals and the low content of uranium it was not feasible to estimate tonnages.

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DMA docket 2093, Rainbow group of claims, Nye County, Nevada, propose exploration by diamond drilling and underground development of uranium-bearing zones associated with a steep dipping, altered rhyolite dike, which is intrusive into granitic rocks. The property, owned by Mr. John Henebergh of Round Mountain, Nevada, was, at the time of the examination, under lease and option to the Rainbow Mining Company of Reno, Nevada.

At the request of Mr. H. C. Miller, Executive Officer, Field Team, Region III, an examination of the property was made by George W. Walker of the U. S. Geological Survey on October 17 and 18, 1951. The results of an investigation of the property in October, 1948, by R. U. King and W. A. Roberts of the Federal Survey, are contained in Special Report of Field Examination No. 12, dated June, 1949. Their report briefly describes the geology, the distribution of the uranium-bearing minerals, a number of analyses for uranium, and an evaluation of the property. A map (scale 1 inch - 40 feet) of the underground workings located on the Rainbow No. 1 claim is included with the report.

Location and Accessibility

The Rainbow group of claims, in the Round Mountain Mining District, Nye County, Nevada, is in sec. 31 and 32, T. 10 N., R. 44 E., Mt. Diablo base and meridian, on the western flank of the Toquima Range. The deposit is 1 mile southeast of the town of Round Mountain and is 58 miles north of Tonapah, Nevada. It is accessible from Round Mountain by 1 mile of dirt road. The nearest railroad shipping point is at Mina, Nevada, approximately

130 miles from the property by paved roads.

Ownership, and description of workings and equipment

The Rainbow group consists of seven unpatented claims - Rainbow claims No. 1 to 7 - which are under lease from Mr. John Henebergh of Round Mountain, Nevada, to the Rainbow Mining Company. Mr. Robert L. McDonald, 430 Gazette Building, Reno, Nevada, is president of the Rainbow Mining Company.

The mine workings, as shown on the accompanying plan, consist of one adit 420 feet long, a number of short crosscuts, and a steeply-inclined winze. The winze has adepth of 202 feet below the adit floor and a connecting 56 foot raise to the surface. The winze and the raise are solidly lagged so that little information in them could be obtained. In addition, approximately 60 feet of water was standing in the winze at the time of the examination.

Surface exploration consists of 5 or 6 small prospect pits and a bulldozer trench which are aligned in a northeast direction roughly following the mineralized zone exposed in the adit. Sufficient buildings and tools are present on the property to carry on the proposed underground exploration; this equipment is the property of Mr. Henebergh. Mr. Henebergh has indicated his willingness to use the equipment for the proposed exploration at no expense to the Government other than operating expenses. Diamond drilling, if warranted, would be done on a contract basis.

Geology and Ore deposits

Rocks exposed in the vicinity of the mine workings are medium-grained granite, or locally quartz monzonite and granodiorte, of probable Cretaceous age. 1/ Dikes of aplite from 1 inch to 2 feet in thickness commonly trend N. 35°E. and dip steeply westward parallel to a sheeting in the granite. The trend of these dikes is not constant and, locally, they are nearly atright angles to the sheeting. Small irregular masses of pegmatite, which is similar mineralogically to the aplite, also cut the granite.

A 5-to 15-foot, highly altered rhyolite dike intrudes the granitic rocks. The dike has a general strike of N. 55° E., dips steeply southeast, and is discontinuously exposed on the surface for nearly 2,000 feet. Exposures in the underground workings indicate that the contacts on both sides of the dike are faulted and that other faults of unknown magnitude intersect the dike at small angles. Near the southwest face in the adit, one fault -- or possibly a group of small, nearly parallel faults -- has cut off the rhyolite dike; the southwest extension of the dike is not exposed in the present workings.

1/ Ferguson, H. G., The Round Mountain district, Nevada; U. S. Geol. Survey Bull. 725 I, 1921

The uranium-bearing minerals consists of greenish-yellow flakes and tabular, fluorescent crystals (1-2 mm.) which are probably torbernite and some autunite. This mineral is largely confined to coatings on fractures and fault surfaces in the rhyolite and in the hanging wall south of the dike; however, some crystals are disseminated in the dike and in crushed zones in the granite. A total of 15 samples, some of which were taken by R. U. King and W. A. Roberts at the time of their examination in October, 1948, were collected at places in the underground workings where radioactivity was highest or where maximum fluorescence was observed. The U_3O_8 content of these samples ranged from 0.001 percent to 0.050 percent (see accompanying plan); an average of all samples taken is about 0.013 percent U_3O_8. No estimates of the tonnage of uranium-bearing rock has been made because of the erratic distribution of the uranium minerals and because assays indicate that none of the rock is of commercial grade.

Commonly hydrated iron oxides are present along fractures and faults in the dike and in the granite. In addition, it is reported by Mr. Henebergh that mineralized zones also contain $5.00 to $10.00 per ton in silver and gold, with silver predominating.

Recommendations

In view of the low uranium content of the mineralized zones on the Rainbow claims, it is believed that there is little possibility of developing an economic source of uranium from this deposit. Therefore, a Government loan for exploration and development is not recommended.

Reviewed by
DMEA OPERATING COMMITTEE
1/15/52
(date) DHB

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2093, The Rainbow Mining Company

Round Mountain, Nye County, Nevada

(Uranium)

George W. Walker
U. S. Geological Survey

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1/ Ferguson, H. G., The Round Mountain district, Nevada; U. S. Geol. Survey Bull. 725 I, 1921

The uranium-bearing minerals consists of greenish-yellow flakes and tabular, fluorescent crystals (1-2 mm.) which are probably torbernite and some autunite. This mineral is largely confined to coatings on fracture and fault surfaces in the rhyolite and in the hanging wall south of the dike; however, some crystals are disseminated in the dike and in crushed zones in the granite. A total of 15 samples, some of which were taken by R. U. King and W. A. Roberts at the time of their examination in October, 1948, were collected at places in the underground workings where radioactivity was highest or where maximum fluorescence was observed. The U_3O_8 content of these samples ranged from 0.001 percent to 0.050 percent (see accompanying plan); an average of all samples taken is about 0.013 percent U_3O_8. No estimates of the tonnage of uranium-bearing rock has been made because of the erratic distribution of the uranium minerals and because assays indicate that none of the rock is of commercial grade.

Commonly hydrated iron oxides are present along fractures and faults in the dike and in the granite. In addition, it is reported by Mr. Honeborgh that mineralized zones also contain $5.00 to $10.00 per ton in silver and gold, with silver predominating.

Recommendations

In view of the low uranium content of the mineralized zones on the Rainbow claims, it is believed that there is little possibility of developing an economic source of uranium from this deposit. Therefore, a Government loan for exploration and development is not recommended.

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

OCT 9 1951

Hon. Patrick McCarran
United States Senate
Washington 25, D. C.

My Dear Senator McCarran:

We wish to advise that the application that you so kindly transmitted on behalf of the Rainbow Mining Company for an exploration project, DMA Docket 2093, has been received and studied by the reviewers of D. M. A.

Having been found in good order, it has accordingly been sent to the corresponding field office for their study and review. As soon as this is completed, the docket will be returned here for final action.

Sincerely yours,

C. O. Mittendorf

Acting Administrator

EWorden/mh 10-4-51
cc: Adm. Read. File
Lyon
Bourret
Field Team III
Keiser, U.G.S
Hected, "
DMA Docket file

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

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
OCT 2 - 1951
SAN FRANCISCO, CALIFORNIA

OCT 1 1951

Mr. H. C. Miller
1012 Flood Building
870 Market Street
San Francisco 2, California

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 2093

Commodity Uranium

Applicant Rainbow Mining Co., 430 Gazette Bldg., Reno, Nevada

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

T. P. Thayer
For Geological Survey

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 2093

Commodity Uranium

Total Amount $25,000

Govt. Participation $22,500

1. Name and Address of Applicant Rainbow Mining Company
430 Gazette Building, Reno, Nevada

2. Location of Property Round Mountain, Nevada

3. Mineral or metal Uranium Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination Report by Field Team is required. See Item 17.

e) Is there an alternative and favorable project? ?
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? yes

Does the lease have sufficient time to run to cover a future productive period? yes - need location date, book & page of recording claims.

*question numbers are those of MF-103

7. Are subordination agreements necessary? yes

a) MF-201? _____

b) MF-202 ✓

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower ✓ yes

b) Equipment and supplies ✓ yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* yes

d) Water (question 13)* yes

e) Power (question 13)* yes

Is a field check needed on any of these points? no

✓ 9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* ?

Is a field check needed on this point? yes

✓ 10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? no

If not, are there sufficient data given so that you can describe the project? no If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? no

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? yes

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? no

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? no If so, attach a draft.

e) Are the cost estimates reasonable? seem so

f) Should more information be requested from applicant? yes

g) Is a field examination necessary to complete Exhibit A? yes

11. Exhibit B (question 23-d)*

a) Is it applicable? no

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed?_____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Don't know

b) Sufficient data? no If so, attach a draft.

c) Are rents and charges reasonable? ?

d) Is a field check needed? ?

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? no

b) Is the schedule adequate for the work proposed? ?

c) Is the schedule excessive for the work proposed? ?

d) Are the proposed wages and salaries reasonable? seem so

e) Is a field check needed? yes

14. Exhibit E (question 23-c)*

a) Is it applicable? no.

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? It is suggested that the Field Team review this application with Mr. Lincoln R. Page, U.S.G.S., and Mr. Charles Towle, AEC, Denver Federal Center, Denver, Colorado. ((If geologically recommended, have applicant prepare & submit the necessary contract exhibits in duplicate.))

Reviewed by: J. O. Harted, AEC, for HWK
H. W. Keyser, U.S.G.S.
E. R. Gordon, DMA

Date September 21, 1951

INT.-DUP. SEC., WASH., D.C. 99009

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-2093

Date received 9-19-51

Participation

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
OCT 2 - 1951
SAN FRANCISCO, CALIFORNIA

RAINBOW MINING COMPANY
430 Gazette Building,
Reno, Nevada

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application August 25, 1951

Estimated cost $25,000.00

Mineral or metal Uranium

Percentage of Government participation 90%

Location of mine Round Mountain, Nevada

Date of filing MF-100

DMA Docket Number, if available 2093

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. See attachment

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attachment

*5. Are you the owner or the lessee of the property? Lessee

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing. Copy attached. Lease in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. See attached statement

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $2,500.00 Yes.

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See attachment

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Same as above.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. RAINBOW GROUP

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. See attachment.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. See attachment

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. See attachment

15. State in detail how the ore could be shipped and how and where milled. See attachment

*16. History: See attachment

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information: None

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly. Torbanite and Autunite

(*b*) Submit available maps and assay data. Maps and assay data attached hereto.

(*c*) Give estimated tonnage and grade of each class of ore reserves. See attachment

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

See attachment.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? Uranium

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. See attachment

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. This question has been previously answered. See engineer reports, attached maps and assay data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each. See attachment

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. See attachment

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Rainbow Mining Co. (Name of company)

By Robert L. McDonald (Signature of authorized official)

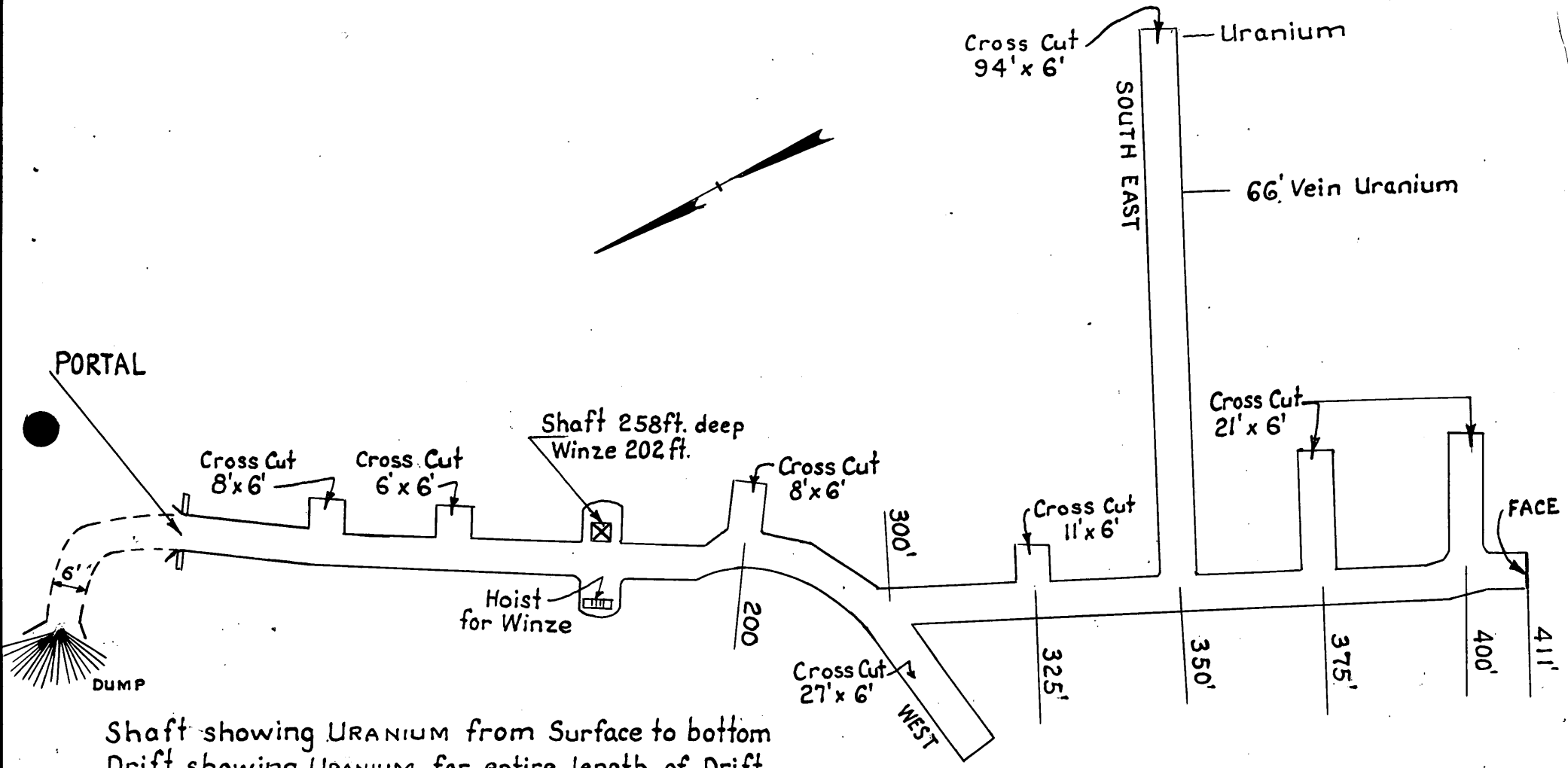
Aug. 25, 1951 (Date)

President (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE



Shaft showing URANIUM from Surface to bottom
Drift showing URANIUM for entire length of Drift
All EAST Cross Cuts show URANIUM
Shaft and Main Drift show Gold and Silver
for entire length and depth. The last 19 ft
of Shaft showing Silver and Gold by assay
$10.00 per ton from drill holes in the
Foot Wall of Shaft.

PLAN VIEW
Uranium Showing for 1300 ft
along The Vein

7 RAINBOW CLAIMS #1 TO #7
NYE COUNTY, NEVADA
ROUND MOUNTAIN MINING DISTRICT

3. RAINBOW MINING COMPANY

OFFICERS:	ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada	President
	CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada	Vice-President
	GEORGE JOLLY, 822 West 1st St., Reno, Nevada	Secretary-Treasurer

DIRECTORS: ROBERT L. McDONALD,
430 Gazette Bldg.,
Reno, Nevada

GEORGE JOLLY,
822 West 1st St.,
Reno, Nevada

FRED M. ANDERSON,
6 State Street,
Reno, Nevada

STOCKHOLDERS:

ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada
CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada
GEORGE JOLLY, 822 West 1st St., Reno, Nevada
FRED M. ANDERSON, 6 State St., Reno, Nevada
ALAN BIBLE, 430 Gazette Building, Reno, Nevada
FRANK FISHER, Virginia City, Nevada
MRS. LAURA STRAUBEL, 421 S. Sierra St., Reno, Nevada
GORDON W. RICE, Triune Bldg., Reno, Nevada
JOHN C. KELLY, Carson City, Nevada
W. E. BALDY, Carson City, Nevada
FRANK POPE, Loyola University, Los Angeles, California

4. (a) Applicant is composed of professional and business people of this area.

(b) Project will be managed by John Henebergh, the discoverer and owner of the property. Mr. Henebergh has 30 years experience in mines in Missouri and Nevada. Mr. Henebergh has been in Nevada since 1924 and has been engaged in all types of mining since that time.

8. Each of stockholders has pledged $500.00 to meet lease payments and owner's contribution. There are no liabilities other than current payments under the lease. Mine is not operating and there is no profit and loss statement.

10. (a) The property consists of 7 unpatented lode mining claims situated in the Round Mountain Mining District, Nye County, Nevada. Tunnel has been driven 411 feet; shaft has been sunk 202 feet from tunnel level or 258 feet from surface at the 225 foot tunnel station; the Southeasterly drift, 94 feet in length has been driven at the 350 foot tunnel station and a Westerly drift 27 feet in length has been driven at the 300 foot tunnel station. Main vein along which tunnel has been driven averages 6 feet in width. 94 foot drift cross cuts a parallel vein, 5 feet in width 61 feet from main tunnel. Surface indicates 4 parallel veins within 300 feet of the present 94 foot tunnel station on the Southeasterly drift. See attached maps for further details.

12. Property is located 1 mile from the Town of Round Mountain in Nye County, Nevada. Round Mountain is 58 miles North of Tonopah, Nevada. The road from Tonopah to Round Mountain is a hard surfaced road on State Highway System No. 8A. The 1 mile road from Round Mountain to the portal of the mine is a graded road. The nearest rail point is Mina, Nevada, which is approximately 70 miles Northwest of Tonopah, Nevada.

13. Water can be developed by sinking of wells.
Power to be used for exploration supplied from existing facilities available at Round Mountain.

14. Property has been developed as set forth in 10 (a) attached hereto. Tugger, hoist and ore buckets are located at shaft. Storage building, cimpressor house, 1 combination store room, office and change room and a timber building are now located on property and are useable during exploration and development work.

