DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 4323

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This document has been recorded as
Exploration Project

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Routing Slip Cys to USGS, BM

To:	700	Date	6/4/56
To:	Asso. Sol.	Date	6/14/56
To:	Mr. Mittendorf	Date	6/27/56
To:	Oper. Com	Date	7-13-56
To:	Oper. Com.	Date	8-3-56
To:	F E J	Date	8-3-56
To:	CDM	Date	8-3-56
To:	Asso. Sol.	Date	8-6-56
To:	Mr. Mittendorf	Date	8-20-56
To:	CDM	Date	8-21-56
To:	Oper. Com.	Date	9-24-56
To:	J. E. Johnson	Date	9-24-56
To:	CDM	Date	9-24-56
To:	MAJ	Date	9-24-56
To:	Oper. Com.	Date	10-18-56
	Admr		10-19-56

DO NOT DETACH

CONTROLLED DOCUMENT

~~Known~~

8-56
11-

224 New Customhouse
Denver 2, Colorado

November 6, 1956

Mr. C. H. Reynolds
Continental Uranium, Inc.
P. O. Box 1550
Grand Junction, Colorado

Re: Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Dear Mr. Reynolds:

In compliance with your telephone request of today, please find attached for your files courtesy copies of DMEA Administrator C. D. Mittendorf's letters of October 22, 1956 and November 2, 1956 to Mr. Robert C. Fruess and Gerald Wathers respectively concerned with the captioned docket.

Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Attachments

WMT/pw

cc: Subject DMEA-4323
Sec.Op.Comm. (2)
Harshman
Storms
Emerick
Chron

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

RECEIVED NOV 8 1956

224 New Customhouse
Denver 2, Colorado

November 6, 1956

Mr. C. H. Reynolds
Continental Uranium, Inc.
P. O. Box 1550
Grand Junction, Colorado

Re: Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz d/b/a
Western Mines Development Company
Hope Group of Claims
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Dear Mr. Reynolds:

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Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Attachments

700

FILE COPY

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

NOV - 2 1956

Mr. Gerald Weathers
Arizona Continental Uranium, Inc.
3928 East Meadowbrook
Phoenix, Arizona

Re: Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz, d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Dear Mr. Weathers:

There is enclosed a letter, dated October 22, 1956, returned by the Post Office, that is addressed to Mr. Robert C. Pruess, former manager of the subject company.

Please deliver this letter to the proper company official.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

FLKnouse/izm 11-1-56
cc to: Docket
Code 700
Mr. Knouse
Admr.'s Reading File
DMEA Field Team, Rng. III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

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

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz, d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Dear Mr. Traver:

Enclosed is the Administrator's letter, dated October 22, 1956, to Mr. Robert C. Pruess, Manager, Gerald Gidwitz, d/b/a Western Mines Development Company, 205 East Camelback Road, Phoenix, Arizona. This letter was directed to the address given on the application, but was returned for the reason stated on the envelope.

Kindly ascertain the correct address to which this communication should be sent and forward it to the Applicant's representative, supplying us with two copies of your transmittal letter.

Sincerely yours,

Chairman, Operating Committee

Enclosures

APPROVED:

Member, Bureau of Mines

Noted: Thor H. Kilsgaard
Member, Geological Survey

Mr Robert Preuss was killed in an airplane crash in August of this year. In view of this, I suggest the letter be rewritten, asking Drawer to contact another official of the applicant company.

JTK

700

FILE COPY
Surname:
Knouse
Ellis
Nelson
Leonard
Jeffrey

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

OCT 22 1956

Mr. Robert C. Pruess, Manager
Gerald Gidwitz
d/b/a Western Mines Development Company
205 East Camelback Road
Phoenix, Arizona

Re: Docket No. DMEA-4323 (Uranium)
Hope Group of Claims
Gila County, Arizona

Dear Mr. Pruess:

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

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

Careful study of all our information, although noting some uranium mineralization on your property, indicates that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

FLKnouse/izm 10-16-56
cc to: Docket
Code 700
Mr. Knouse
Admr.'s Reading File
Operating Committee
DMEA Field Team, Reg. III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Docket

700

F. L. Kaufman
Ellis

Summary of Proposed Project

October 16, 1956

Object: Denial of application for an exploration project.

Docket No.: DMEA-4323

Commodity: Uranium

Applicant: Gerald Gidwitz d/b/a Western Mines Development Company
205 East Camelback Road
Phoenix, Arizona

Property: Known as the Hope Mine, and consists of 16 contiguous unpatented lode mining claims - Hope Nos. 1 to 16 inclusive, in secs. 29 and 30, T. 6 N., R. 14 E., Gila County, Arizona.

The property was leased on July 27, 1954 to Vance Thornburg, Agent for the Applicant, from Maurice Sharp, Charlie Nichols, and Carrel Wilbanks.

Date of Application: May 15, 1956

Work Proposed:

Proposed exploration was outlined in two stages to explore for uranium-bearing ore in the Dripping Spring quartzite of the pre-Cambrian Apache group.

Stage I would consist of 12 inclined diamond drill holes ranging from -3 degrees to -42 degrees to explore the downward extension of the Hope Nos. 1, 2, 3, and 4 veins. Should the 12 holes fail to disclose ore at depth below the crosscut to the Hope No. 3 drift, a 365-foot inclined drift is proposed to be driven in this stage along the footwall of the ore shoot. In addition, 1,200 feet of holes were to be drilled from this incline to explore for additional ore.

Stage II depended upon the results of AEC diamond drilling. (This drilling was completed in May, 1956). In case ore was discovered, the crosscut to the Hope No. 3 vein was to be extended 400 feet, with an additional 300 feet of drifting on the vein or veins cut. In addition, if ore was encountered in the deeper holes (Stage I) an adit crosscut of at least 550 feet, just above a diabase sill, with 400 feet of drifting was proposed. As an alternate to the above crosscut, provided drilling revealed the Hope No. 3 ore shoot pitches to the north, the crosscut was to be driven from another location that would require 1,000 feet of access road.

The principal workings of the Hope Group are comprised of:
(1) The presently flooded 350-foot drift of the Hope No. 1 Mine;
(2) The 85-foot drift of the Hope No. 2 Mine;
(3) The 300-foot drift of the Hope No. 3 Mine; and
(4) The 12-to 15-foot Hope No. 4 open cut.

Production until August 1, 1956 totaled about 4,273 tons of ore averaging 0.17 percent U_3O_8.

Settlement sheets show the following production and approximate average grade of ore produced from the various mines.

Mine	Production tons	Average Grade % U_3O_8
Hope No. 1	1,363	0.17
Hope No. 2	188	0.12
Hope No. 3	2,722	0.18

Ore reserves are estimated by the Applicant to be 1,000 tons containing about 0.25 percent U_3O_8.

Cost of Proposed Work:

Stage I

4,005 ft. diamond core drilling @ $10/ft.	$40,050.00	
20 ft. crosscut @ $35/ft.	700.00	
Slabbing	100.00	
365 ft. incline drift @ $45/ft.	16,425.00	
Contingencies @ 10 percent	5,727.00	
Total Stage I		$63,002.00

Stage II

950 ft. crosscut @ $35/ft.	$33,250.00	
700 ft. drift @ $35/ft.	24,500.00	
1,000 ft. access road @ $1.25/ft.	1,250.00	
Contingencies @ 10 percent	5,900.00	
Total Stage II		$64,900.00

Total Estimated Cost of the Project $127,902.00
Government Participation @ 75% .....$ 95,926.50

Field Team Report: September 28, 1956 (Joint report by T.M. Romslo, USBM & W. L. Emerick, USGS)

The deposits on the property are in the Dripping Spring quartzite of the pre-Cambrian Apache Group. Sills and dikes of diabase intrude

the rocks of the Apache group.

The Dripping Spring quartzite have an upper and lower member. No uranium deposits are known to exist in the lower member. The upper member is about 300 feet thick and is thin bedded, predominately clayey to silty and very fine-grained. A thick diabase sill discordantly intrudes the lower part of the upper member underlying the area proposed for exploration. Extensive geological study of the area resulted in a subdivision of the upper member into (1) a lower red unit of alternating micaceous sandstone and siliceous siltstone, (2) a middle gray siliceous siltstone unit, and (3) an upper buff unit of fine arkosic sandstone. About midway in the middle of the gray unit is an arkosic sandstone about 18 inches thick, locally called the "cutoff quartzite" believed to mark the lower limits of the ore bodies.

Block faulting constitutes the most prominent structure, but locally the upper quartzite member has abundant small faults, fractures, and joint planes. Two nearly vertical fracture systems, with which uranium mineralization is associated, trends N. 20° E. and N. 70° W. The greater part of the uranium mineralization follows the N. 20° E. fractures. In vertical section, the fractures have a stepped or en echelon pattern downward to the southeast. It appears likely that fractures controlled the deposition of uranium minerals.

The pattern of the uranium ore bodies along both sets of fractures in the district appear to be one of small, discontinuous ore bodies both longitudinally and vertically.