15. Ores should be milled at property, and shipped as concentrates.

16. (a) Property was discovered in 1928 by Henebergh Brothers in search of gold and silver. Tunnel was driven along the course of the vein a distance of some 335 feet. Lease was entered into with Nevada Uranium Production Co. in 1948, and this Company drive the tunnel then existing (335 feet) an additional 76 feet, sank a shaft 258 feet from the surfact or 202 feet from the tunnel level. Additional cross cuts were driven as shown on the attached map.

Uranium values occurred throughout the depths of the shaft and along the length of the tunnel and cross cuts. The Nevada

Uranium Co. ceased production in December, 1950, for lack of funds and the contract between the Nevada Uranium Products Co. and John and Perry Henebergh was forfeited in May, 1951.

16. (b) No known history of production of Uranium. Neighboring properties have been credited with production of approximately fifteen millions of dollars in gold and silver.

16. (c) Two geological and mining reports have been made by Walter E. Plank, a professional mining engineer with headquarters in San Francisco. These reports are attached hereto, as Exhibits 1 & 2.

Samples taken during March, 1951, from the 411 foot tunnel station at the face of the tunnel showed the following:

SMITH'S LABORATORY
Uranium Specialist
MOAB, UTAH

Nevada Uranium Production Co.
J. A. Henebergh
Round Mountain, Nevada

March 26, 1951

Sample Description	% U308	% V205	%	%	%
#350 Drift	0.16				
#411 Drift	0.21				

J. EARL SMITH
Chemist

Total Charges $6.00

The sample designated 350 foot drift was taken during March, 1951, from the cross cut of the second vein which is reached by the Easterly drift from 66 feet distance from the 350' tunnel station.

Two other samples taken from the fact of the tunnel at the 411 foot tunnel station and designated as #1 Fines and #2 Coarse showed the following:

SMITH'S LABORATORY
URANIUM SPECIALIST
MOAB, UTAH.

Nevada Uranium Production Co.
Round Mauntain, Nevada

Mar. 12, 1951

Sample Description	U308	V205
#1 Fines	0.134	
#2 Coarse	0.041	

J. EARL SMITH
Chemist

TOTAL CHARGES $6.00

The most recent assay on this property was received from the Bureau of Mines, P. O. Drawer "B", Boulder City, Nevada:

"

August 21, 1951

Hon. Alan Bible
430 Gazette Building
Reno, Nevada.

My dear Mr. Bible:

Reference is made to the three samples submitted for you by Mr. Don Ashbaugh, August 16, for radioactive examination,

All three of these samples have been identified as quite highly weathered granite containing autunite. Radiometric tests on split portions of the entire samples ground to minus 100 mesh show approximately the following:

"

No. 1. "350-foot crosscut, 66-foot vein."
0.024 percent uranium equivalent.

No. 2. "400-foot drift."
0.114 percent uranium equivalent.

No. 3 "300-foot drift."
0.042 percent uranium equivalent.

In accordance with instructions from our Washington, D.C. office, we are requestedto report to them and the U.S. Atomic Energy Commission all ore samples which contain 0.01 per cent uranium equivalent or higher. All information received is considered by the Bureau and the Commission as strictly confidential and is used for determining if a field examination might be warranted. We would therefore appreciate if you would supply the information checked on the enclosed sample report and return the sheet to this office.

Sincerely yours,

/s/ R. R. LLOYD,
R. R. Lloyd, Chief
Electrometallurgical Branch
Metallurgical Division
Region III

Enclosure. ".

18. (c) In process of development and impossible to get accurate estimate of tonnage until further exploration, which is purpose of this application.

19. According to the two assay sheets set forth in 16 (c) the Uranium content of the property has become richer as the mine was developed bearing out the mining reports and predictions of expected enrichment at depth.

21. Application is made for Diamond Drilling to further prove up property. In addition it is felt that the Easterly cross cut commencing at the 350 feet tunnel station should be driven beyond its present 94 foot station because surface indications definitely show 4 more additional parallel veins, the last of which lies approximately 300 feet East of the present 94 foot tunnel station on the Easterly cross cut.

23. Diamond Drilling contract will be let on a footage basis. Current prices for Diamond drilling in the area run from $2.50 to $3.00 per foot. It is estimated that $20,000.00 should be used for this item.

Cross cutting to develop the 4 additional parallel veins will require thelabor of three men (one drill man or miner and two muckers). The going rate of pay for miners in the area is $11.00 per day. Three men should drift 4 feet per day so that the additional parallel vein should be reached in approximately 75 days. Labor costs alone will run approximately $2500.00. A fair allowance for supplies, powder, fuses, caps, etc. would be $2,500.00 or a total estimate of $5,000.00 for cross cutting.

*

24. Project will be scheduled to be completed within one year from date of commencement. Sales will be made as work progresses.

* Rental of Equip. - Allow 1/60 of cost of Equip. per month

** Drifting can be contracted entirely

*** Buildings

EXHIBIT 1

Tonopah, Nevada,
19 August, 1948

Messrs:
William J. Loring,
Jess H. Midgley,
John C. Kelly.

Gentlemen:-

The following brief note is my preliminary opinion after a four hour inspection of a prospect called the "Rainbow Mine" situated one mile southerly of Round Mountain, Nevada, and 58 miles northeasterly of Tonopah, Nevada.

The property under consideration is as yet a prospect, therefore it is a development proposition. It lies in a low hill, the formation of which is a weathered extrusion of a metamorphosed granitoid of great age - possibly as old as Ordovician. In any event it appears to be much older than the Jurassic granites of the Sierra Nevada range.

The mine so far developed consists of an adit (striking 50-230°) run as a drift along a fault, the walls of which are from 5 to 7 feet apart, and which shows excellent slickensides on both walls, particularly the hanging. Dip is 70° or so. As this hillside is not steep the drift gains but little depth-at no point, even at the face, is there more than 65 feet of backs, hence, sinking is necessary.

Vein is a true fissure having identical rock on each wall. Its general appearance would indicate persistence to great depth. The fracture is filled with a banded kaolinized white material that originally may have been quartz and aluminum oxide, although so far no tests have been run to determine that point.

Almost continuously throughout the 350 ft. of length of this meandering drift uranium bearing ore is present in varying degrees of width and richness, all of which fluoresces brilliantly under the "black light". This ore is said to be radio-active; so far, this observer has had no chance to prove or disprove the statement.

Extreme length of this adit to date is 350 ft., more or less. At about 325 ft. is a clearly defined 90° and vertical cross fault fissure 6 to 10 inches wide, the frozen walls filled with a hard, glassy quartz. This type of quartz being very resistive to impregnation is poor in mineralization, therefore in this mine it is of little value as ore.

This fault is much later than the 'drift fault' although it was pre-mineral, This cross fault added to several surface data indicate to me the presence of a vein parallel to the vein under consideration. It lies possibly 300 ft. southerly and very probably forms the opposite boundary of which I suspect to be a horst.

The formation, as mentioned above, is of extreme age, and being of igneous origin is well suited to house radio active ores. The fault filling itself is of great antiquity and its mineral content now recognized as uranium may have been in an earlier day an element of difference physio-chemical properties.

Recommendations: the present drift is of value only as a prospecting "tunnel", as a working gallery it would be of little use. I suggest the suspected presence of a parallel vein to be proven or disproven. It there is such a vein there is a reasonable expectancy of internal shattering in the inclosed block filled with lenses and veinlets of ore.

If the presence of a south vein is established, a crosscut to intersect it should be driven from a point 20 ft. or so outside the present portal. The hillside is much steeper in that direction and backs would be much greater than at adit 'A'. Eventually a two compartment shaft will be sunk. It should not be started on either vein but (1) at a suitable point between the two veins, or (2) preferably, some 75 ft. northeasterly of the present portal.

Conclusion: I feel certain this property has considerable merit and that it will make a profitable venture.

Yours very truly,

Frank E. Plank,
San Francisco,
Mining Engineer.

EXHIBIT 2.

Virginia City, Nevada,
16th Sept. 1948

Mr. W. J. Loring,
Tonopah, Nevada

(Subject: Secondary Enrichment at Rainbow Mine)

Dear Mr. Loring:-

In your letter to Mr. Midgley dated 14 September, 1948, you bring up the subject of the ore improving in quality and quantity with depth. I hold no doubts regarding secondary enrichment being a factor of prime importance at this property.

Uranium salts are somewhat water soluble, hence, through the centuries the U content of the ore has dissolved to an unknown degree and has been carried downward to the permanent water table. There the saturated solutions meeting catalytic agents and other factors precipitate their U, Fe, Cu, O, etc., into other forms, the exact nature of which we do not know at present.

It may be said in rebuttal that the arid desert on the Round Mountain district had insufficient meteoric water (i.e., rain and snow) to cause any appreciable enhancement of values at water level, and that there is very little, if any, increase of value in Au, Ag ores at the Water Level. This is quite true of Au mines in particular because we find gold nearly always as a native metal which is very resistant to oxidation. But the metallic U combines very readily with O as well as other elements and forms some 55 known minerals, many of which are highly complex.

Too, we know positively that the Nevada-Arizona-California deserts were not always arid. In tertiary times rainfell in torrents almost continuously. Then there was the age when Lake Lahonton kept everything wet. The miocene Seas, too, covered this entire area for millions of years, although they were probably pre-mineral.

I think, with considerable conviction, that the water level at your mine will carry an appreciably thick stratum of complex U bearing ore, both primary and secondary. The ore exposed in the present adit clearly shows advanced leaching.

To arrive at a close approximation of the water level, one might investigate the water wells (if any) at Round Mountain, If standing water is found, use that as a datum and run a quick stadia-level survey to the tunnel floor. In open country that would be a short job.

Re the Geiger Counter queries: it would seem reasonable to assume that if 1 lb of evely diesseminated ore showing a U reaction of X clicks at intensidty, 2 lbs. of the same ore having twice the volume of radio-active U would give 2X or 2Y. A simple test would be to record the reading of a given weight of sample, cut it in half and take another reading.

Hoping that you are well, and that we may meet again soon, I am,

Yours truly,

Walter H. Plank

MINING LEASE

THIS AGREEMENT made and entered into, in duplicate, on the 19th day of July, 1951, by and between PERRY A. HENEBERGH and JOHN A. HENEBERGH, of Round Mountain, Nye County, Nevada, the parties of the first part, hereinafter called "Lessors", and RAINBOW MINING COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Nevada, the party of the second part, hereinafter called "Lessee",

W I T N E S S E T H:

The parties hereto, inconsideration of the mutual covenants and agreements herein contained and of the mutual benefits and advantages to accrue to them hereunder, do hereby contract and agree as follows:

FIRST: Lessors do hereby demise and let unto lessee, for the purpose of mining, seven (7) certain unpatented lode mining claims in the present condition thereof, situate in the Round Mountain Mining District of the County of Nye, State of Nevada, described as follows:

Rainbow Mining Claims Nos. 1 to 7 inclusive, for the period beginning on the 19th day of July, 1951, and ending on the 31st day of December, 1956. Provided, however, that the lessee shall have and is hereby granted the exclusive right and option to renew this lease for a period of five (5) additional years upon the same terms and conditions as under this lease except there shall be no further right of renewal. Said right of renewal shall be deemed official if the lessee shall serve upon the lessors either in person or by registered mail addressed to the lessors at their address, Post Office Box 152, Round

Mountain, Nevada, notifying the lessors of its intention to renew this lease for a period of five (5) additional years, without the execution of any new lease or other writing except by written endorsement hereon.

Provided, further, that said notice shall be mailed to the lessors during the last month of the term hereof but not less than fifteen (15) days prior to the termination of this lease.

This right of renewal, however, is subject to the condition that this lease shall be in good standing and that the lessee shall have performed each, every and all of the obligations of this lease and there has been no default on the part of lessee in either or any of the terms herein specified.

SECOND: Lessee shall have possession of all said premises, asprovided for in paragraph First, unless sooner terminated by noncompliance with or violation of the terms hereof as hereinafter provided. Lessee shall have the right to explore and mine in and upon said premises and to extract, remove, treat, ship and sell any and all minerals therefrom and for that purpose make such openings in the demised premises and to erect thereon such buildings and structures as it may deem proper in the conduct of such operations.

THIRD: Lessors shall have the right at all times to enter in and upon the demised premises or any part thereof and any openings and workings therein and thereon, and any buildings or structures thereon, for the purpose of inspecting or surveying the same and sampling any ores and to ascertain whether lessee is complying with the covenants and conditions of this lease.

FOURTH: Lessors shall also have the right to inspect

and make copies of all maps, plats, records, books and accounts made and kept by lessee in connection with its operations upon said property, and lessee shall furnish lessors a plat or plats of any drill hole completed upon any of the demised premises, together with a complete log of each drill hole and copies of all assay certificates made of cuttings from each such drill hole.

FIFTH: Lessee shall conduct all mining and other operations on said property in a good miner-like and workman-like manner and shall keep all shafts, tunnels and mine workings well and securely cribbed, timbered and supported, and shall not remove cribbing, timbers or supports, so as to endanger the ground or permit the same to cove or fall in, to the end that such property be preserved for mining purposes.

SIXTH: Lessee agrees to keep an accurate record of ores and all products mined and produced from the demised premises or any part thereof, to whom sold, and the price received therefor. All such records shall be open to the inspection of lessors or their duly authorized representatives at any time during ordinary business hours.

SEVENTH: Lessee shall prepare and send to lessors, addressed to them at Post Office Box 152 Round Mountain, Nevada, a report each month of the total tonnage of ore and other products removed from said property, together with the amounts, and the persons, firms or corporations to whom sold, and the price for which the same was sold. Lessee shall require the buyer to mail directly to the lessors, at Post Office Box 152 Round Mountain, Nevada, a copy of the bill of sale or other indicia of said sale or sales.

EIGHTH: Lessee covenants and agrees that commencing

with January 1, 1952, it will employ and perform in the working and mining of said Rainbow claims not less than Six Hundred Forty (640) man hours of actual underground development work during each of the calendar months of the term hereof, and that it will furnish lessors on or before the 20th day of each month after January 1, 1952, a written statement showing the number of man hours of labor performed on said Rainbow claims during the preceding calendar month.

NINTH: Lessee agrees to pay to the lessors the sum of One Hundred Dollars ($100.00) lawful money of the United States of America per week, in advance, each and every week beginning with the 19th day of July, 1951, to the first day of January, 1952, as part consideration for the execution and delivery of this lease.

TENTH: Lessee further covenants and agrees to commence actual mining work as above specified on said demised premises not later than January 1, 1952, and to carry on such work continuously except when for good cause written permission is obtained in advance from lessors to suspend operations for some period of time.

ELEVENTH: Lessee shall promptly pay for all labor and services done and rendered in connection with its operations upon said demised premises, and for all materials purchased or used by it for and in connection therewith, and shall at no time permit any lien or lienable charge to be validly asserted against said premises, or any part thereof, or the improvements thereon, or any part thereof.

TWELFTH: Lessee covenants and agrees that in conducting operations hereunder it will comply with all Federal and State laws applicable thereto, including Workman's Compensation

Law, the Nevada Industrial Insurance Law, and the so-called Social Security Law in such manner as to protect lessors from any and all obligation or liability in connection therewith.

Lessee agrees to deliver to Lessors at Round Mountain, Nevada, the original or duplicate receipt of the Nevada Industrial Insurance Commission showing that industrial insurance is carried on all employees, and also to deliver to the lessors monthly the original or duplicate copy of the payroll statement filed with the said commission each month and the receipt or copy thereof showing payment to the Nevada Industrial Insurance Commission for payroll premiums for such insurance.

THIRTEENTH: Lessee shall at all times keep posted in two or more conspicuous places upon the demised premises, and particularly at all points where workmen are engaged, a notice in the following form:

N O T I C E

Notice is hereby given that the undersigned will not be responsible for the payment of any labor performed upon or material or supplies furnished for or used upon those premises known and described as follows, nor will the following described property be subject to any liens for or on account thereof, on the following mining claims:

Rainbow Mining Claim No. 1
Rainbow Mining Claim No. 2
Rainbow Mining Claim No. 3.
Rainbow Mining Claim No. 4
Rainbow Mining Claim No. 5
Rainbow Mining Claim No. 6
Rainbow Mining Claim No. 7

whether the said material be used for the construction, alteration or repair or the intended construction, alteration or repair of buildings, or other structures, or otherwise upon the said premises, including labor performed thereon.

DATED: This 19th day of July, 1951.

PERRY A. HENSBERGH

JOHN A. HENSBERGH

Owners

FOURTEENTH: Lessee shall promptly at or before the time when the same shall become delinquent pay and satisfy all lawful levies of taxes and assessments, general and special, upon the demised premises, the improvements thereof, and the ores and minerals extracted therefrom, excepting Nevada taxes relating to the net proceeds of mines which the law requires the lessors to pay.

FIFTEENTH: Lessee agrees to pay to lessors at Round Mountain, Nevada, royalties on all ore and other products mined and shipped or sold from said Rainbow claims, as follows:

> The royalty on all ore and other products shipped or sold shall be ten percent (10%) of the net mill or smelter return and ten percent (10%) of any premiumd or bonus paid or payable by any governmental agency on such ore or on the mineral contained therein. The term "net mill or smelter return" is defined as the gross value of the ore, less treatment and railroad freight charges thereon and penalties deducted and exacted by the purchaser or smelter because of impurities in said ores.

SIXTEENTH: Lessee covenants and agrees that lessors' royalty upon ores shipped or sold from said Rainbow claims shall be paid by the mill, smelter or other purchaser to which such ores shall be shipped and lessee shall at the time of shipment give written orders to the mill, smelter or purchaser to which such ores may be shipped, directing that out of the proceeds thereof such mill, smelter or purchaser shall pay to lessors or to their order the royalties as hereinbefore defined, and at the time such orders are issued by lessee to such mill, smelter or purchaser, a duplicate thereof shall be sent to lessors at Post Office Box 152, Round Mountain, Nevada.

SEVENTEENTH: Lessee agrees to sell all ores mined and removed from the demised premises to the purchaser or purchasers making bona fide bids therefor that willyield the highest net return as contemplated by Article Fifteenth hereof.

EIGHTEENETH: Lessee shall have no right to assign this lease or any interest therein or to sublet any part of the demised premises, under penalty of forfeitures, without the previous consent in writing of lessors.