All three of the mines on the Hope group were driven at approximately the same stratigraphic horizon in the upper member of the Dripping Spring formation. The Hope No. 1 was driven in the top of the diabase sill, and in the area of the Hope No. 2 and 3 mines, the workings are about 100 feet above the diabase sill. The lower limits of the ore in Hope No. 1 mine appears to have been reached in the diabase sill and the upper limits appear to have been stoped out. Thirteen holes drilled from the face of the drift at various angles failed to find additional ore. Also, mapping in the last 40 feet of drift indicates the vein splits and pinches, with an apparent decrease in grade, and mineralization is pockety.

An inspection of the face Hope No. 2 mine, shows only background radioactivity. The approximate top of the "cutoff quartzite" as projected, indicates that the lower end of the inclined portion of the drift may have reached this level. A vertical drill hole from these workings by AEC penetrated the diabase sill at 90.8 feet, but the mineralization penetrated from 4 to 14½ feet probably would not support a mining operation. The last assay on the Applicant's map showed 0.16 percent U_3O_8 . Recess of operations in this mine indicates that the best ore had been mined and after the ore zone dipped downward it reached a point where minable grades of ore along the strike were in pockets and had decreased to an unprofitable margin. Therefore, additional ore reserves would have to

be sought below the workings rather than forward. The development aspects of work on the vein below the level to the diabase sill is apparent.

The Hope No. 3 mine was opened by a 50-foot adit to a fracture at which point a drift was driven both north and south. Minable ore appears to have decreased in grade and width to the south. Northward along the fracture the ore zone width averaged about 30 inches and was stated to have been consistent for about 160 feet but dropped in grade and to only pockets of ore as the drift neared the downward pitching top of the minable ore zone. Most of the ore in the upper limits has beenstoped out. A 60-foot incline from the workings along the downward pitch of the ore shoot to a vertical depth of 25 feet, and 110 feet of drifting along the vein at this horizon has been completed. The face of the drift is in ore, however, it is expected to end in spots or small pockets of ore as in the drift above. The approximate top of the "cutoff quartzite" as projected, indicates the bottom of the drift is about 2 feet above this horizon. Development aspects of any work on the vein below this level is apparent. A second diamond drill hole by AEC was drilled horizontally from a point about 25 feet west of the Hope No. 3 adit and 10 feet below the adit level. The purpose was to test the ground between the Hope No. 3 and Hope No. 1 fractures for parellel mineralized fractures. The hole penetrated only mineralization in the Hope No. 3 fracture. Therefore, additional drilling for mineralized fractures of the area between the No. 1 and No. 3 fractures is not justified.

In summary it is concluded the veins in the Hope group along N. 20° E. fractures appear to follow the area pattern of narrow, small, and discontinuous ore bodies having mineralized zones with or without ore grade material. The Hope No. 3 has produced most of the ore from the property concerned, and it is at present being mined from the pitching ore body phase, but there is a strong probability that it will follow the pattern of the other ore bodies in similar fractures in the Dipping Spring quartzite. Therefore, based on past and present geological evidence relating to ore bodies in the Dripping Spring quartzite, all of which are along fractures, the probability of discovering significant ore bodies on the Hope group of claims is poor and denial of the application is recommended.

Field Team concurs with the recommendation of the examining team.

Comments of Commodity Specialists:

USGS, W. P. Williams, October 15, 1956:

The examining team is of the opinion that further exploration on the property might disclose small scattered ore deposits but that large significant ore deposits would not be found. I agree and concur with the examiners and recommend denial of the application.

USBM, John E. Crawford, October 16, 1956:

Concurs with recommendation of the Field Team.

Rare & Miscellaneous Metals Div., F.L. Knouse, October 16, 1956:

The probability of discovering additional ore bodies on the subject property whose aggregate reserves would add significant reserves of uranium to the National Defense Program, is remote. However, additional exploration may discover small, disconnected ore bodies but the ore potential is not great enough to justify the proposed exploration. It may be pointed out that a substantial part of the proposed exploration is designed to develop the known ore bodies to which this Agency is not authorized to contribute. Under these circumstances the application for Government exploration assistance should be denied.

Conclusions:

A review of all our information relating to the proposed exploration project indicates that, the probability of making a significant discovery on the subject property is remote. Therefore, the application for Government exploration aid should be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

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

Date 10/16/56

DMEA Docket No. 4323
DMEA Contract No.
Commodity Uranium
Name of applicant Western Mines Development Co.
Name of property Hope Group of Claims
Location of property Gila County, Arizona
Estimated cost of project $127,902.00

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

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

1. Date of subject document: 9/28/56. 2. Date received by reviewers: 10/12/56.

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

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

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

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

7. Explain items marked yes above:

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

9. Action advised:
a. Obtain information from applicant ☐
b. Refer to Field Team ☐
c. Denial ☒
d. Issue with Field Team ☒
e. Disagree with Field Team ☐
f. Suggest alternate plan ☐
g. Recommend another use for the property ☐
h. Approval ☐
i. Consult with Mr. _____ at _____

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

10/15/56

IN REPLY REFER TO:

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

October 15, 1956

Memorandum

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

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

Subject: Review of field examination report, DMEA 4323, Western Mines Development Company, Hope claims, Gila County, Arizona, (uranium).

In an informative report the examining team shows that ore bodies in the Dripping Spring quartzite are small and discontinuous. Fractures are the main ore-localizing structures in the quartzite, and even the fractures are not persistent.

Although 4,273 tons of ore have been produced from the Hope group the ore was scattered and discontinuous. The grade of the ore assayed only as high as 0.18 percent U_3O_8. The examining team estimates that the property contains 4,427 tons of indicated ore and 1,592 tons of inferred ore, all below a grade of 0.20 percent U_3O_8.

The examining team is of the opinion that further exploration on the property might disclose small, scattered ore deposits but that large significant ore deposits would not be found.

I agree with the findings of the examiners and concur with their recommendation for denial of the application.

W. P. Williams

W. P. Williams

OCT 15 1956

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

RECEIVED
OCT - 8 1956

224 New Customhouse
Denver 2, Colorado

October 4, 1956

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Joint Report of Examination DMEA Docket 4323 (Uranium)
Western Mines Development Company (Hope Group of Claims)
Gila County, Arizona

Enclosed are the orignal and three copies of a joint engineering and geologic report on the subject property.

The examiners conclude that the possibility of discovering significant amounts of uranium ore on the Hope Group of Claims is poor. They recommend that the application be denied.

While it may appear inconsistent to deny this application when three contracts have been approved on other Dripping Spring deposits (DMEA 3669, 3935, and 4249), we now have more information on the character of these deposits than we had in the early development period of the area. We therefore concur with the recommendation of the field examiners that the application be denied.

DMEA Field Team, Region III

W. M. Traver

W. M. Traver

E. N. Harshman

E. N. Harshman

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

IN REPLY REFER TO:
DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR
OCT 4 1956
REGION III
DENVER, COLORADO

TRANSMITTED
OCT 4 1956

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

October 3, 1956

RECEIVED
OCT - 3 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 4323 (Uranium), Western Mines Development Company (Hope group of claims) Gila County, Arizona

Enclosed are the original and ten copies of a joint examination report on the subject property by W. L. Emerick, U. S. Geological Survey, and T. M. Romslo, U. S. Bureau of Mines.

The examiners describe in some detail the past operations in the various Hope mines, the structural and stratigraphic control of the small low grade ore shoots, and the ore potential of the undeveloped portions of the various areas proposed for exploration. They conclude, and I concur with them, that the ore potential of the Hope mines 1, 2, 3, and 4 is not great enough to justify the work proposed by the applicant.

The development aspects of the program are apparent, particularly with respect to the proposed Tunnel "B" (Plate VI of the application) and the proposed incline (Plate VII of the application).

N. E. Nelson, in his June 12, 1956, review of the application, points out the marginal nature of the deposits mined

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

to date and comments that justification of the project would rest largely on the possibility of finding higher grade material. From data given in the examination report it appears that higher grade or larger deposits of uranium ore will not be found by the proposed exploration and development program.

It may seem incongruous to deny this application (DMEA 4323) when three contracts have been approved on other Dripping Spring deposits (DMEA 3669, 3935, and 4249). Applications 3669 and 3935 were, however, approved early in the development period of the Dripping Spring deposits and considerable data (mostly discouraging) on the character of these deposits has been assembled since those approvals. A very limited program of exploration was recommended on the Big Six property (DMEA 4249) for reasons given in the Field Team's letter transmitting that report to Washington.

E. N. Harshman
Member, Field Team

Enclosures (11)
ENHarshman:mp

TRANSMITTED
OCT 4 1956

DMEA
DEPARTMENT OF THE INTERIOR
OCT 1 1956
REGION III
DENVER, COLORADO

September 28, 1956

MEMORANDUM

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

From: W. R. Storms, Superintendent, Southwest Experiment Station

Subject: Field Examination Report Docket DMEA 4323 (Uranium), Western Mines Development Company (Hope group of claims) Gila County, Arizona

Enclosed are original and 11 copies of a joint field examination report on the above property, by T. M. Romslo of the Bureau of Mines and W. L. Emerick of the Geological Survey.