NINETEENTH: It is agreed between the parties hereto that cessations or delays in operation hereunder when occasioned by fire, riot or civil commotion, strikes, or other labor controversies, operation of law or interference of Government agencies, acts of nature, or other causes beyond the control of lessee and which lessee could not have been deemed reasonably to have foreseen, shall be excused during the continuance of such cause only, without working termination or forfeiture of this lease, but shall not have the effect of extending the term hereof.

TWENTIETH: In case lessee shall fail to make any payment of royalties at the time and in the manner herein provided for, or if it shall fail to faithfully keep and perform any of its covenants and agreements herein contained, then lessors may give lessee notice in writing of such failure by United States registered mail, postage prepaid, addressed to lessee at Round Mountain, Nevada, and if within two (2) weeks after the mailing of such notice such failure shall not have been remedied, lessors without further notice, shall have the right to terminate this agreement, and upon such termination or at the expiration of this lease, lessee shall, without demand or notice, deliver up to lessors the possession of said premises, and each and every part and parcel thereof, in as good condition as the same now is or may be put into, ordinary wear and tear and damage by the elements excepted, and with all tunnels, adits, shafts, improvements and workings in a condition for the continued operation of said

property.

All improvements of every kind, including machinery, equipment and facilities placed on or brought upon the property for the operation of the mine shall be deemed to be a part of said property and shall remain thereon and revert to the lessors at the expiration or sooner termination of this lease.

Lessee agrees that it will not, during the term hereof, remove any rails, ties, headframes, cribbing, timbers, supports, or other facilities placed in or on the said property whether the same now exist or are placed in or on said property by the lessee.

TWENTYFIRST: This agreement shall enure to the benefit of and bind the parties of the first part, their heirs, executors, administrators and assigns, and the party of the second part, its successors and lawful assigns.

TWENTYSECOND: The lessee shall be required to obtain any and all licenses required for the operation of said property, and particularly all Federal licenses required for the mining and disposition of uranium ores, all at its own expense and responsibility.

IN WITNESS WHEREOF, the parties of the first part have hereunto signed their names, and the party of the second part has caused this agreement to be executed by its officers who are thereunto duly authorized so to do, this 21st day of July, 1951.

JOHN A. HENEBERGH
John A. Henebergh

PERRY A. HENEBERGH
Perry A. Henebergh

Lessors

RAINBOW MINING COMPANY

By ROBERT L. McDONALD
President

Lessee

ATTEST:
GEORGE S. JOLLY
Secretary

(Corporate Seal)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 19th day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for said County of Washoe, JOHN A. RENESBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe, the day and year in this certificate first above written.

GEORGIA NEWMAN
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires May 22, 1952

(S E A L)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 7th day of August, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County, ROBERT L. McDONALD, known to me to be the President of the corporation that executed the foregoing instrument, and upon oath did depose that he is the officer of said corporation as above designated; that he is acquainted with the seal of said corporation; that the signatures to said instrument were made by the officers of said corporation as indicated after said signatures, and that the said corporation executed the said instrument freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe the day and year in this certificate first above written.

CLARENCE K. JONES
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires October 3, 1954

(S E A L)

STATE OF CALIFORNIA,)
) SS.
COUNTY OF LOS ANGELES.)

On this 21st day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County of Los Angeles, PERRY A. HANEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Los Angeles the day and year in this certificate first above written.

CHARLES L. POREP
Notary Public in and for the County of Los Angeles, State of California.

(S E A L)

My Commission expires Nov. 1, 1953

FILE COPY
SURNAME:

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

Gordon
Bourret
Anderson
Mittendorf

OCT 9 1951

Hon. Patrick McCarran
United States Senate
Washington 25, D. C.

My dear Senator McCarran:

We wish to advise that the application that you so kindly transmitted on behalf of the Rainbow Mining Company for an exploration project, DMA docket 2093, has been received and studied by the reviewers of D. M. A.

Having been found in good order, it has accordingly been sent to the corresponding field office for their study and review. As soon as this is completed, the docket will be returned here for final action.

Sincerely yours,

C. O. Mittendorf (S. H.)
Acting Administrator

S.F. 10-9

EGerdon/mh 10-4-51
cc: Adm. Read. File
Lyon
Bourret
Field Team III
Keiser, USGS
Hosted, "
DMA docket file

United States Senate

Mr. [illegible] Schroeder
Acting Administrator
Defense Minerals Administration
Department of the Interior
Washington, [illegible]

Dear Mr. Schroeder:

Bennett
9-19-51

I am enclosing for your consideration an application for aid for an exploration project pursuant to Mineral Order Number Five, under the Defense Production Act of 1950. This application is submitted by the Rainbow Mining Company, [illegible] Gazette Building, Reno, Nevada, and the minerals involved is uranium.

The applicants are requesting a [illegible] loan, [illegible] of which will be furnished by them. The location of the mine is at Round Mountain, Nevada, and sketches of the claims are attached to the application. The property consists of several unpatented lode mining claims. Water can be developed by sinking of wells, and power to be used for exploration supplied from existing facilities available at Round Mountain.

This application is one of the most complete I have ever seen, and all information pertaining to the mine is readily available.

The applicants are well known to me, and are professional and business men of the Reno area. I cannot recommend them too highly. I feel that this application is especially meritorious, and I strongly urge that it be approved after a full field investigation has been made by your field team in that area.

Thank you for your courtesy and cooperation, and I extend my kindest personal regards and best wishes to you.

Sincerely,

Pat McCarran

Enclosures:
Application MF-103 in quadruplicate.

FILE COPY
SURNAME:

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

Gordon
Bourret
Thayer
Moore

OCT 1 1951

Mr. Robert L. McDonald, President
Rainbow Mining Company
430 Gazette Building
Reno, Nevada

Re: Round Mountain, Nevada
Uranium - DMA docket 2093

Dear Mr. McDonald:

Your application, docket 2093, for an exploration project in the amount of $25,000, has been received by the Minor and Rare Metals Branch of the Supply Division.

Before a decision can be reached on your request we find it is necessary to obtain additional information on your property. Your application therefore is being referred to the office of the Executive Officer of DMA field team III, Mr. M. G. Miller, 1012 Flood Building, 870 Market Street, San Francisco 2, California, who will get in touch with you if necessary.

Yours very truly,

SIGNED
Tom Lyon, Director
Supply Division

jf 10/1

EGordon/ch 9-25-51
cc: Adm. Reading File
Lyon
Bourret
Keiser - USGS
Hosted
Field Team III
DMA docket file ✓

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

OCT 1 1951

Mr. H. C. Miller
1012 Flood Building
870 Market Street
San Francisco 2, California

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 2093

Commodity Uranium

Applicant Rainbow Mining Co., 430 Gazette Bldg., Reno, Nevada

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon, Chairman
Coordinating Committee

For Bureau of Mines

For Geological Survey

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 2093

Commodity Uranium

Total Amount $25,000

Govt. Participation $22,500

1. Name and Address of Applicant Rainbow Mining Company
430 Gazette Building, Reno, Nevada

2. Location of Property Round Mountain, Nevada

3. Mineral or metal Uranium Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination Report by Field Team is required. See Item 17.

e) Is there an alternative and favorable project?
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? yes

Does the lease have sufficient time to run to cover a future productive period? Yes - need location date, book & page of recording claims

*question numbers are those of MF-103

7. Are subordination agreements necessary? yes

a) MF-201? _____

b) MF-202 ✓

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower ✓

b) Equipment and supplies ✓
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* yes

d) Water (question 13)* ✓ yes

e) Power (question 13)* ✓ yes

Is a field check needed on any of these points? no

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* ?

_____

Is a field check needed on this point? yes

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? no

If not, are there sufficient data given so that you can describe the project? no _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? no

_____

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? yes

If not, what part of it is? _____

_____

_____

_____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? no

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? no If so, attach a draft.

e) Are the cost estimates reasonable? seem not

f) Should more information be requested from applicant? yes

g) Is a field examination necessary to complete Exhibit A? yes

11. Exhibit B (question 23-d)*

a) Is it applicable? no

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed?_____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Don't know

b) Sufficient data? no If so, attach a draft.

c) Are rents and charges reasonable? ?

d) Is a field check needed? ?

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? no

b) Is the schedule adequate for the work proposed? ?

c) Is the schedule excessive for the work proposed? ?

d) Are the proposed wages and salaries reasonable? seem not

e) Is a field check needed? yes

14. Exhibit E (question 23-c)*

a) Is it applicable? no

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? **It is suggested that the Field Team review this application with Mr. Lincoln R. Page, U.S.G.S., and Mr. Charles Towle, AEC, Denver Federal Center, Denver, Colorado.** If geologically recommendable, have applicant prepare & submit the necessary contract exhibits in metaphrase.

Reviewed by: J. O. Hotard, A.E.C., per HOK
H. W. Keizer, U.S.G.S.
E. R. Gordon DMA

Date September 21, 1951

INT.-DUP. SEC., WASH., D.C. 99009

Mr. Robert L. McDonald, President
Rainbow Mining Company
430 Gazette Building
Reno, Nevada

Subject: DMA-2093
Re: Exploration Loan
Rainbow Group

My dear Mr. McDonald:

This will acknowledge receipt of your application dated September 19, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA- 2093 and referred to the Minor and Rare Metals Branch.

Kindly refer to DMA- 2093 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

KENNETH MC KELLAR, TENN., CHAIRMAN
CARL HAYDEN, ARIZ.
ELMER THOMAS, OKLA.
RICHARD B. RUSSELL, GA.
PAT MC CARRAN, NEV.
JOSEPH C. O'MAHONEY, WYO.
DENNIS CHAVEZ, N. MEX.
BURNET R. MAYBANK, S. C.
ALLEN J. ELLENDER, LA.
LISTER HILL, ALA.
HARLEY M. KILGORE, W. VA.
JOHN L. MC CLELLAN, ARK.
A. WILLIS ROBERTSON, VA.
STYLES BRIDGES, N. H.
CHAN GURNEY, S. DAK.
HOMER FERGUSON, MICH.
KENNETH S. WHERRY, NEBR.
GUY CORDON, OREG.
LEVERETT SALTONSTALL, MASS.
MILTON R. YOUNG, N. DAK.
WILLIAM F. KNOWLAND, CALIF.
EVERARD H. SMITH, CLERK
CECIL H. TOLBERT, ASST. CLERK

OFFICIAL FILE COPY

To	Init.	Date
330	ee	9-19
210		

United States Senate

COMMITTEE ON APPROPRIATIONS

September 18, 1951

DMA-2093

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
SEP 19 3 55 PM '51

Dr. Wilburn C. Schroeder
Acting Administrator
Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

My dear Dr. Schroeder:

I am enclosing for your consideration an application for aid for an exploration project pursuant to Mineral Order Number Five, under the Defense Production Act of 1950. This application is submitted by the Rainbow Mining Company, 430 Gazette Building, Reno, Nevada, and the mineral involved is uranium.

The applicants are requesting a $25,000 loan, 10% of which will be furnished by them. The location of the mine is at Round Mountain, Nevada, and sketches of the mining claims are attached to the application. The property consists of seven unpatented lode mining claims. Water can be developed by sinking of wells, and power to be used for exploration supplied from existing facilities available at Round Mountain.

This application is one of the most complete I have ever seen, and all information pertaining to the mine is readily available.

The applicants are well known to me, and are professional and business men of the Reno area. I cannot recommend them too highly. I feel that this application is especially meritorious, and I strongly urge that it be approved after a full field investigation has been made by your field team in that area.

Thank you for your courtesy and cooperation, and I extend my kindest personal regards and best wishes to you.

Sincerely,

Pat McCarran

Enclosures:
Application MF-103 in quadruplicate.

SEP 19 11 02 AM '51
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

Form MF-100
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-2093

Date received 9-19-51

Participation

RAINBOW MINING COMPANY
430 Gazette Building,
Reno, Nevada

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application August 25, 1951

Estimated cost $25,000.00

Mineral or metal Uranium

Percentage of Government participation 90%

Location of mine Round Mountain, Nevada

Date of filing MF-100

DMA Docket Number, if available 2093

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. See attachment

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attachment

*5. Are you the owner or the lessee of the property? Lessee

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing. Copy attached. Lease in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. See attached statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $2,500.00 Yes.

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See attachment

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Same as above.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. RAINBOW GROUP

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. See attachment.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. See attachment

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. See attachment

15. State in detail how the ore could be shipped and how and where milled. See attachment

*16. History: See attachment

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production: None

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly. Torbanite and Autunite

(*b*) Submit available maps and assay data. Maps and assay data attached hereto.

(*c*) Give estimated tonnage and grade of each class of ore reserves. See attachment

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. See attachment.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? Uranium See attachment

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. This question has been previously answered. See engineer reports, attached maps and assay data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each. See attachment

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. See attachment

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Dunkow Mining Co. (Name of company)

By Robert L. McDonald (Signature of authorized official)

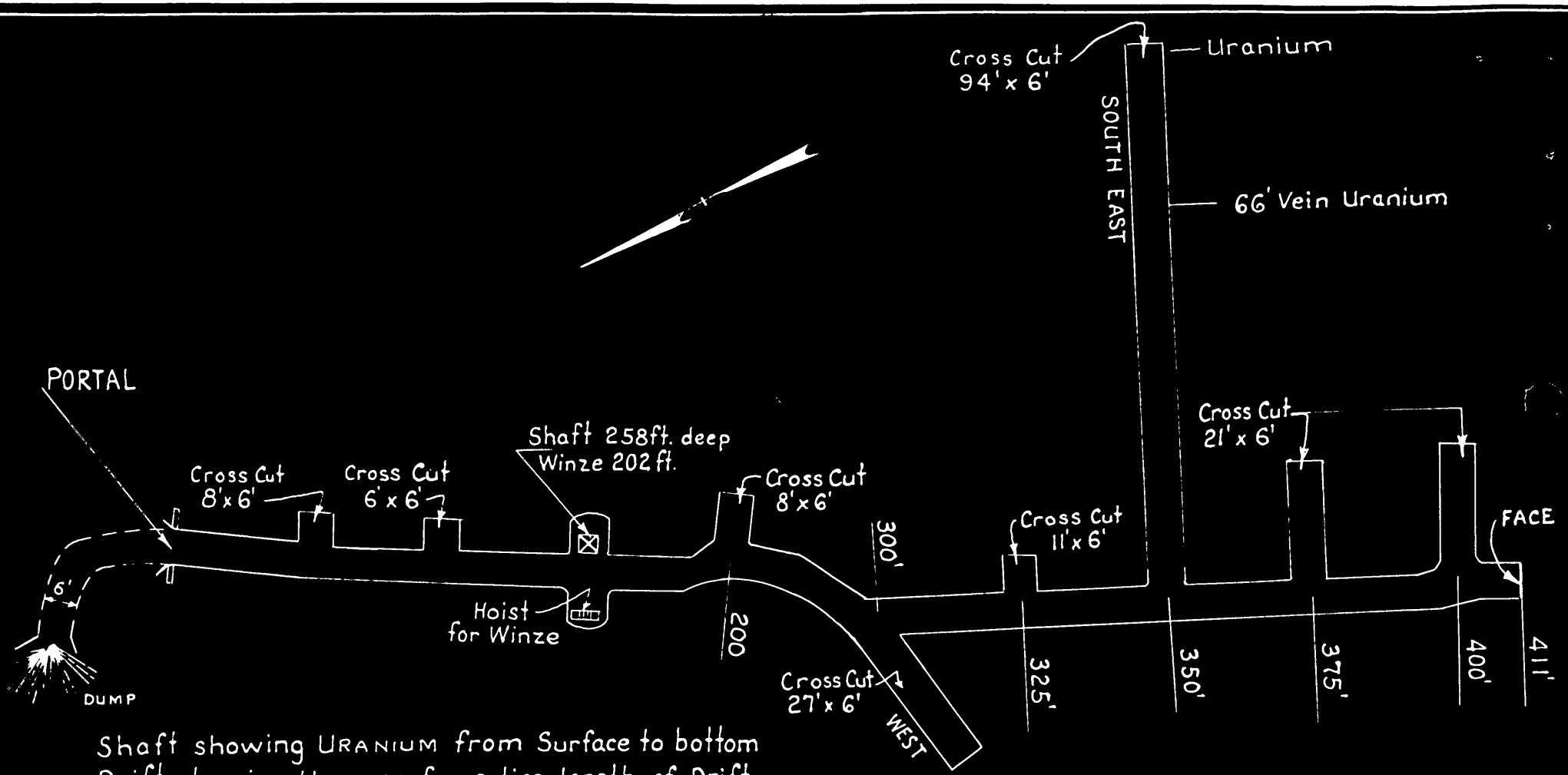
Aug 25, 1951 (Date)

President (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE



Shaft showing URANIUM from Surface to bottom
Drift showing URANIUM for entire length of Drift
All EAST Cross Cuts show URANIUM
Shaft and Main Drift show Gold and Silver
for entire length and depth. The last 19 ft
of Shaft showing Silver and Gold by assay
$10.00 per ton from drill holes in the
Foot Wall of Shaft.

PLAN VIEW
Uranium Showing for 1300 ft
along The Vein

7 RAINBOW CLAIMS #1 TO #7
NYE COUNTY, NEVADA
ROUND MOUNTAIN MINING DISTRICT

3. RAINBOW MINING COMPANY

OFFICERS:	ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada	President
	CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada	Vice-President
	GEORGE JOLLY, 822 West 1st St., Reno, Nevada	Secretary-Treasurer
DIRECTORS:	ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada	
	GEORGE JOLLY, 822 West 1st St., Reno, Nevada	
	FRED M. ANDERSON, 6 State Street, Reno, Nevada	

STOCKHOLDERS:

ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada
CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada
GEORGE JOLLY, 822 West 1st St., Reno, Nevada
FRED M. ANDERSON, 6 State St., Reno, Nevada
ALAN BIBLE, 430 Gazette Building, Reno, Nevada
FRANK FISHER, Virginia City, Nevada
MRS. LAURA STRAUBEL, 421 S. Sierra St., Reno, Nevada
GORDON W. RICE, Triune Bldg., Reno, Nevada
JOHN C. KELLY, Carson City, Nevada
W. E. BALDY, Carson City, Nevada
FRANK POPE, Loyola University, Los Angeles, California

4. (a) Applicant is composed of professional and business people of this area.

(b) Project will be managed by John Henebergh, the discoverer and owner of the property. Mr. Henebergh has 30 years experience in mines in Missouri and Nevada. Mr. Henebergh has been in Nevada since 1924 and has been engaged in all types of mining since that time.

8. Each of stockholders has pledged $500.00 to meet lease payments and owner's contribution. There are no liabilities other than current payments under the lease. Mine is not operating and there is no profit and loss statement.