W. R. Storms
Superintendent
Southwest Experiment Station

cc: W. M. Traver (11)
Shaw
Harshman

WRStorms:ms

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

TRANSMITTED
OCT 4 1956

Box 4126 University Station
Tucson, Arizona

September 28, 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team, Region III

From: T. M. Romslo, U. S. Bureau of Mines
W. L. Emerick, U.S. Geological Survey

Through: W. R. Storms
E. N. Harshman

SUBJECT: Docket DMEA 4323 (Uranium) Western Mines Development Company (Hope group of claims), Gila County, Arizona

Enclosed are the original and 11 copies of a joint field examination report on the above property recommending denial of the application.

Survey and Bureau copies of the docket are being returned under separate covers.

T. M. Romslo
U. S. Bureau of Mines

W. L. Emerick
U. S. Geological Survey

cc: W. M. Traver (11)
Shaw
Harshman

WLE:ms

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

DMEA
DEPARTMENT OF THE INTERIOR
OCT 1 1956
REGION III
DENVER, COLORADO

FOR UNITED STATES GOVERNMENT USE ONLY

TRANSMITTED
OCT 4 1956

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-4323 (Uranium) Western Mines Development Company

Hope group of Claims

Gila County, Arizona

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

W. L. Emerick, Geologist
U. S. Geological Survey

September 28, 1956

Received by
DMEA OPERATING CONTROL
10-12-56
(DATE)

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Western Mines Development Company applied for Defense Minerals Exploration Administration assistance to explore their Hope group of claims in secs. 29 and 30, T. 6 N., R. 14 E., Gila County, Arizona for uranium. The application proposed the drilling of 12 or more diamond-drill holes, the driving of crosscuts, drifts, one inclined drift, and the building of an access road to one drift site. Total cost of the project was an estimated $127,902.00. Application for government aid was received by the Defense Minerals Exploration Administration on June 1, 1956, and a field examination of the property was made on August 16 and 17, 1956 under docket DMEA 4323.

Uranium was first discovered in the district in 1950 but active mining on the Hope group of claims probably did not occur until the applicant acquired the property in 1954. Production from the claims since their acquisition amounts to about 4,273 short tons of ore averaging about 0.17 percent U_3O_8. Current production from the Hope mines reportedly is about 200 tons per month.

The Hope group of claims are in the upper member of the pre-Cambrian Dripping Spring quartzite. A diabase sill discordantly intrudes the upper member of the Dripping Spring quartzite in the district. Block faulting constitutes the most prominent structure in the district but the upper member of the Dripping Spring quartzite has abundant smaller faults, fractures, and joint planes. Two nearly vertical fracture systems, with which uranium mineralization is associated

in the district, trend about N. 20° E. and N. 70° W. A greater part of the uranium mineralization follows the N. 20° E. fractures. In vertical section the N. 20° E. fractures have a stepped or en echelon pattern downward to the southeast.

The pattern of the uranium ore bodies along the N. 20° E. fractures in the Dripping Spring quartzite appears to be one of small, discontinuous bodies longitudinally and vertically. Pitching of the ore bodies northward along the strike of the fractures appears to mean a decrease in grade, with minable ore occurring only in spots or in pockets. The N. 20° E. fractures appear to be persistent in mineralized material but do not appear to be persistent for long in minable widths and lengths of ore. Results of previous exploration on the fractures indicated, generally, only small bodies of marginal ore, or mineralization but no ore.

The uranium minerals present in the fractures on the Hope claims are uraninite and probably some uranophane. Sulphides associated with the uranium are pyrite and pyrrhotite. There are no gangue minerals present.

Minable grade rock in the Hope mines occurs in a mineralized zone averaging about 30 inches wide. The uranium content is relatively high along fractures and rapidly decreases outward to an assay limit.

The host rock for the uranium deposits along the fractures in the report area is a thin-bedded arkosic siltstone and a metamorphic equivalent of similar siltstone in the middle unit of the upper member of the Dripping Spring quartzite. Facies changes within the middle unit appear to limit the uranium deposits vertically. The uranium minerals and sulphides are disseminated in the siltstone or occur on fracture planes within the siltstone in a narrow zone close to the fractures.

All three of the mines on the Hope group of claims were driven at approximately the same stratigraphic horizon above an intruding discordant sill. Owing to an upwarping of the sill the Hope No. 1 mine lies immediately above the sill; the Hope Nos. 2 and 3 about 100 feet above it.

The Hope No. 1 mine was flooded and inaccessible, except for the first 100 feet of its length, but from a study of available geologic data it appeared that no significant reserves remain in the mine. The Hope No. 2 mine was not being worked at the time of examination and the face showed only background radioactivity. The inclined portion of the face on the dip of the ore zone was muck-filled and could not be examined. Recess of mining in the Hope No. 2 probably occurred when the grade of ore in the downdip of the ore zone fell below marginal limits and became unprofitable.

The ore body along the Hope No. 3 fracture appeared to be the best of the applicant's mines. More than half of the total production

from the Hope group of claims was mined from the No. 3. Minable ore decreased in grade and was cut off on the south in this mine by a NE fracture, but northward minable ore persisted for about 160 feet before dropping in grade and to pockets of ore. Present mining in the Hope No. 3 is on the downward pitch of the vein in a drift driven from the bottom of a 60-foot incline. Although still in minable ore, there is a probability, owing to the pattern of ore bodies in the Dripping Spring quartzite, that before long the ore zone on the present mining level will become spotty or occur in pockets.

The examining team estimates a total indicated and inferred tonnage of minable ore in the Hope Nos. 1, 2, and 3 mines of 6,019 short tons, probably averaging about 0.17 percent U_3O_8.

The exploratory program in which the applicant requests government aid involves the drilling of 12 or more inclined diamond-drill holes, the driving of a 20-foot crosscut as a drill station, and the driving of a 365-foot inclined drift under Stage I, or the first phase. Stage II involves 400-foot and 550-foot crosscuts, 300 feet of drifting, and 1,000 feet of access road. Total cost of the project was an estimated $127,902.00.

It can be concluded that the ore bodies along the fractures on the Hope group of claims are geologically similar to the general pattern of ore bodies along fractures in the Dripping Spring quartzite. The ore bodies in the Dripping Spring quartzite along the N. 20° E.

fractures, in the district and in the report area, are small, narrow, and discontinuous bodies. Persistence in minable widths and lengths of ore bodies is not characteristic. It is not believed that exploration on the Hope group of claims would discover additional significant reserves of ore beyond what has been estimated. Present reserves of indicated and inferred ore are not extensive enough to warrant government aid in exploration under the known geological conditions. Denial of the application is therefore recommended.

DMEA-4323 (URANIUM) WESTERN MINES DEVELOPMENT COMPANY
HOPE GROUP OF CLAIMS
GILA COUNTY, ARIZONA

CONTENTS

	Page
INTRODUCTION	1
ACKNOWLEDGMENTS	1
LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES	2
HISTORY, PRODUCTION, AND GRADE	2
EXTENT AND OWNERSHIP OF THE PROPERTY	3
PRESENT STATUS	4
GEOLOGY	4
ORE RESERVES	14
PROPOSED EXPLORATION	16
CONCLUSIONS	18
RECOMMENDATIONS	19

APPENDIX

ILLUSTRATIONS

Figure No.		
1	Location map	Following page 2
2	Claim map	" " 3
3	Geologic Sketch Map showing location of mine workings	In folder
4	Geology of the Hope No. 1 mine	" "
5	Geology of the Hope Nos. 2 and 4 mines	" "
6	Geology of the Hope No. 3 mine	" "
7	Applicant's ore reserve map of Hope No. 2 and No. 3 mines	" "

INTRODUCTION

The Western Mines Development Company, an Arizona corporation with offices in Grand Junction, Colorado, has applied for Defense Minerals Exploration Administration assistance under docket DMEA-4323, to explore their Hope group of claims for uranium. The property is located in secs. 29 and 30, T. 6 N., R. 14 E., Gila County, Arizona.

The proposed application involves the drilling of 12 or more diamond-drill holes, the driving of crosscuts, drifts, an inclined drift, and the building of an access road to drift site. Total cost of the project is an estimated $127,902.00.

Field examination of the property for the DMEA was made on August 16 and 17, 1956 by T. M. Romslo, mining engineer, U. S. Bureau of Mines, and W. L. Emerick, geologist, U. S. Geological Survey. Forest M. McConochie, mine manager for the Western Mines Development Company, accompanied the field team on their examination.

ACKNOWLEDGMENTS

Sincere thanks are extended to Harry C. Granger and Robert B. Raup, of the U. S. Geological Survey, for assistance and discussion on the regional and local geology of the district. Mr. R. J. Schwartz, of the AEC, contributed logs, data, and several helpful suggestions on the geology of the area. Assays of samples were made by LaMar G. Evans, U. S. Bureau of Mines, Tucson, Arizona.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Hope group of claims is located in the Sierra Ancha Mining District on the north side of Workman Creek, in sections 29 and 30, T. 6 N., R. 14 E., Gila County, Arizona (Figure 1). The claims can be easily reached from Globe, Arizona, via the Globe-Young highway, by traveling north on a well-maintained secondary road about 35 miles to Aztec Lodge on Workman Creek. A 1.1 mile dirt road leads up Workman Creek, southeastward, to the mines.