10. (a) The property consists of 7 unpatented lode mining claims situated in the Round Mountain Mining District, Nye County, Nevada. Tunnel has been driven 411 feet; shaft has been sunk 202 feet from tunnel level or 258 feet from surface at the 225 foot tunnel station; the Southeasterly drift, 94 feet in length has been driven at the 350 foot tunnel station and a Westerly drift 27 feet in length has been driven at the 300 foot tunnel station. Main vein along which tunnel has been driven averages 6 feet in width. 94 foot drift cross cuts a parallel vein, 5 feet in width 61 feet from main tunnel. Surface indicates 4 parallel veins within 300 feet of the present 94 foot tunnel station on the Southeasterly drift. See attached maps for further details.

12. Property is located 1 mile from the Town of Round Mountain in Nye County, Nevada. Round Mountain is 58 miles North of Tonopah, Nevada. The road from Tonopah to Round Mountain is a hard surfaced road on State Highway System No. 8A. The 1 mile road from Round Mountain to the portal of the mine is a graded road. The nearest rail point is Mina, Nevada, which is approximately 70 miles Northwest of Tonopah, Nevada.

13. Water can be developed by sinking of wells.
Power to be used for exploration supplied from existing facilities available at Round Mountain.

14. Property has been developed as set forth in 10 (a) attached hereto. Tugger, hoist and ore buckets are located at shaft. Storage building, cimpressor house, 1 combination store room, office and change room and a timber building are now located on property and are useable during exploration and development work.

15. Ores should be milled at property, and shipped as concentrates.

16. (a) Property was discovered in 1928 by Henebergh Brothers in search of gold and silver. Tunnel was driven along the course of the vein a distance of some 335 feet. Lease was entered into with Nevada Uranium Production Co. in 1948, and this Company drive the tunnel then existing (335 feet) an additional 76 feet, sank a shaft 258 feet from the surfact or 202 feet from the tunnel level. Additional cross cuts were driven as shown on the attached map.

Uranium values occurred throughout the depths of the shaft and along the length of the tunnel and cross cuts. The Nevada

Uranium Co. ceased production in December, 1950, for lack of funds and the contract between the Nevada Uranium Products Co. and John and Perry Henebergh was forfeited in May, 1951.

16. (b) No known history of production of Uranium. Neighboring properties have been credited with production of approximately fifteen millions of dollars in gold and silver.

16. (c) Two geological and mining reports have been made by Walter E. Plank, a professional mining engineer with headquarters in San Francisco. These reports are attached hereto, as Exhibits 1 & 2.

Samples taken during March, 1951, from the 411 foot tunnel station at the face of the tunnel showed the following:

SMITH'S LABORATORY
Uranium Specialist
MOAB, UTAH

Nevada Uranium Production Co.
J. A. Henebergh
Round Mountain, Nevada

March 26, 1951

Sample Description	% U308	% V205	%	%	%
#350 Drift	0.16				
#411 Drift	0.21				

J. EARL SMITH
Chemist

Total Charges $6.00

The sample designated 350 foot drift was taken during March, 1951, from the cross cut of the second vein which is reached by the Easterly drift from 66 feet distance from the 350' tunnel station.

Two other samples taken from the fact of the tunnel at the 411 foot tunnel station and designated as #1 Fines and #2 Coarse showed the following:

SMITH'S LABORATORY
URANIUM SPECIALIST
MOAB, UTAH.

Nevada Uranium Production Co.
Round Mountain, Nevada

Mar. 12, 1951

Sample Description	U3O8	V2O5
#1 Fines	0.134	
#2 Coarse	0.041	

J. EARL SMITH
Chemist

TOTAL CHARGES $6.00

The most recent assay on this property was received from the Bureau of Mines, P. O. Drawer "B", Boulder City, Nevada:

"

August 21, 1951

Hon. Alan Bible
430 Gazette Building
Reno, Nevada.

My dear Mr. Bible:

Reference is made to the three samples submitted for you by Mr. Don Ashbaugh, August 16, for radioactive examination.

All three of these samples have been identified as quite highly weathered granite containing autunite. Radiometric tests on split portions of the entire samples ground to minus 100 mesh show approximately the following:

"

No. 1. "350-foot crosscut, 66-foot vein."
0.024 percent uranium equivalent.

No. 2. "400-foot drift."
0.114 percent uranium equivalent.

No. 3 "300-foot drift."
0.042 percent uranium equivalent.

In accordance with instructions from our Washington, D.C. office, we are requestedto report to them and the U.S. Atomic Energy Commission all ore samples which contain 0.01 per cent uranium equivalent or higher. All information received is considered by the Bureau and the Commission as strictly confidential and is used for determining if a field examination might be warranted. We would therefore appreciate if you would supply the information checked on the enclosed sample report and return the sheet to this office.

Sincerely yours,

/s/ R. R. LLOYD,
R. R. Lloyd, Chief
Electrometallurgical Branch
Metallurgical Division
Region III

Enclosure. ".

18. (c) In process of development and impossible to get accurate estimate of tonnage until further exploration, which is purpose of this application.

19. According to the two assay sheets set forth in 16 (c) the Uranium content of the property has become richer as the mine was developed bearing out the mining reports and predictions of expected enrichment at depth.

21. Application is made for Diamond Drilling to further prove up property. In addition it is felt that the Easterly cross cut commencing at the 350 feet tunnel station should be driven beyond its present 94 foot station because surface indications definitely show 4 more additional parallel veins, the last of which lies approximately 300 feet East of the present 94 foot tunnel station on the Easterly cross cut.

23. Diamond Drilling contract will be let on a footage basis. Current prices for Diamond drilling in the area run from $2.50 to $3.00 per foot. It is estimated that $20,000.00 should be used for this item.

Cross cutting to develop the 4 additional parallel veins will required thelabor of three men (one drill man or miner and two muckers). The going rate of pay for miners in the area is $11.00 per day. Three men should drift 4 feet per day so that the additional parallel vein should be reached in approximately 75 days. Labor costs alone will run approximately $2500.00. A fair allowance for supplies, powder, fuses, caps, etc. would be $2,500.00 or a total estimate of $5,000.00 for cross cutting.

24. Project will be scheduled to be completed within one year from date of commencement. Sales will be made as work progresses.

EXHIBIT 1.

Tonopah, Nevada,
19 August, 1948

Messrs:
William J. Loring,
Jess H. Midgley,
John C. Kelly.

Gentlemen:-

The following brief note is my preliminary opinion after a four hour inspection of a prospect called the "Rainbow Mine" situated one mile southerly of Round Mountain, Nevada, and 58 miles northeasterly of Tonopah, Nevada.

The property under consideration is as yet a prospect, therefore it is a development proposition. It lies in a low hill, the formation of which is a weathered extrusion of a metamorphosed granitoid of great age - possibly as old as Ordovician. In any event it appears to be much older than the Jurassic granites of the Sierra Nevada range.

The mine so far developed consists of an adit (striking 50-230°) run as a drift along a fault, the walls of which are from 5 to 7 feet apart, and which shows excellent slickensides on both walls, particularly the hanging. Dip is 70° or so. As this hillside is not steep the drift gains but little depth-at no point, even at the face, is there more than 65 feet of backs, hence, sinking is necessary.

Vein is a true fissure having identical rock on each wall. Its general appearance would indicate persistence to great depth. The fracture is filled with a banded kaolinized white material that originally may have been quartz and aluminum oxide, although so far no tests have been run to determine that point.

Almost continuously throughout the 350 ft. of length of this meandering drift uranium bearing ore is present in varying degrees of width and richness, all of which fluoresces brilliantly under the "black light". This ore is said to be radio-active; so far, this observer has had no chance to prove or disprove the statement.

Extreme length of this adit to date is 350 ft., more or less. At about 325 ft. is a clearly defined 90° and vertical cross fault fissure 6 to 10 inches wide, the frozen walls filled with a hard, glassy quartz. This type of quartz being very resistive to impregnation is poor in mineralization, therefore in this mine it is of little value as ore.

This fault is much later than the 'drift fault' although it was pre-mineral, This cross fault added to several surface data indicate to me the presence of a vein parallel to the vein under consideration. It lies possibly 300 ft. southerly and very probably forms the opposite boundary of which I suspect to be a horst.

The formation, as mentioned above, is of extreme age, and being of igneous origin is well suited to house radio active ores. The fault filling itself is of great antiquity and its mineral content now recognized as uranium may have been in an earlier day an element of difference physio-chemical properties.

Recommendations: the present drift is of value only as a prospecting "tunnel", as a working gallery it would be of little use. I suggest the suspected presence of a parallel vein to be proven or disproven. If there is such a vein there is a reasonable expectancy of internal shattering in the inclosed block filled with lenses and veinlets of ore.

If the presence of a south vein is established, a crosscut to intersect it should be driven from a point 20 ft. or so outside the present portal. The hillside is much steeper in that direction and backs would be much greater than at adit 'A'. Eventually a two compartment shaft will be sunk. It should not be started on either vein but (1) at a suitable point between the two veins, or (2) preferably, some 75 ft. northeasterly of the present portal.

Conclusion: I feel certain this property has considerable merit and that it will make a profitable venture.

Yours very truly,

Frank E. Plank,
San Francisco,
Mining Engineer.

EXHIBIT 2

Virginia City, Nevada,
16th Sept. 1948

Mr. W. J. Loring,
Tonopah, Nevada

(Subject: Secondary Enrichment at Rainbow Mine)

Dear Mr. Loring:-

In your letter to Mr. Midgley dated 14 September, 1948, you bring up the subject of the ore improving in quality and quantity with depth. I hold no doubts regarding secondary enrichment being a factor of prime importance at this property.

Uranium salts are somewhat water soluble, hence, through the centuries the U content of the ore has dissolved to an unknown degree and has been carried downward to the permanent water table. There the saturated solutions meeting catalytic agents and other factors precipitate their U, Fe, Cu, O, etc., into other forms, the exact nature of which we do not know at present.

It may be said in rebuttal that the arid desert on the Round Mountain district had insufficient meteoric water (i.e., rain and snow) to cause any appreciable enhancement of values at water level, and that there is very little, if any, increase of value in Au, Ag ores at the Water Level. This is quite true of Au mines in particular because we find gold nearly always as a native metal which is very resistant to oxidation. But the metallic U combines very readily with O as well as other elements and forms some 55 known minerals, many of which are highly complex.

Too, we know positively that the Nevada-Arizona-California deserts were not always arid. In tertiary times rainfall in torrents almost continuously. Then there was the age when Lake Lahonton kept everything wet. The miocene Seas, too, covered this entire area for millions of years, although they were probably pre-mineral.

I think, with considerable conviction, that the water level at your mine will carry an appreciably thick stratum of complex U bearing ore, both primary and secondary. The ore exposed in the present adit clearly shows advanced leaching.

To arrive at a close approximation of the water level, one might investigate the water wells (if any) at Round Mountain, If standing water is found, use that as a datum and run a quick stadia-level survey to the tunnel floor. In open country that would be a short job.

Re the Geiger Counter queries: it would seem reasonable to assume that if 1 lb of evely diesseminated ore showing a U reaction of X clicks at intensidty, 2 lbs. of the same ore having twice the volume of radio-active U would give 2X or 2Y. A simple test would be to record the reading of a given weight of sample, cut it in half and take another reading.

Hoping that you are well, and that we may meet again soon, I am,

Yours truly,

Walter H. Plank

MINING LEASE

THIS AGREEMENT made and entered into, in duplicate, on the 19th day of July, 1951, by and between PERRY A. HENEBERGH and JOHN A. HENEBERGH, of Round Mountain, Nye County, Nevada, the parties of the first part, hereinafter called "Lessors", and RAINBOW MINING COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Nevada, the party of the second part, hereinafter called "Lessee",

W I T N E S S E T H:

The parties hereto, incconsideration of the mutual covenants and agreements herein contained and of the mutual benefits and advantages to accrue to them hereunder, do hereby contract and agree as follows:

FIRST: Lessors do hereby demise and let unto lessee, for the purpose of mining, seven (7) certain unpatented lode mining claims in the present condition thereof, situate in the Round Mountain Mining District of the County of Nye, State of Nevada, described as follows:

Rainbow Mining Claims Nos. 1 to 7 inclusive, for the period beginning on the 19th day of July, 1951, and ending on the 31st day of December, 1956. Provided, however, that the lessee shall have and is hereby granted the exclusive right and option to renew this lease for a period of five (5) additional years upon the same terms and conditions as under this lease except there shall be no further right of renewal. Said right of renewal shall be deemed official if the lessee shall serve upon the lessors either in person or by registered mail addressed to the lessors at their address, Post Office Box 152, Round

Mountain, Nevada, notifying the lessors of its intention to renew this lease for a period of five (5) additional years, without the execution of any new lease or other writing except by written endorsement hereon.

Provided, further, that said notice shall be mailed to the lessors during the last month of the term hereof but not less than fifteen (15) days prior to the termination of this lease.

This right of renewal, however, is subject to the condition that this lease shall be in good standing and that the lessee shall have performed each, every and all of the obligations of this lease and there has been no default on the part of lessee in either or any of the terms herein specified.

SECOND: Lessee shall have possession of all said premises, asprovided for in paragraph First, unless sooner terminated by noncompliance with or violation of the terms hereof as hereinafter provided. Lessee shall have the right to explore and mine in and upon said premises and to extract, remove, treat, ship and sell any and all minerals therefrom and for that purpose make such openings in the demised premises and to erect thereon such buildings and structures as it may deem proper in the conduct of such operations.

THIRD: Lessors shall have the right at all times to enter in and upon the demised premises or any part thereof and any openings and workings therein and thereon, and any buildings or structures thereon, for the purpose of inspecting or surveying the same and sampling any ores and to ascertain whether lessee is complying with the covenants and conditions of this lease.

FOURTH: Lessors shall also have the right to inspect

and make copies of all maps, plats, records, books and accounts made and kept by lessee inconnection with its operations upon said property, and lessee shall furnish lessors a plat or plats of any drill hole completed upon any of the demised premises, together with a complete log of each drill hole and copies of all assay certificates made of cuttings from each such drill hole.

FIFTH: Lessee shall conduct all mining and other operations on said property in a good miner-like and workman-like manner and shall keep all shafts, tunnels and mine workings well and securely cribbed, timbered and supported, and shall not remove cribbing, timbers or supports, so as to endanger the ground or permit the same to cove or fall in, to the end that such property be preserved for mining purposes.

SIXTH: Lessee agrees to keep an accurate record of ores and all products mined and produced from the demised premises or any part thereof, to whom sold, and the price received therefor. All such records shall be open to the inspection of lessors or their duly authorized representatives at any time during ordinary business hours.

SEVENTH: Lessee shall prepare and send to lessors, addressed to them at Post Office Box 152 Round Mountain, Nevada, a report each month of the total tonnage of ore and other products removed from said property, together with the amounts, and the persons, firms or corporations to whom sold, and the price for which the same was sold. Lessee shall require the buyer to mail directly to the lessors, at Post Office Box 152 Round Mountain, Nevada, a copy of the bill of sale or other indicia of said sale or sales.

EIGHTH: Lessee covenants and agrees that commencing

with January 1, 1952, it will employ and perform in the working and mining of said Rainbow claims not less than Six Hundred Forty (640) man hours of actual underground development work during each of the calendar months of the term hereof, and that it will furnish lessors on or before the 10th day of each month after January 1, 1952, a written statement showing the number of man hours of labor performed on said Rainbow claims during the preceding calendar month.

NINTH: Lessee agrees to pay to the lessors the sum of One Hundred Dollars ($100.00) lawful money of the United States of America per week, in advance, each and every week beginning with the 19th day of July, 1951, to the first day of January, 1952, as part consideration for the execution and delivery of this lease.

TENTH: Lessee further covenants and agrees to commence actual mining work as above specified on said demised premises not later than January 1, 1952, and to carry on such work continuously except when for good cause written permission is obtained in advance from lessors to suspend operations for some period of time.

ELEVENTH: Lessee shall promptly pay for all labor and services done and rendered in connection with its operations upon said demised premises, and for all materials purchased or used by it for and in connection therewith, and shall at no time permit any lien or lienable charge to be validly asserted against said premises, or any part thereof, or the improvements thereon, or any part thereof.

TWELFTH: Lessee covenants and agrees that in conducting operations hereunder it will comply with all Federal and State laws applicable thereto, including Workman's Compensation

Law, the Nevada Industrial Insurance Law, and the so-called Social Security Law in such manner as to protect lessors from any and all obligation or liability in connection therewith.

Lessee agrees to deliver to Lessors at Round Mountain, Nevada, the original or duplicate receipt of the Nevada Industrial Insurance Commission showing that industrial insurance is carried on all employees, and also to deliver to the lessors monthly the original or duplicate copy of the payroll statement filed with the said commission each month and the receipt or copy thereof showing payment to the Nevada Industrial Insurance Commission for payroll premiums for such insurance.

THIRTEENTH: Lessee shall at all times keep posted in two or more conspicuous places upon the demised premises, and particularly at all points where workmen are engaged, a notice in the following form:

N O T I C E

Notice is hereby given that the undersigned will not be responsible for the payment of any labor performed upon or material or supplies furnished for or used upon those premises known and described as follows, nor will the following described property be subject to any liens for or on account thereof, on the following mining claims:

Rainbow Mining Claim No. 1
Rainbow Mining Claim No. 2
Rainbow Mining Claim No. 3.
Rainbow Mining Claim No. 4
Rainbow Mining Claim No. 5
Rainbow Mining Claim No. 6
Rainbow Mining Claim No. 7

whether the said material be used for the construction, alteration or repair or the intended construction, alteration or repair of buildings, or other structures, or otherwise upon the said premises, including labor performed thereon.

DATED: This 19th day of July, 1951.

PERRY A. HENEBERGH

JOHN A. HENEBERGH

Owners

FOURTEENTH: Lessee shall promptly at or before the time when the same shall become delinquent pay and satisfy all lawful levies of taxes and assessments, general and special, upon the demised premises, the improvements thereof, and the ores and minerals extracted therefrom, excepting Nevada taxes relating to the net proceeds of mines which the law requires the lessors to pay.