The Sierra Ancha Mountain range in the area presents a rugged topography of nearly vertical canyons, steep hillsides, and sloping mesas. Elevations range from 4,000 feet to 7,500 feet above sea level. The Hope group of claims are at an elevation of slightly above 5,900 feet above sea level. Vegetation above the 4,000-foot level consists of manzanita, scruboak, and pines.

HISTORY, PRODUCTION, AND GRADE

Uranium was first discovered in the Sierra Ancha District, Gila County, Arizona, in 1950. Prospecting, exploration and development in the district was further stimulated in 1953 by AEC radiometric surveys and exploratory drilling that continued to 1956.

The Hope group of claims probably was first located by the present owners early in 1954. In July 1954 the applicant obtained the claims by lease. Since then the applicant has explored and developed the Hope group of claims and the nearby Deep Creek, Cline,

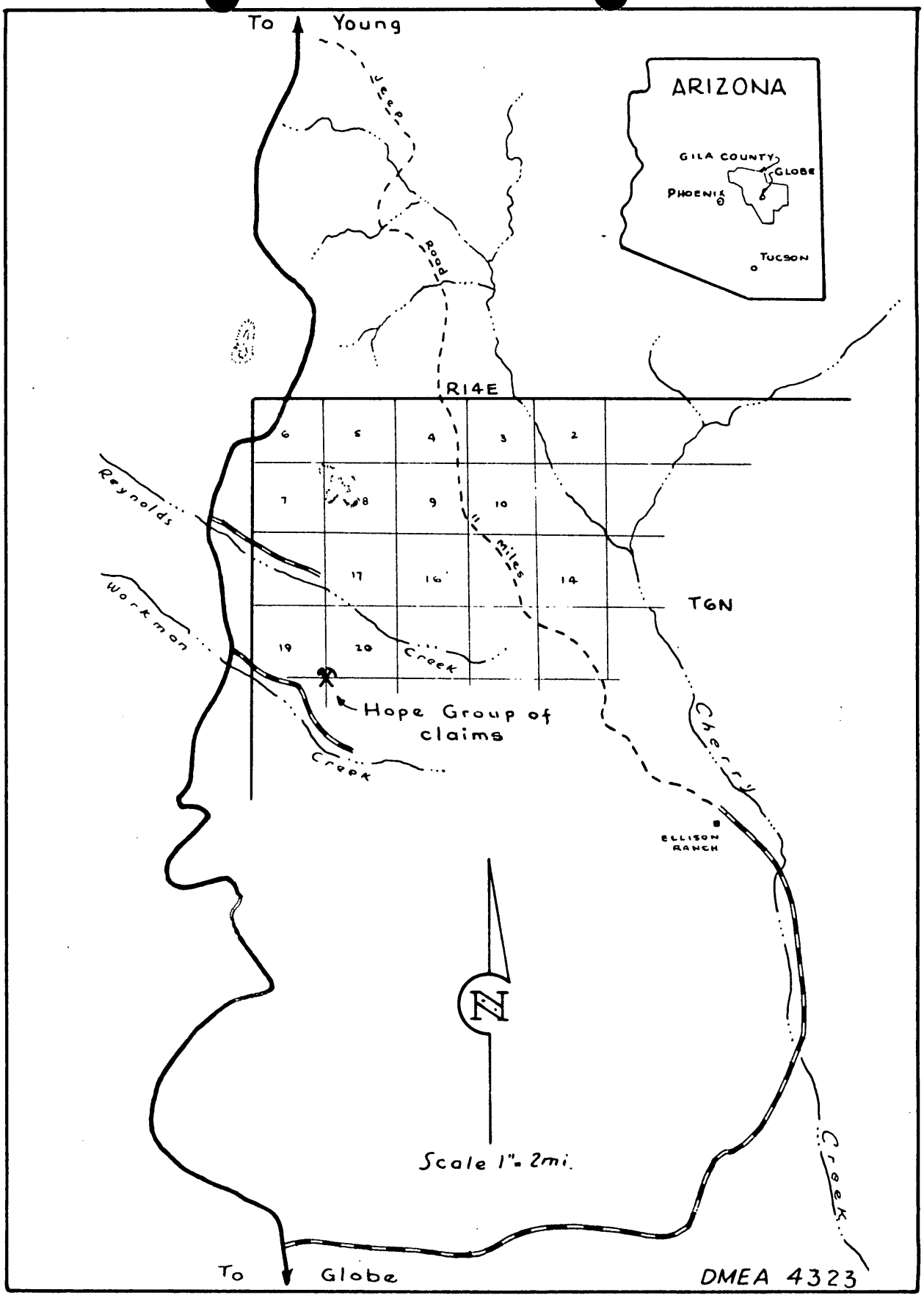


FIG. 1 LOCATION MAP, WESTERN MINES DEV. CO.
GILA COUNTY, ARIZONA

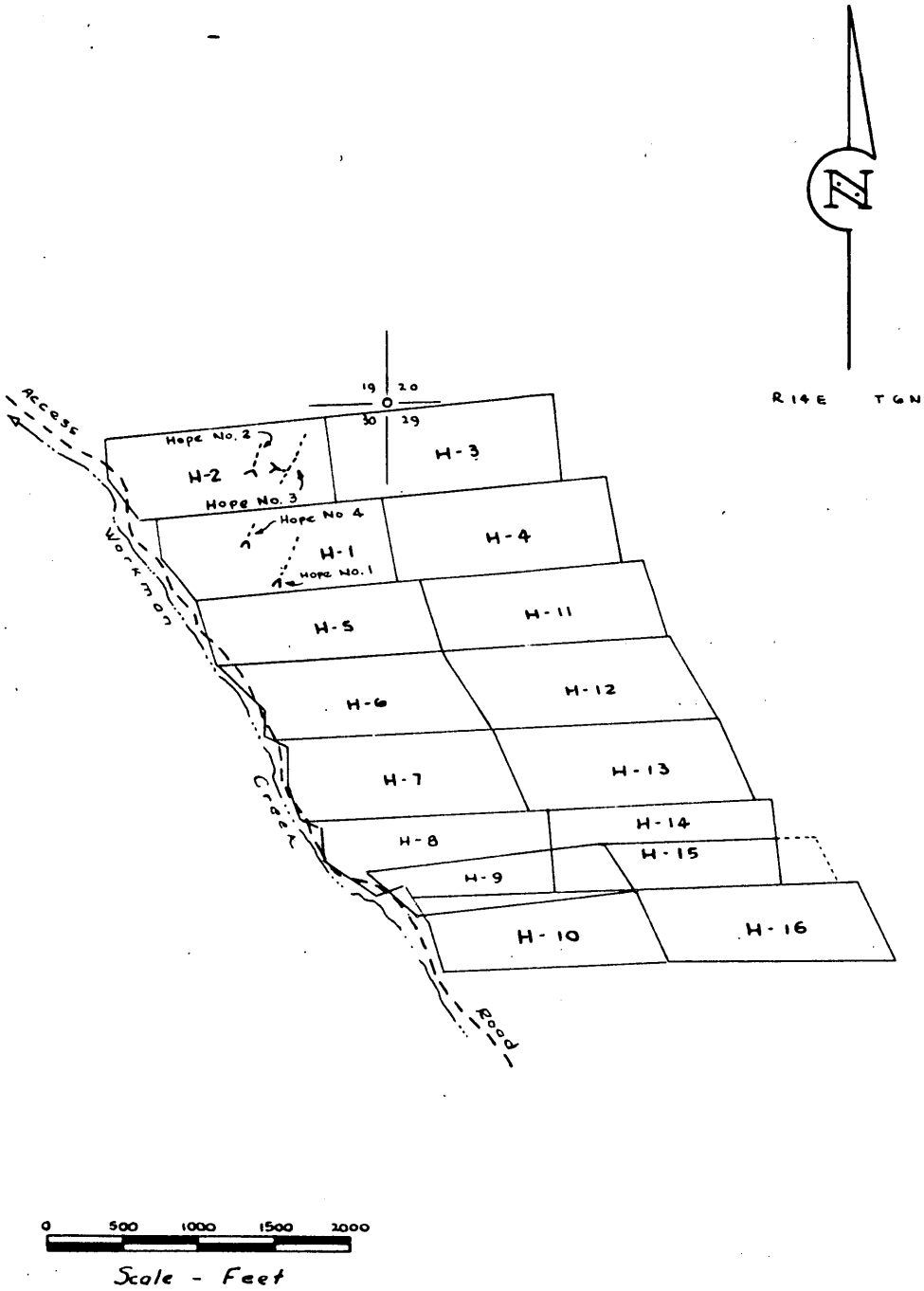
and Workman groups of claims. These operations consisted of geologic and radiometric mapping, stripping, road building, drifting, and long hole drilling. During April and May 1956 the AEC drilled 2 diamond drill holes on the Hope claims.