FIFTEENTH: Lessee agrees to pay to lessors at Round Mountain, Nevada, royalties on all ore and other products mined and shipped or sold from s id Rainbow claims, as follows:

> The royalty on all ore and other products shipped or sold shall be ten percent (10%) of the net mill or smelter return and ten percent (10%) of any premiumd or bonus paid or payable by any governmental agency on such ore or on the ineral contained therein. The term "net mill or smelter return" is defined as the gross value of the ore, less treatment and railroad freight charges thereon and penalties deducted and exacted by the purchaser or smelter because of impurities in said ores.

SIXTEENTH: Lessee covenants and agrees that lessors' royalty upon ores shipped or sold from said Rainbow claims shall be paid by the mill, smelter or other purchaser to which such ores shall be shipped and lessee shall at the time of shipment give written orders to the mill, smelter or purchaser to which such ores may be shipped, directing that out of the proceeds thereof such mill, smelter or purchaser shall pay to lessors or to their order the royalties as hereinbefore defined, and at the time such orders are issued by lessee to such mill, smelter or purchaser, a duplicate thereof shall be sent to lessors at Post Office Box 152, Round Mountain, Nevada.

SEVENTEENTH: Lessee agrees to sell all ores mined and removed from the demised premises to the purchaser or purchasers making bona fide bids therefor that willyield the highest net return as contemplated by Article Fifteenth hereof.

EIGHTEENETH: Lessee shall have no right to assign this lease or any interest therein or to sublet any part of the demised premises, under penalty of forfeitures, without the previous consent in writing of lessors.

NINETEENTH: It is agreed between the parties hereto that cessations or delays in operation hereunder when occasioned by fire, riot or civil commotion, strikes, or other labor controversies, operation of law or interference of Government agencies, acts of nature, or other causes beyond the control of lessee and which lessee could not have been deemed reasonably to have foreseen, shall be excused during the continuance of such cause only, without working termination or forfeiture of this lease, but shall not have the effect of extending the term hereof.

TWENTIETH: In case lessee shall fail to make any payment of royalties at the time and in the manner herein provided for, or if it shall fail to faithfully keep and perform any of its covenants and agreements herein contained, then lessors may give lessee notice in writing of such failure by United States registered mail, postage prepaid, addressed to lessee at Round Mountain, Nevada, and if within two (2) weeks after the mailing of such notice such failure shall not have been remedied, lessors without further notice, shall have the right to terminate this agreement, and upon such termination or at the expiration of this lease, lessee shall, without demand or notice, deliver up to lessors the possession of said premises, and each and every part and parcel thereof, in as good condition as the same now is or may be put into, ordinary wear and tear and damage by the elements excepted, and with all tunnels, adits, shafts, improvements and workings in a condition for the continued operation of said

property.

All improvements of every kind, including machinery, equipment and facilities placed on or brought upon the property for the operation of the mine shall be deemed to be a part of said property and shall remain thereon and revert to the lessors at the expiration or sooner termination of this lease.

Lessee agrees that it will not, during the term hereof, remove any rails, ties, headframes, cribbing, timbers, supports, or other facilities placed in or on the said property whether the same now exist or are placed in or on said property by the lessee.

TWENTYFIRST: This agreement shall enure to the benefit of and bind the parties of the first part, their heirs, executors, administrators and assigns, and the party of the second part, its successors and lawful assigns.

TWENTYSECOND: The lessee shall be required to obtain any and all licenses required for the operation of said property, and particularly all Federal licenses required for the mining and disposition of uranium ores, all at its own expense and responsibility.

IN WITNESS WHEREOF, the parties of the first part have hereunto signed their names, and the party of the second part has caused this agreement to be executed by its officers who are thereunto duly authorized so to do, this 21st day of July, 1951.

JOHN A. HENEBERGH
John A. Henebergh

PERRY A. HENEBERGH
Perry A. Henebergh

Lessors

RAINBOW MINING COMPANY

By ROBERT L. McDONALD
President

Lessee

ATTEST:

GEORGE S. JOLLY
Secretary

(Corporate Seal)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 19th day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for said County of Washoe, JOHN A. HENEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe, the day and year in this certificate first above written.

GEORGIA NEWMAN
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires May 22, 1952

(S E A L)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 7th day of August, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County, ROBERT L. McDONALD, known to me to be the President of the corporation that executed the foregoing instrument, and upon oath did depose that he is the officer of said corporation as above designated; that he is acquainted with the seal of said corporation; that the signatures to said instrument were made by the officers of said corporation as indicated after said signatures, and that the said corporation executed the said instrument freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe the day and year in this certificate first above written.

CLARENCE K. JONES
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires October 3, 1954

(S E A L)

STATE OF CALIFORNIA,)
(SS.
COUNTY OF LOS ANGELES.)

On this 21st day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County of Los Angeles, PERRY A. HENEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Los Angeles the day and year in this certificate first above written.

CHARLES L. POREP
Notary Public in and for the County of Los Angeles, State of California.

(S E A L)

My Commission expires Nov. 1, 1953

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-2093

Date received 9-19-51

Participation

RAINBOW MINING COMPANY
430 Gazette Building,
Reno, Nevada

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application August 25, 1951

Estimated cost $25,000.00

Mineral or metal Uranium

Percentage of Government participation 90%

Location of mine Round Mountain, Nevada

Date of filing MF-100

DMA Docket Number, if available 2093

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. See attachment

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attachment

*5. Are you the owner or the lessee of the property? Lessee

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing. Copy attached. Lease in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. See attached statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $2,500.00 Yes.

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See attachment

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Same as above.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. RAINBOW GROUP

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. See attachment.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. See attachment

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. See attachment

15. State in detail how the ore could be shipped and how and where milled. See attachment

*16. History: See attachment

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information: None

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly. Torbanite and Autunite

(*b*) Submit available maps and assay data. Maps and assay data attached hereto.

(*c*) Give estimated tonnage and grade of each class of ore reserves. See attachment

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

See attachment.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? Uranium

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. See attachment

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. This question has been previously answered. See engineer reports, attached maps and assay data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each. See attachment

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. See attachment

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Rainbow Mining Co. (Name of company)

By Hubert L. McDonald (Signature of authorized official)

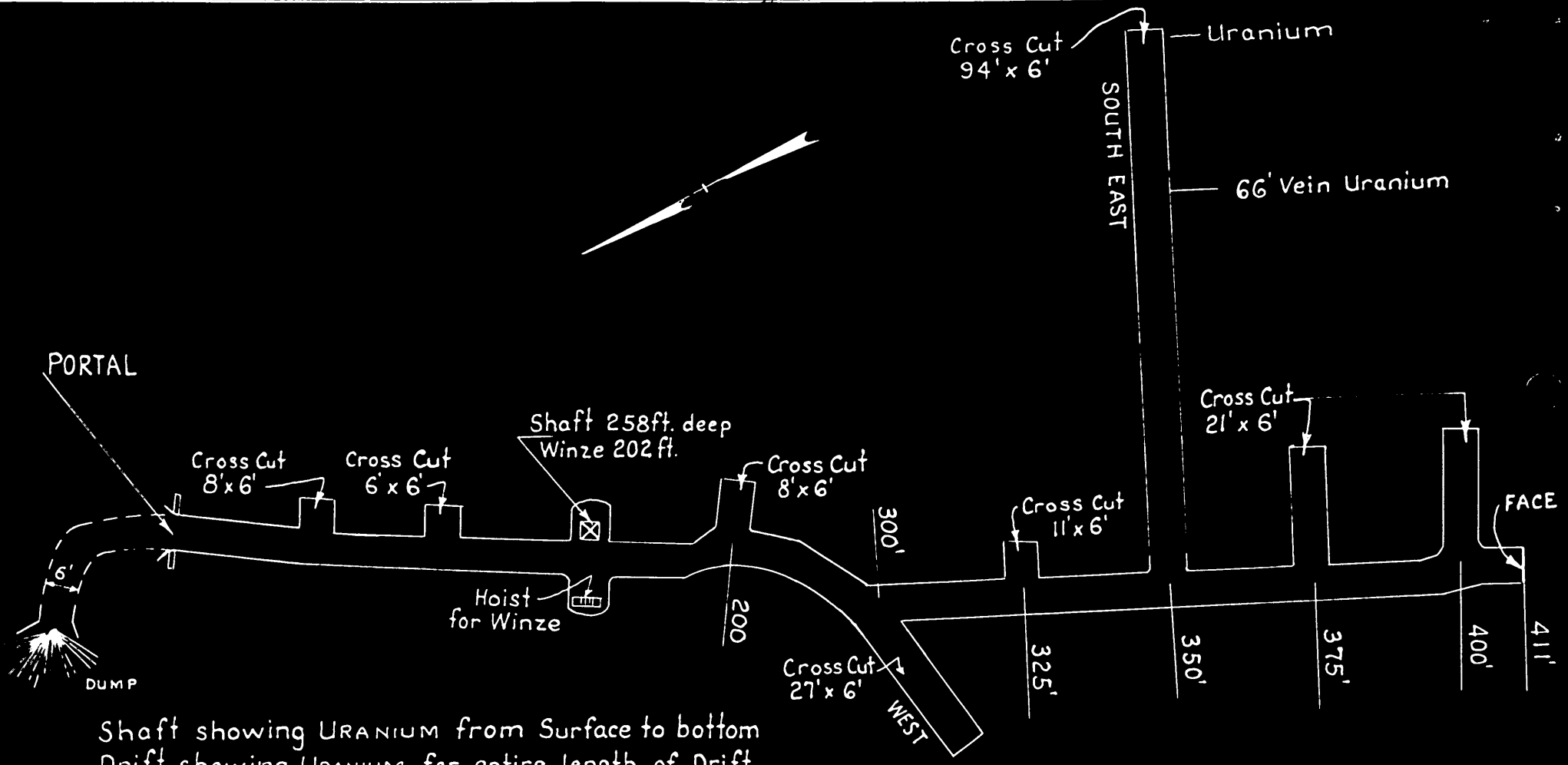
August 25, 1951 (Date)

President (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE



Shaft showing URANIUM from Surface to bottom
Drift showing URANIUM for entire length of Drift
All EAST Cross Cuts show URANIUM
Shaft and Main Drift show Gold and Silver
for entire length and depth. The last 19 ft
of Shaft showing Silver and Gold by assay
$ 10.00 per ton from drill holes in the
Foot Wall of Shaft.

PLAN VIEW
Uranium Showing for 1300 ft
along The Vein

7 RAINBOW CLAIMS #1 TO #7
NYE COUNTY, NEVADA
ROUND MOUNTAIN MINING DISTRICT

3. RAINBOW MINING COMPANY

OFFICERS:

ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada	President
CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada	Vice-President
GEORGE JOLLY, 822 West 1st St., Reno, Nevada	Secretary-Treasurer

DIRECTORS:

ROBERT L. McDONALD,
430 Gazette Bldg.,
Reno, Nevada

GEORGE JOLLY,
822 West 1st St.,
Reno, Nevada

FRED M. ANDERSON,
6 State Street,
Reno, Nevada

STOCKHOLDERS:

ROBERT L. McDONALD, 430 Gazette Bldg., Reno, Nevada
CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada
GEORGE JOLLY, 822 West 1st St., Reno, Nevada
FRED M. ANDERSON, 6 State St., Reno, Nevada
ALAN BIBLE, 430 Gazette Building, Reno, Nevada
FRANK FISHER, Virginia City, Nevada
MRS. LAURA STRAUSEL, 421 S. Sierra St., Reno, Nevada
GORDON W. RICE, Triune Bldg., Reno, Nevada
JOHN C. KELLY, Carson City, Nevada
W. E. BALDY, Carson City, Nevada
FRANK POPE, Loyola University, Los Angeles, California

4. (a) Applicant is composed of professional and business people of this area.

(b) Project will be managed by John Henebergh, the discoverer and owner of the property. Mr. Henebergh has 30 years experience in mines in Missouri and Nevada. Mr. Henebergh has been in Nevada since 1924 and has been engaged in all types of mining since that time.

8. Each of stockholders has pledged $500.00 to meet lease payments and owner's contribution. There are no liabilities other than current payments under the lease. Mine is not operating and there is no profit and loss statement.

10. (a) The property consists of 7 unpatented lode mining claims situated in the Round Mountain Mining District, Nye County, Nevada. Tunnel has been driven 411 feet; shaft has been sunk 202 feet from tunnel level or 258 feet from surface at the 225 foot tunnel station; the Southeasterly drift, 94 feet in length has been driven at the 350 foot tunnel station and a Westerly drift 27 feet in length has been driven at the 300 foot tunnel station. Main vein along which tunnel has been driven averages 6 feet in width. 94 foot drift cross cuts a parallel vein, 5 feet in width 61 feet from main tunnel. Surface indicates 4 parallel veins within 300 feet of the present 94 foot tunnel station on the Southeasterly drift. See attached maps for further details.

12. Property is located 1 mile from the Town of Round Mountain in Nye County, Nevada. Round Mountain is 58 miles North of Tonopah, Nevada. The road from Tonopah to Round Mountain is a hard surfaced road on State Highway System No. 8A. The 1 mile road from Round Mountain to the portal of the mine is a graded road. The nearest rail point is Mina, Nevada, which is approximately 70 miles Northwest of Tonopah, Nevada.

13. Water can be developed by sinking of wells.
Power to be used for exploration supplied from existing facilities available at Round Mountain.

14. Property has been developed as set forth in 10 (a) attached hereto. Tugger, hoist and ore buckets are located at shaft. Storage building, cimpressor house, 1 combination store room, office and change room and a timber building are now located on property and are useable during exploration and development work.

15. Ores should be milled at property, and shipped as concentrates.

16. (a) Property was discovered in 1928 by Henebergh Brothers in search of gold and silver. Tunnel was driven along the course of the vein a distance of some 335 feet. Lease was entered into with Nevada Uranium Production Co. in 1948, and this Company drive the tunnel then existing (335 feet) an additional 76 feet, sank a shaft 258 feet from the surfact or 202 feet from the tunnel level. Additional cross cuts were driven as shown on the attached map.

Uranium values occurred throughout the depths of the shaft and along the length of the tunnel and cross cuts. The Nevada

Uranium Co. ceased production in December, 1950, for lack of funds and the contract between the Nevada Uranium Products Co. and John and Perry Henebergh was forfeited in May, 1951.

16. (b) No known history of production of Uranium. Neighboring properties have been credited with production of approximately fifteen millions of dollars in gold and silver.

16. (c) Two geological and mining reports have been made by Walter E. Plank, a professional mining engineer with headquarters in San Francisco. These reports are attached hereto, as Exhibits 1 & 2

Samples taken during march, 1951, from the 411 foot tunnel station at the face of the tunnel showed the following:

SMITH'S LABORATORY
Uranium Specialist
MOAB, UTAH

Nevada Uranium Production Co.
J. A. Henebergh
Round Mountain, Nevada

March 26, 1951

Sample Description	% U308	% V205	%	%	%
#350 Drift	0.16				
#411 Drift	0.21				

J. EARL SMITH
Chemist

Total Charges $6.00

The sample designated 350 foot drift was taken during March, 1951, from the cross cut of the second vein which is reached by the Easterly drift from 66 foot distance from the 350' tunnel station.

Two other samples taken from the face of the tunnel at the 411 foot tunnel station and designated as #1 Fines and #2 Course showed the following:

SMITH'S LABORATORY
Assayers SPECIALIST
Ogden, Utah.

Nevada Uranium Production Co.
Grand Mountain, Nevada

Mar. 14, 1951

Sample Description	U308	V205
#1 Fines	0.134	
#2 Course	0.041	

J. Lewis Smith
Chemist

ETHEL M. 16.00

The most recent assay on this property was received from the Bureau of Mines, P. O. Drawer "B", Boulder City, Nevada:

"

August 21, 1951

Hon. Alan Sible
430 Grazotto Building
Reno, Nevada.

My dear Mr. Sible:

Reference is made to the three samples submitted for you by Mr. Dan Ashbaugh, August 16, for radioactive examination.

All three of these samples have been identified as quite highly weathered granite containing autunite. Radiometric tests on split portions of the entire samples ground to minus 100 mesh showed approximately the following:

"

No. 1. "300-foot crosscut, 66-foot vein."
0.024 percent uranium equivalent.

No. 2. "400-foot drift."
0.114 percent uranium equivalent.

No. 3 "300-foot drift."
0.042 percent uranium equivalent.

In accordance with instructions from our Washington, D.C. office, we are requested to report to them the U.S. Atomic Energy Commission all ore samples which contain 0.01 per cent uranium equivalent or higher. All information received is considered by the Bureau and the Commission as strictly confidential and is used for determining if field examination might be warranted. We would therefore appreciate if you would supply the information checked on the enclosed sample report and return the sheet to this office.

Sincerely yours,

/s/ H. A. Lazib,
H. H. Lloyd, Chief
Electrometallurgical Branch
Metallurgical Division
Region III

Enclosure.

"

16. (c) In process of development and impossible to get accurate estimate of tonnage until further exploration, which is purpose of this application.

17. According to the the assay sheets set forth in 16 (c) the uranium content of the property has become richer as the mine was developed during out the mining reports and predictions of expected enrichment at depth.

21. Application is made for Diamond Drilling to further prove up property. In addition it is felt that the Lusterly cross cut commencing at the 350 foot tunnel station should be driven beyond its present 94 foot station because surface indications definitely show 4 more additional parallel veins, the last of which lies approximately 300 feet East of the present 94 foot tunnel station on the Lusterly cross cut.

23. Diamond Drilling contract will be let on a footage basis. Current prices for Diamond drilling in the area run from $2.50 to $3.00 per foot. It is estimated that $25,000.00 should be used for this item.

Cross cutting to develop the 4 additional parallel veins will require the labor of three men (one drill man or miner and two muckers). The going rate of pay for miners in the area is $11.00 per day. Three men should drift 4 feet per day so that the additional parallel vein should be reached in approximately 75 days. Labor costs alone will run approximately $2800.00. A fair allowance for supplies, powder, fuses, caps, etc. would be $2,500.00 or a total estimate of $5,300.00 for cross cutting.

24. Project will be scheduled to be completed within one year from date of commencement. Bonus will be made as work progresses.

EXHIBIT 1.

Tonopah, Nevada,
19 August, 1946

Messrs:
William J. Boring,
Joe F. Midgley,
John C. Kelly.

Gentlemen:-

The following brief note is my preliminary opinion after a four hour inspection of a prospect called the "Red Mountain Mine" situated one mile southerly of Round Mountain, Nevada, and 53 miles northeasterly of Tonopah, Nevada.

The property under consideration is as yet a prospect, therefore it is a development proposition. It lies in a low hill, the formation of which is a weathered extrusion of a metamorphosed granitoid of great age - possibly as old as Ordovician. In any event it appears to be much older than the Jurassic granites of the Sierra Nevada range.

The mine so far developed consists of an adit (striking 30-230°) run as a drift along a fault, the walls of which are from 5 to 7 feet apart, and which shows excellent slickensides on both walls, particularly the hanging. Dip is 70° or so. As this hillside is not steep the drift gains but little depth-at no point, even at the face, is there more than 65 feet of backs, hence, sinking is necessary.

Vein is a true fissure having identical rock on each wall. Its general appearance would indicate persistence to great depth. The fracture is filled with a banded kaolinized white material that originally may have been quartz and aluminum oxide, although so far no tests have been run to determine that point.

Almost continuously throughout the 350 ft. of length of this meandering drift uranium bearing ore is present in varying degrees of width and richness, all of which fluoresces brilliantly under the "black light". This ore is said to be radio-active; so far, this observer has had no chance to prove or disprove the statement.

Entrance length of this adit to face is 300 ft., more or less. At about 325 ft. is a clearly defined 90° and vertical cross fault fissure 6 to 10 inches wide, the frozen walls filled with a hard, glassy quartz. This type of quartz being very resistive to impregnation is prior in mineralization, therefore in this mine it is of little value as ore.

This fault is much later than the 'drift fault' although it was pre-mineral. This cross fault added to several surface data indicate to me the presence of a vein parallel to the vein under consideration. It lies possibly 300 ft. southerly and very probably forms the opposite boundary of which I suspect to be a horst.

The formation, as mentioned above, is of extreme age, and being of igneous origin is well suited to house radio active ores. The fault filling itself is of great antiquity and its mineral content now recognized as uranium may have been in an earlier day an element of difference physio-chemical properties.

Recommendations: the present drift is of value only as a prospecting "tunnel", as a working gallery it would be of little use. I suggest the suspected presence of a parallel vein to be proven or disproven. If there is such a vein there is a reasonable expectancy of internal shattering in the inclosed block filled with lenses and veinlets of ore.

If the presence of a south vein is established, a crosscut to intersect it should be driven from a point 20 ft. or so outside the present portal. The hillside is much steeper in that direction and backs would be much greater than at adit 'A'. Eventually a two compartment shaft will be sunk. It should not be started on either vein but (1) at a suitable point between the two veins, or (2) preferably, some 75 ft. northeasterly of the present portal.

Conclusion: I feel certain this property has considerable merit and that it will make a profitable venture.

Yours very truly,

Frank P. Plank,
San Francisco,
Mining Engineer.

EXHIBIT 2.

Virginia City, Nevada,
18th Sept. 1949

Mr. M. J. Boring,
Tonopah, Nevada

(Subject: Secondary enrichment at Elbow Mine)

Dear Mr. Boring:-

In your letter to Mr. Midgley dated 16 September, 1949, you bring up the subject of the ore improving in quality and quantity withdepth. I hold no doubts regarding secondary enrichment being a factor of prime importance at this property.

Uranium salts are somewhat water soluble, hence, through the centuries the U content of the ore has dissolved to an unknown degree and has been carried downward to the permanent water table. There the saturated solutions meeting catalytic agents and other factors precipitate their U, Fe, Cu, O, etc., into other forms, thecexact nature of which we do not know at present.

It may be said in rebuttal that the arid desert on the Round Mountain district had insufficient meteoric water (i.e., rain and snow) to secure any appreciable enhancement of values at water level, and that there is very little, if any, increase of value in Au, Ag ores at the water level. This is quite true of Au mines in particular because we find gold nearly always as a native metal which is very resistant to oxidation. But the metallic U combines very readily with O as well as other elements and forms some 50 known minerals, many of which are highly complex.

Also, we know positively that the Nevada-Arizona-California deserts were not always arid. In tertiary times rainfall in torrents at least continuously. Then there was the age when Lake Lahontan kept everything wet. The miocene seas, too, covered this entire area for millions of years, although they were probably pre-mineral.

I think, with considerable conviction, that the water level at your mine will carry an appreciably thick stratum of complex U bearing ore, both primary and secondary. The ore exposed in the present adit clearly shows advanced leaching.

To arrive at a close approximation of the water level, one might investigate the water wells (if any) at Round Mountain. If standing water is found, use that as a datum and run a quick static-level survey to the tunnel floor. In open country that would be a short job.

Re the Geiger Counter queries: it would seem reasonable to assume that if 1 lb of evely diesseminated ore showing a U reaction of X clicks at intensidty, 2 lbs. of the same ore having twice the volume of radio-active U would give 2X or 2Y. A simple test would be to record the reading of a given weight of sample, cut it in half and take another reading.

Hoping that you are well, and that we may meet again soon, I am,

Yours truly,

Walter F. Plank

MINING LEASE

THIS AGREEMENT made and entered into, in duplicate, on the 19th day of July, 1951, by and between PERRY A. HENEBERGH and JOHN A. HENEBERGH, of Round Mountain, Nye County, Nevada, the parties of the first part, hereinafter called "Lessors", and RAINBOW MINING COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Nevada, the party of the second part, hereinafter called "Lessee",

W I T N E S S E T H:

The parties hereto, inconsideration of the mutual covenants and agreements herein contained and of the mutual benefits and advantages to accrue to them hereunder, do hereby contract and agree as follows:

FIRST: Lessors do hereby demise and let unto lessee, for the purpose of mining, seven (7) certain unpatented lode mining claims in the present condition thereof, situate in the Round Mountain Mining District of the County of Nye, State of Nevada, described as follows:

Rainbow Mining Claims Nos. 1 to 7 inclusive, for the period beginning on the 19th day of July, 1951, and ending on the 31st day of December, 1956. Provided, however, that the lessee shall have and is hereby granted the exclusive right and option to renew this lease for a period of five (5) additional years upon the same terms and conditions as under this lease except there shall be no further right of renewal. Said right of renewal shall be deemed official if the lessee shall serve upon the lessors either in person or by registered mail addressed to the lessors at their address, Post Office Box 152, Round

Mountain, Nevada, notifying the lessors of its intention to renew this lease for a period of five (5) additional years, without the execution of any new lease or other writing except by written endorsement hereon.

Provided, further, that said notice shall be mailed to the lessors during the last month of the term hereof but not less than fifteen (15) days prior to the termination of this lease.

This right of renewal, however, is subject to the condition that this lease shall be in good standing and that the lessee shall have performed each, every and all of the obligations of this lease and there has been no default on the part of lessee in either or any of the terms herein specified.

SECOND: Lessee shall have possession of all said premises, asprovided for in paragraph First, unless sooner terminated by noncompliance with or violation of the terms hereof as hereinafter provided. Lessee shall have the right to explore and mine in and upon said premises and to extract, remove, treat, ship and sell any and all minerals therefrom and for that purpose make such openings in the demised premises and to erect thereon such buildings and structures as it may deem proper in the conduct of such operations.

THIRD: Lessors shall have the right at all times to enter in and upon the demised premises or any part thereof and any openings and workings therein and thereon, and any buildings or structures thereon, for the purpose of inspecting or surveying the same and sampling any ores and to ascertain whether lessee is complying with the covenants and conditions of this lease.

FOURTH: Lessors shall also have the right to inspect

and make copies of all maps, plats, records, books and accounts made and kept by lessee in connection with its operations upon said property, and lessee shall furnish lessors a plat or plats of any drill hole completed upon any of the demised premises, together with a complete log of each drill hole and copies of all assay certificates made of cuttings from each such drill hole.

FIFTH: Lessee shall conduct all mining and other operations on said property in a good miner-like and workman-like manner and shall keep all shafts, tunnels and mine workings well and securely cribbed, timbered and supported, and shall not remove cribbing, timbers or supports, so as to endanger the ground or permit the same to cove or fall in, to the end that such property be preserved for mining purposes.

SIXTH: Lessee agrees to keep an accurate record of ores and all products mined and produced from the demised premises or any part thereof, to whom sold, and the price received therefor. All such records shall be open to the inspection of lessors or their duly authorized representatives at any time during ordinary business hours.

SEVENTH: Lessee shall prepare and send to lessors, addressed to them at Post Office Box 152 Round Mountain, Nevada, a report each month of the total tonnage of ore and other products removed from said property, together with the amounts, and the persons, firms or corporations to whom sold, and the price for which the same was sold. Lessee shall require the buyer to mail directly to the lessors, at Post Office Box 152 Round Mountain, Nevada, a copy of the bill of sale or other indicia of said sale or sales.

EIGHTH: Lessee covenants and agrees that commencing

with January 1, 1952, it will employ and perform in the working and mining of said Rainbow claims not less than Six Hundred Forty (640) man hours of actual underground development work during each of the calendar months of the term hereof, and that it will furnish lessors on or before the 10th day of each month after January 1, 1952, a written statement showing the number of man hours of labor performed on said Rainbow claims during the preceding calendar month.

NINTH: Lessee agrees to pay to the lessors the sum of One Hundred Dollars ($100.00) lawful money of the United States of America per week, in advance, each and every week beginning with the 19th day of July, 1951, to the first day of January, 1952, as part consideration for the execution and delivery of this lease.

TENTH: Lessee further covenants and agrees to commence actual mining work as above specified on said demised premises not later than January 1, 1952, and to carry on such work continuously except when for good cause written permission is obtained in advance from lessors to suspend operations for some period of time.

ELEVENTH: Lessee shall promptly pay for all labor and services done and rendered in connection with its operations upon said demised premises, and for all materials purchased or used by it for and in connection therewith, and shall at no time permit any lien or lienable charge to be validly asserted against said premises, or any part thereof, or the improvements thereon, or any part thereof.

TWELFTH: Lessee covenants and agrees that in conducting operations hereunder it will comply with all Federal and State laws applicable thereto, including Workman's Compensation

Law, the Nevada Industrial Insurance Law, and the so-called Social Security Law in such manner as to protect lessors from any and all obligation or liability in connection therewith.

Lessee agrees to deliver to Lessors at Round Mountain, Nevada, the original or duplicate receipt of the Nevada Industrial Insurance Commission showing that industrial insurance is carried on all employees, and also to deliver to the lessors monthly the original or duplicate copy of the payroll statement filed with the said commission each month and the receipt or copy thereof showing payment to the Nevada Industrial Insurance Commission for payroll premiums for such insurance.

THIRTEENTH: Lessee shall at all times keep posted in two or more conspicuous places upon the demised premises, and particularly at all points where workmen are engaged, a notice in the following form:

N O T I C E

Notice is hereby given that the undersigned will not be responsible for the payment of any labor performed upon or material or supplies furnished for or used upon those premises known and described as follows, nor will the following described property be subject to any liens for or on account thereof, on the following mining claims:

Rainbow Mining Claim No. 1
Rainbow Mining Claim No. 2
Rainbow Mining Claim No. 3.
Rainbow Mining Claim No. 4
Rainbow Mining Claim No. 5
Rainbow Mining Claim No. 6
Rainbow Mining Claim No. 7

whether the said material be used for the construction, alteration or repair or the intended construction, alteration or repair of buildings, or other structures, or otherwise upon the said premises, including labor performed thereon.

DATED: This 19th day of July, 1951.

PERRY A. HENEBERGH

JOHN A. HENEBERGH

Owners

FOURTEENTH: Lessee shall promptly at or before the time when the same shall become delinquent pay and satisfy all lawful levies of taxes and assessments, general and special, upon the demised premises, the improvements thereof, and the ores and minerals extracted therefrom, excepting Nevada taxes relating to the net proceeds of mines which the law requires the lessors to pay.

FIFTEENTH: Lessee agrees to pay to lessors at Round Mountain, Nevada, royalties on all ore and other products mined and shipped or sold from said Rainbow claims, as follows:

> The royalty on all ore and other products shipped or sold shall be ten percent (10%) of the net mill or smelter return and ten percent (10%) of any premium or bonus paid or payable by any governmental agency on such ore or on the mineral contained therein. The term "net mill or smelter return" is defined as the gross value of the ore, less treatment and railroad freight charges thereon and penalties deducted and exacted by the purchaser or smelter because of impurities in said ores.

SIXTEENTH: Lessee covenants and agrees that lessors' royalty upon ores shipped or sold from said Rainbow claims shall be paid by the mill, smelter or other purchaser to which such ores shall be shipped and lessee shall at the time of shipment give written orders to the mill, smelter or purchaser to which such ores may be shipped, directing that out of the proceeds thereof such mill, smelter or purchaser shall pay to lessors or to their order the royalties as hereinbefore defined, and at the time such orders are issued by lessee to such mill, smelter or purchaser, a duplicate thereof shall be sent to lessors at Post Office Box 152, Round Mountain, Nevada.

SEVENTEENTH: Lessee agrees to sell all ores mined and removed from the demised premises to the purchaser or purchasers making bona fide bids therefor that willyield the highest net return as contemplated by Article Fifteenth hereof.

EIGHTEENTH: Lessee shall have no right to assign this lease or any interest therein or to sublet any part of the demised premises, under penalty of forfeitures, without the previous consent in writing of lessors.

NINETEENTH: It is agreed between the parties hereto that cessations or delays in operation hereunder when occasioned by fire, riot or civil commotion, strikes, or other labor controversies, operation of law or interference of Government agencies, acts of nature, or other causes beyond the control of lessee and which lessee could not have been deemed reasonably to have foreseen, shall be excused during the continuance of such cause only, without working termination or forfeiture of this lease, but shall not have the effect of extending the term hereof.

TWENTIETH: In case lessee shall fail to make any payment of royalties at the time and in the manner herein provided for, or if it shall fail to faithfully keep and perform any of its covenants and agreements herein contained, then lessors may give lessee notice in writing of such failure by United States registered mail, postage prepaid, addressed to lessee at Round Mountain, Nevada, and if within two (2) weeks after the mailing of such notice such failure shall not have been remedied, lessors without further notice, shall have the right to terminate this agreement, and upon such termination or at the expiration of this lease, lessee shall, without demand or notice, deliver up to lessors the possession of said premises, and each and every part and parcel thereof, in as good condition as the same now is or may be put into, ordinary wear and tear and damage by the elements excepted, and with all tunnels, adits, shafts, improvements and workings in a condition for the continued operation of said

property.

All improvements of every kind, including machinery, equipment and facilities placed on or brought upon the property for the operation of the mine shall be deemed to be a part of said property and shall remain thereon and revert to the lessors at the expiration or sooner termination of this lease.

Lessee agrees that it will not, during the term hereof, remove any rails, ties, headframes, cribbing, timbers, supports, or other facilities placed in or on the said property whether the same now exist or are placed in or on said property by the lessee.

TWENTYFIRST: This agreement shall enure to the benefit of and bind the parties of the first part, their heirs, executors, administrators and assigns, and the party of the second part, its successors and lawful assigns.

TWENTYSECOND: The lessee shall be required to obtain any and all licenses required for the operation of said property, and particularly all Federal licenses required for the mining and disposition of uranium ores, all at its own expense and responsibility.

IN WITNESS WHEREOF, the parties of the first part have hereunto signed their names, and the party of the second part has caused this agreement to be executed by its officers who are thereunto duly authorized so to do, this 21st day of July, 1951.

JOHN A. HENEBERGH
John A. Henebergh

PERRY A. HENEBERGH
Perry A. Henebergh

Lessors

RAINBOW MINING COMPANY

By ROBERT L. McDONALD
President

Lessee

ATTEST:

GEORGE S. JOLLY
Secretary

(Corporate Seal)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 19th day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for said County of Washoe, JOHN A. HENEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe, the day and year in this certificate first above written.

GEORGIA NEWMAN
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires May 22, 1952

(S E A L)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 7th day of August, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County, ROBERT L. McDONALD, known to me to be the President of the corporation that executed the foregoing instrument, and upon oath did depose that he is the officer of said corporation as above designated; that he is acquainted with the seal of said corporation; that the signatures to said instrument were made by the officers of said corporation as indicated after said signatures, and that the said corporation executed the said instrument freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe the day and year in this certificate first above written.

CLARENCE K. JONES
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires October 3, 1954

(S E A L)

STATE OF CALIFORNIA,)
(SS.
COUNTY OF LOS ANGELES.)

On this 21st day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County of Los Angeles, PERRY A. HENEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Los Angeles the day and year in this certificate first above written.

CHARLES L. POREP
Notary Public in and for the County of Los Angeles, State of California.

(S E A L)

My Commission expires Nov. 1, 1953

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-2093

Date received 9-19-51

Participation

RAINBOW MINING COMPANY
430 Gazette Building,
Reno, Nevada

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application August 25, 1951

Estimated cost $25,000.00

Mineral or metal Uranium

Percentage of Government participation 90%

Location of mine Round Mountain, Nevada

Date of filing MF-100

DMA Docket Number, if available 2093

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. See attachment

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attachment

*5. Are you the owner or the lessee of the property? Lessee

6. If owner, state what claims, liens, or encumbrances, if any, are against the property.

7. If lessee, attach a copy of the lease and state if it is in good standing. Copy attached. Lease in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. See attached statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $2,500.00 Yes.

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See attachment

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. Same as above.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. RAINBOW GROUP

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. See attachment.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. See attachment

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. See attachment

15. State in detail how the ore could be shipped and how and where milled. See attachment

*16. History: See attachment

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production: None

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly. Torbanite and Autunite

(*b*) Submit available maps and assay data. Maps and assay data attached hereto.