Production from the Hope group of claims probably started early in 1955. A small amount of ore had been produced and stockpiled before the first shipment was made August 1955 to the AEC operated Cutter, Arizona buying station. Production has been continuous, and to August 1, 1956 totalled about 4,273 tons of ore averaging 0.17 percent U_3O_8.

EXTENT AND OWNERSHIP OF THE PROPERTY

The property of Western Mines Development Company involved in the proposed exploratory project consists of sixteen contiguous unpatented mining claims (Figure 2), known as the Hope Nos. 1 to 16, inclusive, in secs. 29 and 30, T. 6 N., R. 14 E., Gila County, Arizona. In addition, the Company reportedly controls the sixteen mineral claims, known as the Workman group, lying immediately to the north and contiguous to the Hope claims.

The Hope group of claims was leased on July 27, 1954 by Vance Thornburg, agent for Gerald Gidwitz, dba/Western Mines Development Company, from owners Maurice Sharp, Charlie Nichols, and Carroll Willbanks, all residents of Gila County. Vance Thornburg assigned all interests in the Hope group of claims to Gerald Gidwitz, dba/Western Mines Development Company, on November 22, 1954.



DMEA 4323

FIG. 2 CLAIM MAP, WESTERN MINES DEV. CO.
GILA COUNTY, ARIZONA

Officers of the Western Mines Development Company include Willard Gidwitz, president; Gerald Gidwitz and Joseph Gidwitz, vice-presidents; Max H. Brown, secretary-treasurer; and E. E. Young, assistant secretary-treasurer.

PRESENT STATUS

The principal mine workings of the Hope group of claims are shown on figure 3. They comprise: (1) the presently flooded 350-foot drift of the Hope No. 1 mine, (2) the 85-foot drift of the Hope No. 2 mine, (3) the 300-foot drift of the Hope No. 3 mine, and (4) the 12 to 15 foot Hope No. 4 open cut.

Activity is confined to the Hope No. 3 mine where 2 contract miners are driving a drift northward from the bottom of the incline and raising from the drift to the adit. These workings yield all of the ore being produced at present, about 200 tons per month.

The major pieces of equipment at the mines are a Trato shovel, 6 jackhammers, a stoper, 3 jacklegs, a sump pump, a slusher, 2 mine cars, a pickup truck, and a 365 CFM compressor. Most of the equipment is rented.

F. M. McConochie, the mine superintendent, lives on the property.

GEOLOGY

The deposits of the Hope group of claims in the Sierra Ancha mining district, Gila County, Arizona, are in the Dripping Spring quartzite of the pre-Cambrian Apache group. In the district, the Dripping Spring quartzite is conformably underlain by the Barnes conglomerate and conformably overlain by lower members of the Mescal

limestone. Sills and dikes of diabase intrude the rocks of the Apache group in the district.

The Dripping Spring quartzite has an upper and a lower member. The lower member, about 300 feet thick, is generally medium to very fine-grained, massively-bedded, and cross-laminated. It is gradational into the underlying Barnes conglomerate. No uranium deposits are known to exist in the lower member[1/]. The upper member is also about 300 feet thick, but is thin-bedded, predominantly clayey to silty, and very fine-grained. A thick diabase sill discordantly intrudes the lower part of the upper member. Granger and Raup[2/], of the U. S. Geological Survey, have worked extensively in the district, and they have subdivided the upper member into (1) a lower red unit of alternating micaceous sandstone and siliceous siltstone, (2) a middle gray siliceous siltstone unit, and (3) an upper buff unit of fine arkosic sandstone. About midway in the middle gray unit is an arkosic sandstone facies about 18 inches thick, locally called the "cutoff quartzite" (Figure 3), dividing the middle gray unit into an upper black facies and a lower gray facies of siltstone. On the Hope group of claims Granger and Raup[3/] believe that the "cutoff quartzite" probably marks the lower limit of the ore bodies.

1/ Schwartz, R. J., AEC, 1956, oral comm.

2/ Granger, H. C., and Raup, R. B., 1956, oral comm.

3/ Op. cit., 1956, oral comm.

Both the gray and black facies of the middle gray unit are favorable horizons for uranium in the district[4/]. Much of the siltstone in the upper member of the Dripping Spring quartzite is feldspathic and according to Granger[5/] the metallic K may range from about 8.7 percent to about 12.1 percent.

Block faulting constitutes the most prominent structure in the district, but locally the upper member of the Dripping Spring quartzite has abundant smaller faults, fractures, and joint planes. Two nearly vertical fracture systems, with which uranium mineralization is associated in the district, trend about N. 20° E. and N. 70° W. The greater part of the uranium mineralization follows the N. 20° E. fractures. In vertical section (Figures 4, 5, and 6) the fractures have a stepped or en echelon pattern downward to the southeast. It appears probable that fractures controlled the deposition of minerals, but the importance of the fracturing is very obscure in places in the mines. Much of the later fracturing appears to follow the old joint planes of the sediments.

The pattern of the uranium ore bodies along both sets of fractures in the Dripping Spring quartzite of the district and the report area appears to be one of small, discontinuous ore bodies both longitudinally and vertically. As a part of the pattern, pitching of the ore bodies along the strike is apparently a common characteristic on

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4/ Op. cit., 1956, oral comm.

5/ Id., 1956, oral comm.

the N. 20° E. fractures, and if experience is to be reckoned, appears to indicate a probable decrease in grade, with minable ore occurring generally in spots and pockets. An analysis of the data given on the applicant's other properties in the area reveals a pattern of narrow, mineralized fractures that ranged from sub-marginal to marginal grades. The deposits in the fractures on these other properties were small, limited longitudinally along the fractures, and were spotty in minable ore. The N. 20° E. fractures appear to be persistent in mineralized material but do not appear to be persistent for long in minable widths and lengths of ore. The applicant's Workman group of claims immediately joining and contiguous to the Hope claims on the north contained short, discontinuous ore bodies along N. 20° E. fractures that generally became spotty and too low grade to mine. Exploration of the Workman group by drifting, crosscuts, radiometric traverses, and wagon-drilling did not prove any minable ore. Applicant's Cline group, about 1½ miles south of Workman Creek and the Hope claims, was explored on the N. 20° E. mineralized fractures by drifting, raising, and long-hole testing. Results of the exploration on the fractures indicated only small bodies of marginal ore, or mineralization, but no ore.

Applicant's mines along the N. 20° E. fractures on the Hope group of claims do not depart from the pattern of uranium ore bodies in the Dripping Spring quartzite. Most, or all, of the characteristics found in the Dripping Spring quartzite uranium ore bodies to date are present

in the Hope mines, namely: narrowness, smallness, discontinuity, pitching of ore body along the strike, and mineralized zones along fractures, with and without ore grade material.

The host rock along the fractures for the uranium deposits in the report area is a thin-bedded arkosic siltstone, and a metamorphic equivalent of similar siltstone, in the middle unit of the upper member of the Dripping Spring quartzite. The uranium mineral, or minerals, and some sulphides are found disseminated in the siltstone, or occur on fracture planes within the siltstone in a narrow zone close to the fractures.

The uranium mineral present in greatest amount disseminated in the siltstone and along the fracture planes on the Hope group of claims is uraninite; some uranophane is said to occur alone in places. Sulphides, associated with the uranium in the Hope mines, are pyrite and pyrrhotite. No gangue minerals are present.

Actual minable ore grade rock occurs in a mineralized zone along fractures and decreases in grade outward to an assay limit. The mineralized zone ranges from about $1\frac{1}{2}$ feet to 3 feet but probably averages about 30 inches. In mining, much low grade rock is mixed with the higher grade ore of the mineralized zone, bringing the average grade down to about 0.17 percent U_3O_8, as shown on the applicant's settlement sheets. When the narrow mineralized zone occurs in spots or pockets mining generally becomes unprofitable.

All three of the mines on the Hope group of claims (Figure 3) were driven at approximately the same stratigraphic horizon in the upper member of the Dripping Spring formation above an intruding discordant diabase sill. The Hope No. 1 mine was driven for part of its length in the top of the sill, which was upwarped in the area of this mine (Figure 3), cutting out the lower part of the middle unit of the Dripping Spring quartzite. In the area of the Hope Nos. 2 and 3 mines the diabase sill is about 100 feet below the levels (Figure 3). Upper limits of the ore, and probably the lower limits in the case of the Hope Nos. 2 and 3, appear to be limited by facies changes within the sediments. Slight differences in chemical nature or permeability of the facies within the middle unit probably helped to make favorable or unfavorable horizons for uranium deposition.