(*c*) Give estimated tonnage and grade of each class of ore reserves. See attachment

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. See attachment.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? Uranium See attachment

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps, such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. This question has been previously answered. See engineer reports, attached maps and assay data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows: See attachment

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. See attachment

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Rainbow Mining Co. (Name of company)

By Robert L. McDaniel (Signature of authorized official)

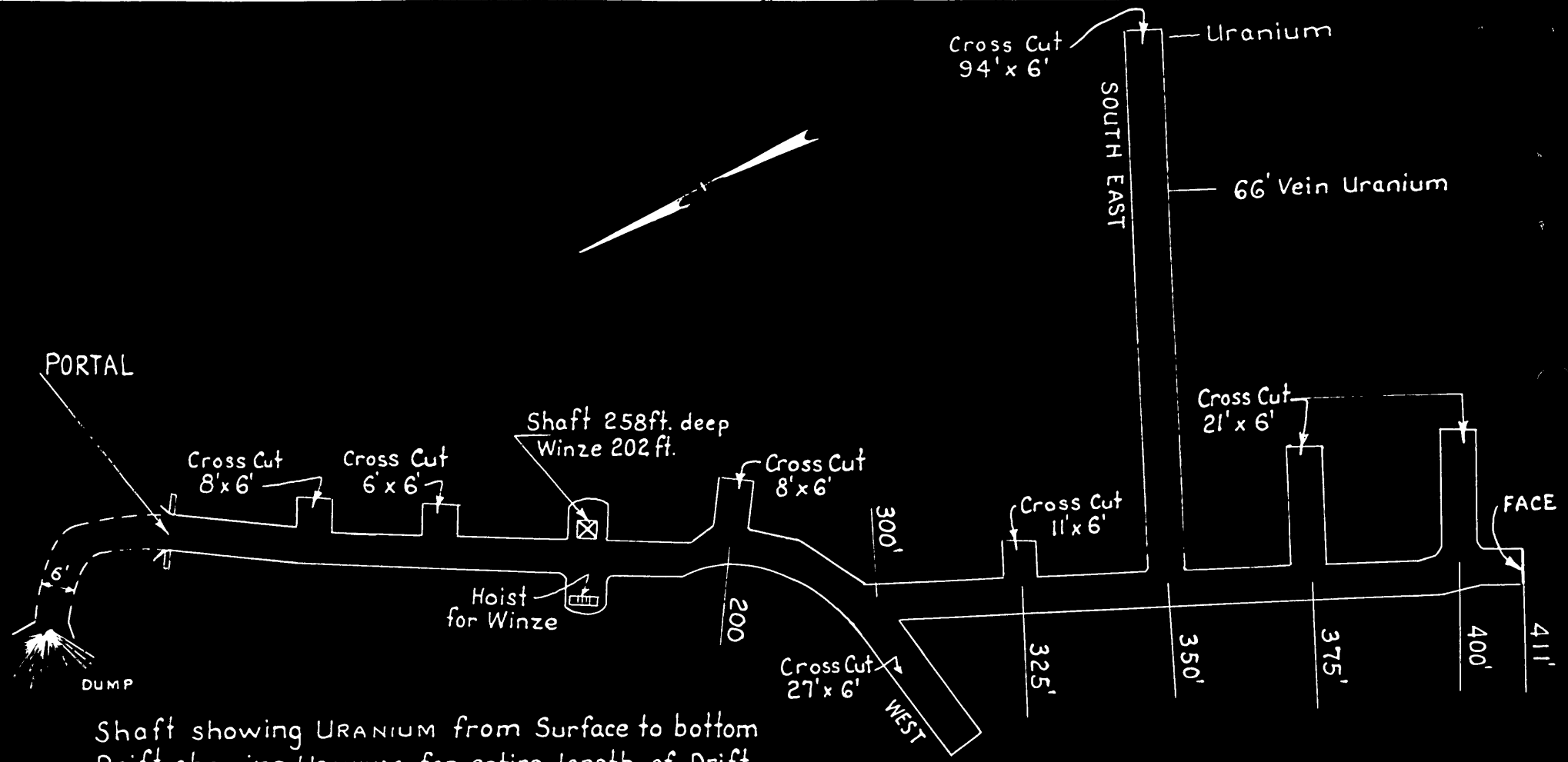
Aug. 25, 1951 (Date)

President (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE



Shaft showing URANIUM from Surface to bottom
Drift showing URANIUM for entire length of Drift
All EAST Cross Cuts show URANIUM
Shaft and Main Drift show Gold and Silver
for entire length and depth. The last 19 ft
of Shaft showing Silver and Gold by assay
$10.00 per ton from drill holes in the
Foot Wall of Shaft.

PLAN VIEW
Uranium Showing for 1300 ft
along The Vein

7 RAINBOW CLAIMS #1 TO #7
NYE COUNTY, NEVADA
ROUND MOUNTAIN MINING DISTRICT

3. RAINBOW MINING COMPANY

OFFICERS: ROBERT E. McDONALD, 430 Gazette Bldg., Reno, Nevada — President

CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada — Vice-President

GEORGE JOLLY, 822 West 1st St., Reno, Nevada — Secretary-Treasurer

DIRECTORS: ROBERT E. McDONALD, 430 Gazette Bldg., Reno, Nevada

GEORGE JOLLY, 822 West 1st St., Reno, Nevada

FRED M. ANDERSON, 6 State Street, Reno, Nevada

STOCKHOLDERS:

ROBERT E. McDONALD, 430 Gazette Bldg., Reno, Nevada
CLARK J. GUILD, JR., Professional Bldg., Reno, Nevada
GEORGE JOLLY, 822 West 1st St., Reno, Nevada
FRED M. ANDERSON, 6 State St., Reno, Nevada
ALAN BIBLE, 430 Gazette Building, Reno, Nevada
FRANK FISHER, Virginia City, Nevada
MRS. LAURA EMMANUEL, 421 S. Sierra St., Reno, Nevada
GORDON W. RICE, Triune Bldg., Reno, Nevada
JOHN J. KELLY, Carson City, Nevada
W. L. BALDY, Carson City, Nevada
FRANK POPE, Loyola University, Los Angeles, California

4. (a) Applicant is composed of professional and business people of this area.

(b) Project will be managed by John Heneborgh, the discoverer and owner of the property. Mr. Heneborgh has 30 years experience in mines in Missouri and Nevada. Mr. Heneborgh has been in Nevada since 1924 and has been engaged in all types of mining since that time.

8. Each of stockholders has pledged $500.00 to meet lease payments and owner's contribution. There are no liabilities other than current payments under the lease. Mine is not operating and there is no profit and loss statement.

10. (a) The property consists of 7 unpatented lode mining claims situated in the Round Mountain Mining District, Nye County, Nevada. Tunnel has been driven 411 feet; shaft has been sunk 202 feet from tunnel level or 258 feet from surface at the 225 foot tunnel station; the Southeasterly drift, 94 feet in length has been driven at the 350 foot tunnel station and a Westerly drift 27 feet in length has been driven at the 300 foot tunnel station. Main vein along which tunnel has been driven averages 6 feet in width. 94 foot drift cross cuts a parallel vein, 2 feet in width 61 feet from main tunnel. Surface indicates 4 parallel veins within 300 feet of the present 94 foot tunnel station on the Southeasterly drift. See attached maps for further details.

12. Property is located 1 mile from the Town of Round Mountain in Nye County, Nevada. Round Mountain is 58 miles North of Tonopah, Nevada. The road from Tonopah to Round Mountain is a hard surfaced road on State Highway System No. 8A. The 1 mile road from Round Mountain to the portal of the mine is a graded road. The nearest rail point is Mina, Nevada, which is approximately 70 miles Northwest of Tonopah, Nevada.

13. Water can be developed by sinking of wells.
Power to be used for exploration supplied from existing facilities available at Round Mountain.

14. Property has been developed as set forth in 10 (a) attached hereto. Tugger, hoist and ore buckets are located at shaft. Storage building, compressor house, 1 combination store room, office and change room and a timber building are now located on property and are useable during exploration and development work.

15. Ores should be milled at property, and shipped as concentrates.

16. (a) Property was discovered in 1928 by Honebergh Brothers in search of gold and silver. Tunnel was driven along the course of the vein a distance of some 335 feet. Lease was entered into with Nevada Uranium Production Co. in 1948, and this Company drive the tunnel then existing (335 feet) an additional 76 feet, sank a shaft 258 feet from the surfact or 202 feet from the tunnel level. Additional cross cuts were driven as shown on the attached map.

Uranium values occurred throughout the depths of the shaft and along the length of the tunnel and cross cuts. The Nevada

Uranium Co. ceased production in December, 1950, for lack of funds and the contract between the Nevada Uranium Products Co. and John and Perry Heneborgh was forfeited in May, 1951.

16. (b) No known history of production of Uranium. Neighboring properties have been credited with production of approximately fifteen millions of dollars in gold and silver.

16. (c) Two geological and mining reports have been made by Walter E. Plank, a professional mining engineer with headquarters in San Francisco. These reports are attached hereto, as exhibits 1 & 2

Samples taken during March, 1951, from the 411 foot tunnel station at the face of the tunnel showed the following:

SMITH'S LABORATORY
Uranium Specialist
ROAS, UTAH

Nevada Uranium Production Co.
J. A. Heneborgh
Round Mountain, Nevada

March 26, 1951

Sample Description	% U3O8	% V2O5	%	%	%
#350 Drift	0.16				
#411 Drift	0.21				

J. Arth SMITH
Chemist

Total Charges $6.00

The sample designated 350 foot drift was taken during March, 1951, from the cross cut of the second vein which is reached by the Easterly drift from 66 feet distance from the 350' tunnel station.

Two other samples taken from the fact of the tunnel at the 411 foot tunnel station and designated as #1 Fines and #2 Coarse showed the following:

SMITH'S LABORATORY
URANIUM SPECIALIST
MOAB, UTAH.

Nevada Uranium Production Co.
Round Mountain, Nevada

Mar. 12, 1951

Sample Description	U_3O_8	V_2O_5
#1 Fines	0.134	
#2 Coarse	0.041	

J. EARL SMITH
Chemist

TOTAL CHARGES $6.00

The most recent assay on this property was received from the Bureau of Mines, P. O. Drawer "B", Boulder City, Nevada:

"

August 21, 1951

Hon. Alan Bible
430 Gazette Building
Reno, Nevada.

My dear Mr. Bible:

Reference is made to the three samples submitted for you by Mr. Don Ashbaugh, August 16, for radioactive examination.

All three of these samples have been identified as quite highly weathered granite containing autunite. Radiometric tests on split portions of the entire samples ground to minus 100 mesh show approximately the following:

"

No. 1. "350-foot crosscut, 66-foot vein."
0.024 percent uranium equivalent.

No. 2. "400-foot drift."
0.114 percent uranium equivalent.

No. 3 "300-foot drift."
0.042 percent uranium equivalent.

In accordance with instructions from our Washington, D.C. office, we are requestedto report to them and the U.S. Atomic Energy Commission all ore samples which contain 0.01 per cent uranium equivalent or higher. All information received is considered by the Bureau and the Commission as strictly confidential and is used for determining if a field examination ight be warranted. We would therefore appreciate if you would supply the information checked on the enclosed sample report and return the sheet to this office.

Sincerely yours,

/s/ R. R. LLOYD,
R. R. Lloyd, Chief
Electrometallurgical Branch
Metallurgical Division
Region III

Enclosure. ".

18. (c) In process of development and impossible to get accurate estimate of tonnage until further exploration, which is purpose of this application.

19. According to the two assay sheets set forth in 16 (c) the Uranium content of the property has become richer as the mine was developed bearing out the mining reports and predictions of expected enrichment at depth.

21. Application is made for Diamond Drilling to further prove up property. In addition it is felt that the Easterly cross cut commencing at the 350 feet tunnel station should be driven beyond its present 94 foot station because surface indications definitely show 4 more additional parallel veins, the last of which lies approximately 300 feet East of the present 94 foot tunnel station on the Easterly cross cut.

23. Diamond Drilling contract will be let on a footage basis. Current prices for Diamond drilling in the area run from $2.50 to $3.50 per foot. It is estimated that $20,000.00 should be used for this item.

Cross cutting to develop the 4 additional parallel veins will require the labor of three men (one drill man or miner and two muckers). The going rate of pay for miners in the area is $11.00 per day. Three men should drift 4 feet per day so that the additional parallel vein should be reached in approximately 75 days. Labor costs alone will run approximately $2500.00. A fair allowance for supplies, powder, fuses, caps, etc. would be $2,500.00 or a total estimate of $5,000.00 for cross cutting.

24. Project will be scheduled to be completed within one year from date of commencement. Status will be made of work progresses.

EXHIBIT 1.

Tonopah, Nevada,
10 August, 1948

Messrs:
William J. Loring,
Joss E. Midgley,
John C. Kelly.

Gentlemen:-

The following brief note is my preliminary opinion after a four hour inspection of a prospect called the "Rainbow Mine" situated one mile southerly of Round Mountain, Nevada, and 83 miles northeasterly of Tonopah, Nevada.

The property under consideration is as yet a prospect, therefore it is a development proposition. It lies in a low hill, the formation of which is a weathered extrusion of a metamorphosed granitoid of great age - possibly as old as Ordovician. In any event it appears to be much older than the Jurassic granites of the Sierra Nevada range.

The mine so far developed consists of an adit (striking 50-230°) run as a drift along a fault, the walls of which are from 5 to 7 feet apart, and which shows excellent slickensides on both walls, particularly the hanging. Dip is 70° or so. As this hillside is not steep the drift gains but little depth-at no point, even at the face, is there more than 65 feet of backs, hence, sinking is necessary.

Vein is a true fissure having identical rock on each wall. Its general appearance would indicate persistence to great depth. The fracture is filled with a banded kaolinized white material that originally may have been quartz and aluminum oxide, although so far no tests have been run to determine that point.

Almost continuously throughout the 350 ft. of length of this meandering drift uranium bearing ore is present in varying degrees of width and richness, all of which fluoresces brilliantly under the "black light". This ore is said to be radio-active; so far, this observer has had no chance to prove or disprove the statement.

Extreme length of this adit to date is 350 ft., more or less. At about 325 ft. is a clearly defined 90° and vertical cross fault fissure 6 to 10 inches wide, the frozen walls filled with a hard, glassy quartz. This type of quartz being very resistive to impregnation is poor in mineralization, therefore in this mine it is of little value as ore.

This fault is much later than the 'drift fault' although it was pre-mineral. This cross fault added to several surface data indicate to me the presence of a vein parallel to the vein under consideration. It lies possibly 300 ft. southerly and very probably forms the opposite boundary of which I suspect to be a horst.

The formation, as mentioned above, is of extreme age, and being of igneous origin is well suited to house radio active ores. The fault filling itself is of great antiquity and its mineral content now recognized as uranium may have been in an earlier day an element of difference physio-chemical properties.

Recommendations: the present drift is of value only as a prospecting "tunnel", as a running gallery it would be of little use. I suggest the suspected presence of a parallel vein to be proven or disproven. If there is such a vein there is a reasonable expectancy of internal shattering in the inclosed block filled with lenses and veinlets of ore.

If the presence of a south vein is established, a crosscut to intersect it should be driven from a point 20 ft. or so outside the present portal. The hillside is much steeper in that direction and backs would be much greater than at adit 'A'. Eventually a two compartment shaft will be sunk. It should not be started on either vein but (1) at a suitable point between the two veins, or (2) preferably, some 75 ft. northeasterly of the present portal.

Conclusion: I feel certain this property has considerable merit and that it will make a profitable venture.

Yours very truly,

Frank W. Plank,
San Francisco,
Mining Engineer.

EXHIBIT 2.

Virginia City, Nevada,
16th Sept. 1948

Mr. T. J. Loring,
Tonopah, Nevada

(Subject: Secondary Enrichment at Rainbow Mine)

Dear Mr. Loring:-

In your letter to Mr. Midgley dated 14 September, 1948, you bring up the subject of the ore improving in quality and quantity with depth. I hold no doubts regarding secondary enrichment being a factor of prime importance at this property.

Uranium salts are somewhat water soluble, hence, through the centuries the U content of the ore has dissolved to an unknown degree and has been carried downward to the permanent water table. There the saturated solutions meeting catalytic agents and other factors precipitate their U, Fe, Cu, O, etc., into other forms, the exact nature of which we do not know at present.

It may be said in rebuttal that the arid desert on the Round Mountain district had insufficient meteoric water (i.e., rain and snow) to cause any appreciable enhancement of values at water level, and that there is very little, if any, increase of value in Au, Ag ores at the Water Level. This is quite true of Au mines in particular because we find gold nearly always as a native metal which is very resistant to oxidation. But the metallic U combines very readily with O as well as other elements and forms some 55 known minerals, many of which are highly complex.

Too, we know positively that the Nevada-Arizona-California deserts were not always arid. In tertiary times rainfall in torrents almost continuously. Then there was the age when Lake Lahonton kept everything wet. The miocene seas, too, covered this entire area for millions of years, although they were probably pre-mineral.

I think, with considerable conviction, that the water level at your mine will carry an appreciably thick stratum of complex U bearing ore, both primary and secondary. The ore exposed in the present adit clearly shows advanced leaching.

To arrive at a close approximation of the water level, one might investigate the water wells (if any) at Round Mountain. If standing water is found, use that as a datum and run a quick stadia-level survey to the tunnel floor. In open country that would be a short job.

Re the Geiger Counter queries: it would seem reasonable to assume that if 1 lb. of evenly disseminated ore showing a U reaction of X clicks at intensity, 2 lbs. of the same ore having twice the volume of radio-active U would give 2X or 2Y. A simple test would be to record the reading of a given weight of sample, cut it in half and take another reading.

Hoping that you are well, and that we may meet again soon, I am,

Yours truly,

Walter H. Blank

MINING LEASE

THIS AGREEMENT made and entered into, in duplicate, on the 19th day of July, 1951, by and between PERRY A. HENEBERGH and JOHN A. HENEBERGH, of Round Mountain, Nye County, Nevada, the parties of the first part, hereinafter called "Lessors", and RAINBOW MINING COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Nevada, the party of the second part, hereinafter called "Lessee",

W I T N E S S E T H:

The parties hereto, incconsideration of the mutual covenants and agreements herein contained and of the mutual benefits and advantages to accrue to them hereunder, do hereby contract and agree as follows:

FIRST: Lessors do hereby demise and let unto lessee, for the purpose of mining, seven (7) certain unpatented lode mining claims in the present condition thereof, situate in the Round Mountain Mining District of the County of Nye, State of Nevada, described as follows:

Rainbow Mining Claims Nos. 1 to 7 inclusive, for the period beginning on the 19th day of July, 1951, and ending on the 31st day of December, 1956. Provided, however, that the lessee shall have and is hereby granted the exclusive right and option to renew this lease for a period of five (5) additional years upon the same terms and conditions as under this lease except there shall be no further right of renewal. Said right of renewal shall be deemed official if the lessee shall serve upon the lessors either in person or by registered mail addressed to the lessors at their address, Post Office Box 152, Round

Mountain, Nevada, notifying the lessors of its intention to renew this lease for a period of five (5) additional years, without the execution of any new lease or other writing except by written endorsement hereon.

Provided, further, that said notice shall be mailed to the lessors during the last month of the term hereof but not less than fifteen (15) days prior to the termination of this lease.

This right of renewal, however, is subject to the condition that this lease shall be in good standing and that the lessee shall have performed each, every and all of the obligations of this lease and there has been no default on the part of lessee in either or any of the terms herein specified.