The Hope No. 1 mine (Figure 4) was flooded and inaccessible at the time of examination except for about the first 100 feet. Applicant's report stated that 600 tons of the remaining developed ore reserves were being mined, and from appearances this had been done. From a study of available geologic data it appears that no significant reserves now remain in the Hope No. 1 mine, inasmuch as the drift level lies on or immediately above the dipping surface of the diabase sill, and the upper limits of ore also appear to have been reached and stoped out. The first 100 feet of the drift was in submarginal grade rock and at 300 feet the ore horizon went into the

floor and became spotty as the face advanced. Thirteen holes about 100 feet deep drilled at various angles by the applicant from the face of the drift failed to find additional ore. The last assays shown by the applicant's map in the Hope No. 1 drift showed unminable grade rock, and in addition no assays were shown for the last 25 feet of drift to the face. Mapping by Granger and Raup[6/], of the U. S. Geological Survey, on the last 40 feet of the Hope No. 1 mine (Figure 4) indicates that the vein splits and pinches, apparently decreases in grade, and becomes pockety. The Hope No. 1 mine probably could be compared to the applicant's Workman No. 1 mine on adjoining claims to the north of the Hope group. Both mines were driven on or near the diabase-quartzite contact in mineralized fractures trending N. 20° E., and it appears the mineralized zone ended in pockets of ore. Applicant's data in regard to the Workman No. 1 mine states that "an incline was started which followed the contact for 100 feet, but was discontinued when the ore began to occur in pockets instead of a relatively consistent mineralized vein."

The Hope No. 2 mine was not being worked at the time of examination. An inspection of the face in the mine showed only background radioactivity, and the inclined portion of the face (Figure 5) was muck-filled, so no examination of the downward pitch of the ore zone could be made. The approximate top of the "cutoff quartzite" as plotted on figure 5 indicates that the lower end of the inclined

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6/ Op. cit. 1956, oral comm.

portion of the drift may have reached this level. The higher zones of radioactivity, as plotted (R. J. Schwartz, AEC, 1956) on Figure 5, suggest that minable grades of ore were probably hard to maintain in the drift. The last assay shown on applicant's map in the Hope No. 2 mine is 0.16 percent U_3O_8. Recess of mining in the Hope No. 2 mine also suggests that the best ore had been mined and that after the ore zone dipped downward it reached a point where minable grades of ore along the strike of the fracture were in spots or pockets and had probably decreased to an unprofitable marginal point. Applicant states that drilling disclosed the ore body in the floor to a depth of at least 27 feet and pitching to the north. It is questionable whether the 27 feet represents minable ore grade material. A diamond drill hole (AEC-DD No. 1 - Appendix) was drilled vertically in April 1956 by the AEC about 22 feet south and 10 feet below the Hope No. 2 portal (Figures 3 and 5). Being drilled vertically, the drill hole probably did not stay within the plane of the fracture, but the assays of eU_3O_8, shown on the log, from the beginning of scanning at 4 feet down to 14½ feet, would probably not sustain minable grades of ore. The drill hole penetrated the diabase sill at 90.8 feet. Additional reserves of ore in this mine would probably have to be sought downward in the fracture from the floor of the present drift if the applicant's drilling disclosed minable grade rock in that direction, rather than forward along the strike.

The ore body along the fracture in the Hope No. 3 mine, about 100 feet east of the Hope No. 2 fracture (Figure 6), appears to be the best in the applicant's Hope group of claims. More than half of the 4,273 tons of production from the Hope group came from this mine. The mine was opened by a 50-foot adit driven to an intersection with the fracture, at which point a drift was driven both north and south. Minable ore appears to have decreased in grade and width to the south, where it was cut off at a N.E. fracture. Northward along the strike of the fracture the ore zone width, averaging about 30 inches, was stated to have been consistent for about 160 feet but dropped in grade and to only pockets of ore as the drift neared the downward pitching top of the minable ore zone. Most of the ore to its upper limit above the drift has been stoped out. Two long-holes were drilled below raise No. 7, which showed, according to the applicant's data, ore to a depth of 50 feet. A winze was sunk to a depth of 13 feet under raise No. 9, after which a 13-foot drill hole was put down from the bottom of the winze. Both winze and drill hole allegedly showed ore. The present mining in the Hope No. 3 mine is on the downward pitch of the vein and at the time of examination the applicant had completed a 60-foot incline, started beneath raise No. 7 on the downward pitch of the vein, to a vertical depth of about 25 feet. A drift was being driven along the fracture from the bottom

of the incline and at the time of examination was about 60 feet long, but subsequent work has extended the drift an additional 50 feet. A raise was driven 10 feet from the face and a second raise is now being driven 30 feet south of the face. A 3-foot chip sample taken by the field examiners across the face of the drift on this level on August 17, 1956 (Figure 6) gave a chemical assay of 0.22 percent U_3O_8; a 50-60 pound grab sample (Figure 6) taken from an ore pile from the drift gave a chemical assay of 0.24 percent U_3O_8. The drift face appeared to have some spots higher in radioactivity than others but the best area appeared to be about midway on the face. On the basis of the sample assays, the drift is still in ore but there is a strong probability, if the pattern of other mineralized fractures in the Dripping Spring quartzite is followed, that the ore values along the strike of the Hope No. 3 fracture will end in spots or pockets of ore. The approximate top of the "cutoff quartzite" as plotted on Figure 6 indicates that the floor level of the drift at the bottom of the incline is about 2 feet or less above this point.

A second diamond drill hole (AEC-DD No. 2 - APPENDIX) was drilled horizontally by the AEC in May 1956 (Figures 3 and 6). Its collar location was about 25 feet west of the Hope No. 3 adit and about 10 feet below the adit level. Purpose of the horizontal drilling was to test the ground between the Hope No. 3 and Hope No. 1 fractures for parallel mineralized fractures. R. J. Schwartz of the AEC[7/] stated that the hole

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7/ Personal comm., 1956.

did not penetrate the extension of the Hope No. 1 fracture. Neither did it apparently penetrate any mineralized fractures in the intervening ground, except the Hope No. 3 fracture at about 95 feet. Total length of the drill hole was 353.0 feet.

ORE RESERVES

Reserves for the Hope group of claims were calculated for an average width of 30 inches of minable grade ore at an average grade of 0.17 percent U_3O_8. A study of settlement sheets included in the application and a record of ore sales submitted shortly after field investigations show that the average grade of U_3O_8 paid for at the mill amounted to about 0.17 percent U_3O_8 for Hope #1 ore, about 0.12 percent U_3O_8 for Hope #2 ore, and about 0.18 percent U_3O_8 for Hope #3 ore. A tonnage factor of 12 cubic feet per ton of rock was used in converting volumes to tons. Based on the probability expressed by Granger and Raup[8/] that the ore bodies of the Hope group of claims are limited downward by the "cutoff quartzite" facies of the middle unit of the Dripping Spring quartzite, inferred reserves were calculated to that point.

Applicant's settlement sheets show 1,363 short tons of ore averaging about 0.17 percent U_3O_8 shipped from the Hope No. 1 mine. Calculation of reserves at an average width of 30 inches of minable ore give approximately 1,100 short tons of indicated ore from the drift and stopes. Field examiners conclude from geological information that the Hope No. 1 has been mined out and contains no significant additional indicated or inferred tonnages of ore grade material.

8/ Op. cit. 1956, oral comm.

Settlement sheets on the Hope #2 mine show that about 188 short tons of ore averaging about 0.12 percent U_3O_8 were shipped from this mine through July 1956. Applicant (Figure 7) estimates 48 tons of indicated ore, 242 tons of probable ore, and 232 tons of inferred ore, averaging about 0.12 percent U_3O_8, in the Hope #2 mine. Stratigraphically, the "cutoff quartzite" facies is about 18 feet below the floor of the Hope No. 2 mine. Calculation of reserves at an average width of 30 inches of minable ore gives approximately 300 short tons of indicated ore from the drift and stope of the Hope No. 2 mine. Using a length of 80 feet, an average width of 30 inches, and a vertical depth of 18 feet, the inferred reserves for the Hope No. 2 mine would amount to about 300 short tons of ore.

Settlement sheets on the Hope No. 3 mine show that about 2,722 short tons of ore averaging about 0.18 percent U_3O_8 were shipped from this mine through July 1956. Applicant (Figure 7) estimates 784 tons of assured ore averaging 0.37 percent U_3O_8, 1,049 tons of probable ore averaging 0.35 percent U_3O_8, and 2,816 tons of inferred ore averaging 0.25 percent U_3O_8, for the Hope No. 3 mine. Stratigraphically, the "cutoff quartzite" is about 30 feet below the floor of the Hope No. 3 level. The floor level of the drift at bottom of the incline appears to be 2 feet or less above the top of the "cutoff quartzite" facies, which may have influenced the levelling off of the incline at its present elevation. Calculation of reserves at an average width of

30 inches of minable ore shows 3,027 short tons of indicated ore from drifts, stopes, and incline. Extending reserves to a depth of 30 feet where applicable, and including areas in the unmined areas above and below the "incline" drift, an additional 1,292 short tons of inferred ore were obtained.

Summary of reserves

	Short tons		Av. grade
	Indicated	Inferred	Percent U_3O_8
Hope No. 1	1,100	---	0.17
Hope No. 2	300	300	0.12
Hope No. 3	3,027	1,292	0.18
	4,427	1,592	

PROPOSED EXPLORATION

Proposed exploration by the applicant was outlined in two stages or phases. Stage I (Phase "A") would consist of 12 inclined diamond drill holes ranging from -3 degrees to -42 degrees to explore the downward extension of the Hope Nos. 1, 2, 3, and 4 veins. Six of the inclined diamond drill holes would be drilled from a drill station near the face of the Hope No. 2 drift, and six other inclined diamond-drill holes would be drilled from a station off the drift about 110 feet from the Hope No. 3 adit. Should the above 12 drill holes fail to disclose ore at depth below the crosscut to the Hope No. 3 drift, a 365-foot inclined drift was proposed to be driven in this stage along the footwall of the oreshoot (see applicant's Plate VII). 1,200 feet of drill holes were to be drilled from this incline to explore for additional ore.

Stage II (Phase "B") depended upon the results of the AEC diamond-drill hole (Figures 3 and 6) drilled horizontally in May 1956 about 25 feet west and 10 feet below the Hope No. 3 adit, to cut the projection of the Hope No. 1 vein, or any other structure. In case ore was encountered in this hole, or in any of the holes drilled to the east in Stage I (Phase "A"), the crosscut to the Hope No. 3 vein was to be extended 400 feet east, with 300 feet of drifting done on the vein or veins cut. In addition, Stage II (Phase "B") proposed a crosscut of at least 550 feet a short distance above the diabase sill, with 400 feet of drift, if ore was encountered in the deeper holes of Stage I (Phase "A"). As an alternative to this 550-foot crosscut, if the drilling revealed that the oreshoot of the Hope No. 3 extended downward to this elevation (top of sill), but pitches to the north, the crosscut was to be driven in location "C" (applicant's Plate VI-Alternate proposed tunnel). This alternate tunnel would require 1,000 feet of access road.

The AEC horizontal drill hole did not cut the extension of the Hope No. 1 fracture, and penetrated no mineralized fractures in the intervening ground as far as it went, with the exception of the Hope No. 3 fracture at 95 feet. Total length of the hole was 353.0 feet. This information would make applicant's drill

holes 7, 8, and 9 under Stage I (Phase A), and the crosscut extension east 400 feet of the Hope No. 3 adit under Stage II (Phase B), unnecessary. The tunnels proposed under Stage II (Phase B) a short distance above the diabase sill appear to be in the realm of development.

CONCLUSIONS

Based on a probable geologic pattern of small, discontinuous uranium bodies along the N. 20° E. fractures in the Dripping Spring quartzite in the district, and of the report area, the ore bodies of the Hope group of claims appear geologically similar. The N. 20° E. fractures, in general, do not appear to be persistent for long in minable widths, depths and lengths of ore. Pitching of the ore bodies along the strike of the fractures appears to indicate, in general, a decrease in grade with minable ore occurring only in spots or pockets. Exploration by the applicant on his claims contiguous to and adjoining the Hope claims on the north reveals in that area a pattern of narrow, mineralized fractures ranging from sub-marginal to marginal grades, limited longitudinally and vertically along the N. 20° E. fractures, and spotty in minable ore. The mines of the Hope group of claims, along the N. 20° E. fractures, appear to follow the area pattern of narrow, small, and discontinuous ore bodies having mineralized zones with or without ore grade material. The Hope No. 3 has produced most of the ore from the group of claims and it is at present being mined in the pitching ore body phase, but there is a

strong probability that it will follow the pattern of ore bodies in the N. 20° E. fractures of the Dripping Spring quartzite. Based on the negative results attained along the N. 20° E. fractures elsewhere in the report area, and from a study of geological conditions on the Hope group of claims, it is not expectable that the Hope mines will be exceptions to the general pattern. Reserves of indicated and inferred ore as estimated from mining and geological data are not extensive enough to warrant recommendations for government aid under the known geological conditions.

RECOMMENDATIONS

Based on past and present geological evidence pertaining to orebodies in the Dripping Spring quartzite in the district and in the report area, all of which are along fractures, the probability of discovering significant bodies of reserves on the Hope group of claims is poor, and government aid is not believed warranted in this type of a deposit. Denial of the application is therefore recommended.

APPENDIX

EXTRACTS OF AEC DIAMOND DRILL HOLE LOGS

Hope group of claims, Gila County, Arizona

DRILL CORE LOG

CLAIM: Hope HOLE: #1 DRILLED BY: USBM DRILL DATE: April 1956
LOCATION: Workman Creek, Gila County, Ariz. LOGGED BY: RJS RECOVERY: 85%
COLLAR ELEVATION: 6,100' CAVED AT: 85 ft. CASED TO: 80 ft.

Footage from	Footage to	Scanning MR/hr	Geology Remarks	% eU_3O_8
0	0.2	1.0	py dism & on fracture	0.45%
0.2	0.5	0.1	arkosic, py same	0.08
0.5	1.8	0.3	some silty beds	0.15
1.8	2.0	0.1		0.12
2.0	2.7	0.2	fractured, high core loss, ox	0.17
2.7	3.5	1.5	fractured, clayey, py	1.00
3.5	3.8	0.5		0.26
3.8	5.0	0.3	highly fractured, core loss	0.10
5.0	6.6	0.2	less py	0.08
6.6	7.8	0.3	banded, py in frac. & splotches	0.13
7.8	8.1	0.1	same	0.07
8.1	8.4	0.5	md gray fract. & streaks, Strat.	0.24
8.4	8.9	0.07	very little py	0.04
8.9	9.6	0.25	py dism & thin veinlets	0.12
9.6	10.8	0.3	some thin vf-gr bands	0.13
10.8	11.5	0.15	dark veinlets & splotches w/py	0.07
11.5	12.0	0.20		0.07
12.0	12.4	0.10	py in dark veinlets & splotches	0.07
12.4	12.9	0.30	same as 8.9 to 12.0	0.11
12.9	13.3	0.15		0.09
13.3	14.5	0.06	py in dark splotches	0.04
14.5	19.4		banded, less py. some cpy recemented breccia zone at 16.0	
19.4	20.3		same as 9.6 to 12.0	
20.3	22.5		less py	
22.5	26.0		some lt gray, vf-gr, th-bd lenses	
26.0	27.8		no py, lt gray speckled	
27.8	29.0		no py	
29.0	30.7		"	
30.7	31.8		"	
31.8	36.6		"	

EXTRACTS OF AEC DIAMOND DRILL HOLE LOGS - CONT'D

Hope - Hole #1 - Cont'd

Footage		Scanning	Geology
from	to	MR/hr	Remarks
36.6	37.6		irreg. lenses of vf-gr
37.6	43.6		badly shattered, ox, core loss
43.6	49.0		very lt gray f-gr bands, no py
49.0	51.0		md lt gray vf-gr bands, x-bd, py
51.0	53.1		badly fractured, no py
53.1	57.0		py dism & dendritic dispersions
57.0	66.0		no py, calcite-filled fractures
66.0	72.0		ox bedding planes, calcite-filled vein fills ½ core last 5 ft.
72.0	76.9		some dism py (dendritic)
76.9	81.0		badly fractured, high core loss
81.0	89.9		some x-bd, very little py, rxl (?)
89.9	90.8		possible rxl, some dism py
90.8	92.5		diabase, 3" chill zone
92.5	94.0		db calcite in fract., dism py
94.0	106.5		db

NOTE: Diabase-quartzite contact crosses core 15° from horizontal.
Scanning readings below 14.5 feet are all 0.05 MR/hr or less.

EXTRACTS OF AEC DIAMOND DRILL HOLE LOGS - CONT'D

CLAIM: Hope HOLE: #2 DRILLED BY: USBM Drill DATE: May 1956
LOCATION: Workman Creek, Gila County, Ariz. LOGGED BY: RJS & JEK RECOVERY: 86%
COLLAR ELEV.: 6,105' ANGLE DRILLED: Horizontal

Footage from	Footage to	Scanning MR/hr	Geology Remarks and assay in % eU_3O_8
0	10.0	(0.1*	Fractured, lm stain, tiny pits
10.0	40.0	(0.1	dism py. some cpy, md gray halos on py filled fractures, f-gr dark spots
40.0	56.5	(0.1	same, calcite fracture crosses core from 48 to 50 ft.
56.5	68.7	(0.1	slightly off horizontal core in cutting into md gray, th-bd zone
68.7	94.5	(0.1	dism py, dark streaks more silty thin calcite fracture at 94.5
94.5	94.7	0.2	dism py on fracture at 94.7
94.7		0.3	rxl?
	95.1	1.2	
95.1		2.0	rxl?
	95.4	2.0	
95.4		1.0	rxl?, dark spots
	96.2	0.3	
96.2		0.3	dark spots
	96.5	0.1	
96.5	101.2	(0.1	dark spots and splotches
101.2	105.5	(0.1	light & md. gray swirls, x-bd?
105.5	165.0	(0.1	dark py filled fractures & dendrites with alt. halos. m-gr spots
165.0	171.0	(0.1	same as 101.2-105.5
171.0	209.0	(0.1	wavy bd, dism py. dark streaks at 193, occasional lt gray th-bd
209.0	211.5	(0.1	py on fractures & dism. pyrrhotite on fracture at 209.3
211.5	214.3	(0.1	rxl?, py & cpy coarsely dism. fault displaces bedding at 214.3
214.3	222.0	(0.1	same as 171.0-209.0
222.0	232.0	(0.1	py, cpy, dar green alt. halos sph at 224
232.0	255.5	(0.1	py in veinlets & dism, partly ox gyp & serp? on fractures, qtz veinlets parallel to core.
255.5	270.5	(0.1	warped bds, py dism & on bedding
270.5	273.0	(0.1	py on fract. green alt. halos
273.0	313.5	(0.1	same, wavy fault at 300, ½" gouge
313.5	331.0	(0.1	same, bd-plane in core 315-331
331.0	353.0	(0.1	Fault zone, fractured rock, high core loss, ox, dark bands at 346.5 and 351.