SECOND: Lessee shall have possession of all said premises, asprovided for in paragraph First, unless sooner terminated by noncompliance with or violation of the terms hereof as hereinafter provided. Lessee shall have the right to explore and mine in and upon said premises and to extract, remove, treat, ship and sell any and all minerals therefrom and for that purpose make such openings in the demised premises and to erect thereon such buildings and structures as it may deem proper in the conduct of such operations.

THIRD: Lessors shall have the right at all times to enter in and upon the demised premises or any part thereof and any openings and workings therein and thereon, and any buildings or structures thereon, for the purpose of inspecting or surveying the same and sampling any ores and to ascertain whether lessee is complying with the covenants and conditions of this lease.

FOURTH: Lessors shall also have the right to inspect

and make copies of all maps, plats, records, books and accounts made and kept by lessee in connection with its operations upon said property, and lessee shall furnish lessors a plat or plats of any drill hole completed upon any of the demised premises, together with a complete log of each drill hole and copies of all assay certificates made of cuttings from each such drill hole.

FIFTH: Lessee shall conduct all mining and other operations on said property in a good miner-like and workman-like manner and shall keep all shafts, tunnels and mine workings well and securely cribbed, timbered and supported, and shall not remove cribbing, timbers or supports, so as to endanger the ground or permit the same to cove or fall in, to the end that such property be preserved for mining purposes.

SIXTH: Lessee agrees to keep an accurate record of ores and all products mined and produced from the demised premises or any part thereof, to whom sold, and the price received therefor. All such records shall be open to the inspection of lessors or their duly authorized representatives at any time during ordinary business hours.

SEVENTH: Lessee shall prepare and send to lessors, addressed to them at Post Office Box 152 Round Mountain, Nevada, a report each month of the total tonnage of ore and other products removed from said property, together with the amounts, and the persons, firms or corporations to whom sold, and the price for which the same was sold. Lessee shall require the buyer to mail directly to the lessors, at Post OfficeBox 152 Round Mountain, Nevada, a copy of the bill of sale or other indicia of said sale or sales.

EIGHTH: Lessee covenants and agrees that commencing

with January 1, 1952, it will employ and perform in the working and mining of said Rainbow claims not less than Six Hundred Forty (640) man hours of actual underground development work during each of the calendar months of the term hereof, and that it will furnish lessors on or before the 10th day of each month after January 1, 1952, a written statement showing the number of man hours of labor performed on said Rainbow claims during the preceding calendar month.

NINTH: Lessee agrees to pay to the lessors the sum of One Hundred Dollars ($100.00) lawful money of the United States of America per week, in advance, each and every week beginning with the 19th day of July, 1951, to the first day of January, 1952, as part consideration for the execution and delivery of this lease.

TENTH: Lessee further covenants and agrees to commence actual mining work as above specified on said demised premises not later than January 1, 1952, and to carry on such work continuously except when for good cause written permission is obtained in advance from lessors to suspend operations for some period of time.

ELEVENTH: Lessee shall promptly pay for all labor and services done and rendered in connection with its operations upon said demised premises, and for all materials purchased or used by it for and in connection therewith, and shall at no time permit any lien or lienable charge to be validly asserted against said premises, or any part thereof, or the improvements thereon, or any part thereof.

TWELFTH: Lessee covenants and agrees that in conducting operations hereunder it will comply with all Federal and State laws applicable thereto, including Workman's Compensation

Law, the Nevada Industrial Insurance Law, and the so-called Social Security Law in such manner as to protect lessors from any and all obligation or liability in connection therewith.

Lessee agrees to deliver to Lessors at Round Mountain, Nevada, the original or duplicate receipt of the Nevada Industrial Insurance Commission showing that industrial insurance is carried on all employees, and also to deliver to the lessors monthly the original or duplicate copy of the payroll statement filed with the said commission each month and the receipt or copy thereof showing payment to the Nevada Industrial Insurance Commission for payroll premiums for such insurance.

THIRTEENTH: Lessee shall at all times keep posted in two or more conspicuous places upon the demised premises, and particularly at all points where workmen are engaged, a notice in the following form:

N O T I C E

Notice is hereby given that the undersigned will not be responsible for the payment of any labor performed upon or material or supplies furnished for or used upon those premises known and described as follows, nor will the following described property be subject to any liens for or on account thereof, on the following mining claims:

Rainbow Mining Claim No. 1
Rainbow Mining Claim No. 2
Rainbow Mining Claim No. 3.
Rainbow Mining Claim No. 4
Rainbow Mining Claim No. 5
Rainbow Mining Claim No. 6
Rainbow Mining Claim No. 7

whether the said material be used for the construction, alteration or repair or the intended construction, alteration or repair of buildings, or other structures, or otherwise upon the said premises, including labor performed thereon.

DATED: This 19th day of July, 1951.

PERRY A. HENEBERGH

JOHN A. HENEBERGH

Owners

FOURTEENTH: Lessee shall promptly at or before the time when the same shall become delinquent pay and satisfy all lawful levies of taxes and assessments, general and special, upon the demised premises, the improvements thereof, and the ores and minerals extracted therefrom, excepting Nevada taxes relating to the net proceeds of mines which the law requires the lessors to pay.

FIFTEENTH: Lessee agrees to pay to lessors at Round Mountain, Nevada, royalties on all ore and other products mined and shipped or sold from said Rainbow claims, as follows:

> The royalty on all ore and other products shipped or sold shall be ten percent (10%) of the net mill or smelter return and ten percent (10%) of any premiumd or bonus paid or payable by any governmental agency on such ore or on the mineral contained therein. The term "net mill or smelter return" is defined as the gross value of the ore, less treatment and railroad freight charges thereon and penalties deducted and exacted by the purchaser or smelter because of impurities in said ores.

SIXTEENTH: Lessee covenants and agrees that lessors' royalty upon ores shipped or sold from said Rainbow claims shall be paid by the mill, smelter or other purchaser to which such ores shall be shipped and lessee shall at the time of shipment give written orders to the mill, smelter or purchaser to which such ores may be shipped, directing that out of the proceeds thereof such mill, smelter or purchaser shall pay to lessors or to their order the royalties as hereinbefore defined, and at the time such orders are issued by lessee to such mill, smelter or purchaser, a duplicate thereof shall be sent to lessors at Post Office Box 152, Round Mountain, Nevada.

SEVENTEENTH: Lessee agrees to sell all ores mined and removed from the demised premises to the purchaser or purchasers making bona fide bids therefor that willyield the highest net return as contemplated by Article Fifteenth hereof.

EIGHTEENETH: Lessee shall have no right to assign this lease or any interest therein or to sublet any part of the demised premises, under penalty of forfeitures, without the previous consent in writing of lessors.

NINETEENTH: It is agreed between the parties hereto that cessations or delays in operation hereunder when occasioned by fire, riot or civil commotion, strikes, or other labor controversies, operation of law or interference of Government agencies, acts of nature, or other causes beyond the control of lessee and which lessee could not have been deemed reasonably to have foreseen, shall be excused during the continuance of such cause only, without working termination or forfeiture of this lease, but shall not have the effect of extending the term hereof.

TWENTIETH: In case lessee shall fail to make any payment of royalties at the time and in the manner herein provided for, or if it shall fail to faithfully keep and perform any of its covenants and agreements herein contained, then lessors may give lessee notice in writing of such failure by United States registered mail, postage prepaid, addressed to lessee at Round Mountain, Nevada, and if within two (2) weeks after the mailing of such notice such failure shall not have been remedied, lessors without further notice, shall have the right to terminate this agreement, and upon such termination or at the expiration of this lease, lessee shall, without demand or notice, deliver up to lessors the possession of said premises, and each and every part and parcel thereof, in as good condition as the same now is or may be put into, ordinary wear and tear and damage by the elements excepted, and with all tunnels, adits, shafts, improvements and workings in a condition for the continued operation of said

property.

All improvements of every kind, including machinery, equipment and facilities placed on or brought upon the property for the operation of the mine shall be deemed to be a part of said property and shall remain thereon and revert to the lessors at the expiration or sooner termination of this lease.

Lessee agrees that it will not, during the term hereof, remove any rails, ties, headframes, cribbing, timbers, supports, or other facilities placed in or on the said property whether the same now exist or are placed in or on said property by the lessee.

TWENTYFIRST: This agreement shall enure to the benefit of and bind the parties of the first part, their heirs, executors, administrators and assigns, and the party of the second part, its successors and lawful assigns.

TWENTYSECOND: The lessee shall be required to obtain any and all licenses required for the operation of said property, and particularly all Federal licenses required for the mining and disposition of uranium ores, all at its own expense and responsibility.

IN WITNESS WHEREOF, the parties of the first part have hereunto signed their names, and the party of the second part has caused this agreement to be executed by its officers who are thereunto duly authorized so to do, this 21st day of July, 1951.

JOHN A. HENEBERGH
John A. Henebergh

PERRY A. HENEBERGH
Perry A. Henebergh

Lessors

RAINBOW MINING COMPANY

By ROBERT L. McDONALD
President

Lessee

ATTEST:

GEORGE S. JOLLY
Secretary

(Corporate Seal)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 19th day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for said County of Washoe, JOHN A. HENEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe, the day and year in this certificate first above written.

GEORGIA NEWMAN
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires May 22, 1952

(S E A L)

STATE OF NEVADA,)
(SS.
COUNTY OF WASHOE.)

On this 7th day of August, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County, ROBERT L. McDONALD, known to me to be the President of the corporation that executed the foregoing instrument, and upon oath did depose that he is the officer of said corporation as above designated; that he is acquainted with the seal of said corporation; that the signatures to said instrument were made by the officers of said corporation as indicated after said signatures, and that the said corporation executed the said instrument freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Washoe the day and year in this certificate first above written.

CLARENCE K. JONES
Notary Public in and for the County of Washoe, State of Nevada.

My Commission expires October 3, 1954

(S E A L)

STATE OF CALIFORNIA,)
(SS.
COUNTY OF LOS ANGELES.)

On this 21st day of July, 1951, personally appeared before me, the undersigned, a Notary Public in and for the said County of Los Angeles, PERRY A. HENEBERGH, known to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily, and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in the County of Los Angeles the day and year in this certificate first above written.

CHARLES L. POREP
Notary Public in and for the County of Los Angeles, State of California.

(S E A L)

My Commission expires Nov. 1, 1953

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMA 2093
(URANIUM)

EXPLANATION

Granite

Altered rhyolite

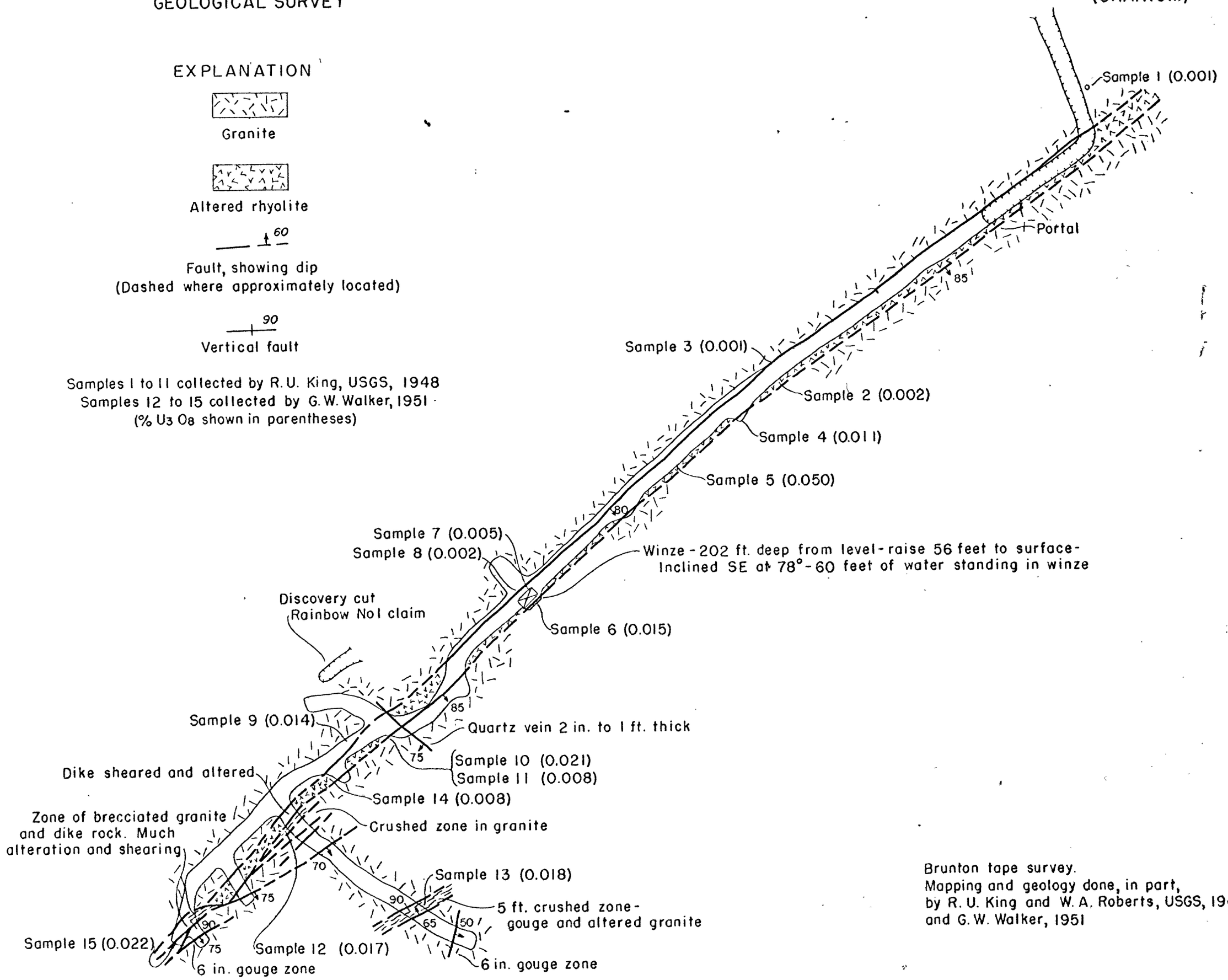
60

Fault, showing dip
(Dashed where approximately located)

90

Vertical fault

Samples 1 to 11 collected by R.U. King, USGS, 1948
Samples 12 to 15 collected by G.W. Walker, 1951
(% U_3O_8 shown in parentheses)



Brunton tape survey.
Mapping and geology done, in part,
by R. U. King and W. A. Roberts, USGS, 1948
and G. W. Walker, 1951

ADIT ON RAINBOW NO. 1 CLAIM (HENEBERGH TUNNEL) ROUND MOUNTAIN, NYE COUNTY, NEVADA

0 40 80 120 Feet

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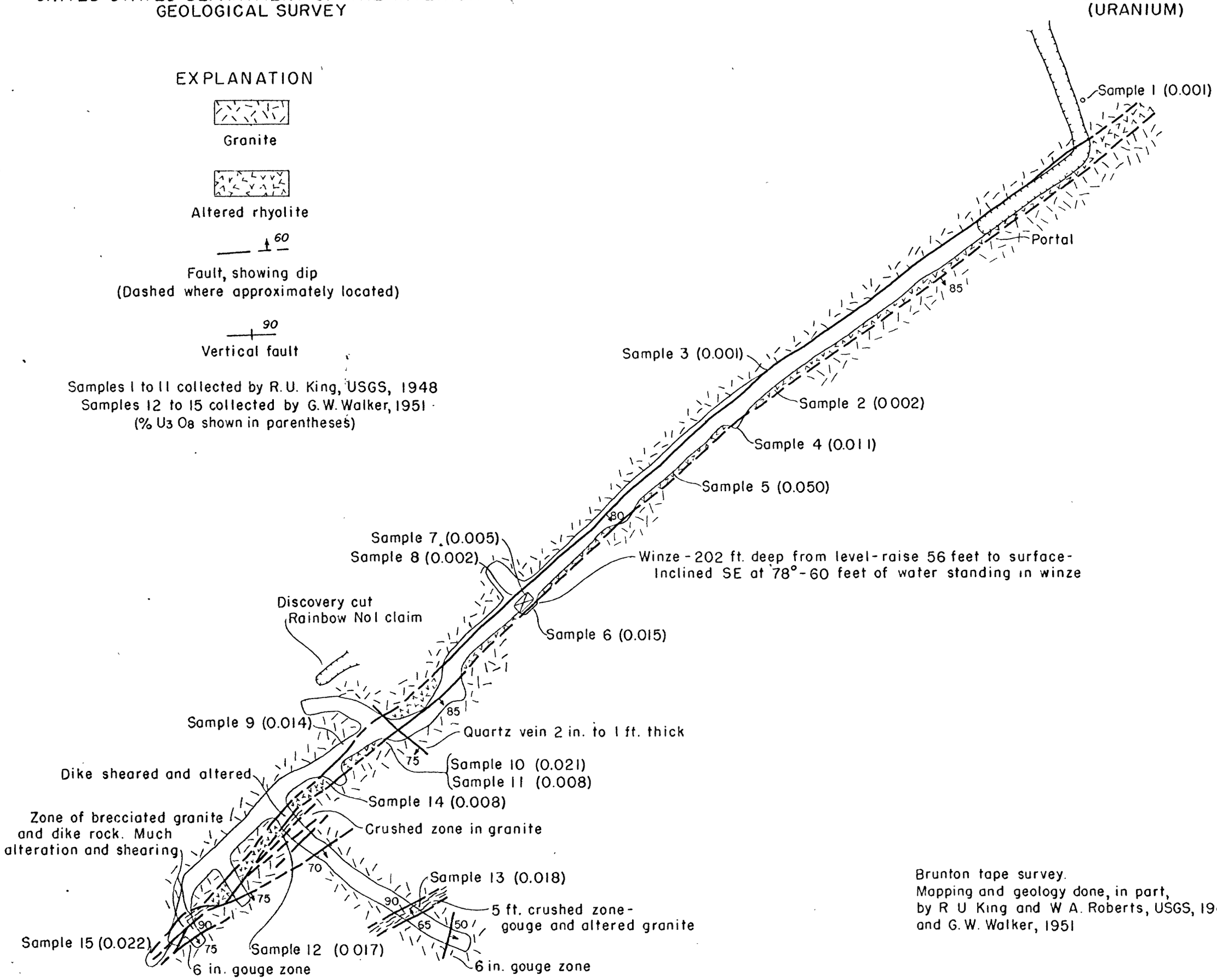

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