NOTE: (0.1 indicates less than 0.1 MR/hr
This hole was not probed. Probe was out of order and hole now inaccessible.

Surname copy

700

FLKnouse
Ellis
Selfridge
Johnson
Wittendorf

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

SEP 24 1956

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz, d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Dear Mr. Traver:

This is with reference to the Operator's letter, dated September 15, 1956, signed by Gerald Weathers, in which it is stated that "... development and mining on the Hope #2 claim has progressed to the elevation of 5,916 feet above sea level. Therefore, the added provisions in Paragraph #5 will remain the same excepting that the area contained within the boundaries of the Hope #2 claim above the elevation of 5,916 feet should be excluded from the royalty provision on production."

In the event the Field Team recommends an exploration program on the Hope #2 claims or in other areas of the subject property, we do not feel that any part of the land should be excluded except such limited areas where ore has been found, and a projection of such an excluded area should not include a specific area in which DMEA work is recommended. In this connection, the specific area to be excluded should have the approval of the Applicant and landowners, and the necessary copies of maps showing this area should be forwarded so they can be attached to the Consent to Lien and Subordination Agreement which will be prepared by this office and submitted for execution.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (24B)

FLKnouse/gla 9-24-56

APPROVED:

Frank D. Lamb (24B)
Member, Bureau of Mines

Thor H. Kiilsgaard (24B)
Member, Geological Survey

cc to: Admr.'s Reading File
Docket
Oper. Committee
Messrs. JECrawford, 3643, w/cc let. & 2 maps
THKiilsgaard, 5224, " " " 2 "
JOHosted, 3210, GSA
Code 700
Mr. Knouse

R. C. G.

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

224 New Customhouse
Denver 2, Colorado

September 19, 1956

Memorandum

To: W. R. Storms

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-4323 (Uranium), Gerald Gidwitz d/b/a/ Western Mines Development Company (Hope group of claims), Gila County, Arizona

Enclosed is additional information on the subject application which should be attached to your copy of the brochure. This information consists of the following:

1. Copy of a letter, dated August 21, 1956, from Ernest Wm. Ellis to the applicant.

2. Copy of a letter from the applicant to Ernest Wm. Ellis, dated September 15, 1956.

3. Plate IV, Geologic map of Hope Claim group.

4. Plate VI, Map showing proposed drilling and development Hope No. 2 claim.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC/pw

cc: Harshman
Sec.Op.Comm. (2)
DMEA-4323
Chron

9/20/56 gla

RECEIVED
SEP 20 1956

Arizona Continental Uranium, Inc.

GERALD WEATHERS
3928 EAST MEADOWBROOK
PHOENIX, ARIZONA

CR 4-0375 PHOENIX, ARIZONA

September 15, 1956

Mr. Ernest Wm. Ellis, Chief
Rare and Miscellaneous Metals Division
U. S. Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-4323(Uranium)
Hope Group of Claims
Gila County, Arizona

Dear Mr. Ellis:

The claim map submitted with our application for DMEA assistance does not show Hope Claims Nos. 9 and 16 as originally staked because upon surveying these claims, we found them to overlap other claims. A map (Plate IV) is included showing their locations. The claims were later amended and duly recorded; however, the original outside boundary lines formed by these contigious claims remain the same.

The modifications requested in the "Consent to Lien", Form MF-203, were added by the property owners, not Western Mines Development Company. Since the date of application for D.M.E.A. assistance, development and mining on the Hope #2 claim has progressed to the elevation of 5,916 feet above sea level. Therefore, the added provisions in Paragraph #5 will remain the same excepting that the area contained within the boundaries of the Hope #2 claim above the elevation of 5,916 feet should be excluded from the royalty provision on production. This excluded area is shown on the enclosed map, Plate VI.

Please advise me if I can be of further assistance to you in this matter.

Sincerely yours,

Gerald Weathers

Gerald Weathers

GW:hrw

Enclosures: Plate IV - Plat of Hope Claims
Plate VI - Hope #2 claim showing extent of current development and mining.
} 1 of each in packet

cc: W. M. Traver
E. E. Yount
Vin Gray
File

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

FI
Surnam

Mr. Robert C. Pruess, Manager
Gerald Gidwitz
d/b/a Western Mines Development Company
205 East Camelback Road
Phoenix, Arizona

Re: Docket No. DMEA-4323 (Uranium)
Hope Group of Claims
Gila County, Arizona

Dear Mr. Pruess:

This is with reference to the Forms MF-203 "Consent to Lien" that were sent to you for execution on July 13, 1956, which were modified and executed and sent to our Denver, Colorado office.

The modifications you have made of this document indicates that you wish to exclude certain land area within these claims that would be subject to the royalty provision on production. In this connection, you should submit a map which shows the specific area or areas you wish to have excluded and state the reason therefor. The map or maps should show the vertical and lateral limits of said areas in relation to the claim boundaries. Also, since the claim map submitted with your application does not show the claims Hope Nos. 9 and 16, you should submit a map which shows all the claims, Hope Nos. 1 through 16.

One copy of the above information should be sent to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, 224 New Customhouse Building, Denver 2, Colorado, and three copies to this office.

Sincerely yours,

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

FLKnouse/izm 8-20-56
cc to: Docket
Code 700
Mr. Knouse
Admr.'s Reading File
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

8/17/56

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

August 15, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: W. L. Emerick

From: Field Team, Region III

Subject: Docket DMEA 4323 (Uranium) Gerald Gidwitz, d/b/a Western Mines Development Company (Hope group of claims) Gila County, Arizona

We are in receipt of a copy of a letter to you from Robert C. Pruess, Manager for the subject Applicant dated August 13, 1956. In this letter he makes reference to your letter to him of August 10, 1956. Please forward this office a copy of your letter to Mr. Pruess dated August 10 to enable us to keep our file complete on the subject application.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

HMC:ab

cc: Sec. Op. Comm. (2)
Harshman
Docket 4323
Chron.

RECEIVED
AUG 17 1956

DEPARTMENT OF THE INTERIOR
Office of the Solicitor

Date AUG - 7 1956

Re: DMEA-4323
Western Mines Development Co.

Referred to: Chief, Rare & Misc. Metals Div., DMEA

From: Associate Solicitor Dwyer

For: Information and retention X

Information and return _____

Necessary action and return _____

Comment and return _____

Distribution in office or region _____

Remarks: We agree that the Consent to Lien attached to Traver's memo dated June 27, 1956, to the Operating Committee, is not inadequate. We suppose that if certain land were deleted from the contract, the landowners might sign an unqualified Consent to Lien.

(Signature)

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

MF-203
Revised March 24, 1955

RECEIVED
AUG - 1 1956

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Gerald Gidwitz dba Western
Docket No. DMEA-4323 /Mines Develop-
Contract No. Idm-E /ment Company
Contract Date

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Gila, State of Arizona, described as follows:1/

Unpatented lode mining claims, Hope Nos. 1-16, inclusive, situated in Sierra Ancha mining district, Gila County, Arizona, the Notices of Location of which are recorded in the office of the County Recorder of Gila County, Arizona, in Docket 6, pp. 343-358.

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

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

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

Continuation of this condition contained in Paragraph 5.

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

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

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

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

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

5. Added provision: provided, however, that the provisions of this paragraph (#2) pertaining to the Government lien, percentage royalty and production of minerals, shall apply only to ores discovered as a result of the exploration work done by the use of such loan funds, and that the undersigned will subordinate their rights only to the ~~XXXX~~ returns from ores discovered by such exploration work to the extent (and not in excess) that the first five percent (5%) of such returns may be applied to the repayment of any such loan.

Dated this _____ day of _____, 195__.

Maurice Sharp [Seal]
Maurice Sharp

Carrel Wilbanks [Seal]
Carrel Wilbanks

Charlie Nichols [Seal]
Charlies Nichol

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

_____
[Corporate Seal]

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Gerald Gidwitz dba Western
Docket No. DMEA-4323 /Mines Develop-
Contract No. Idm-E /ment Company
Contract Date

RECEIVED
AUG - 1 1956

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Gila, State of Arizona, described as follows:1/

Unpatented lode mining claims, Hope Nos. 1-16, inclusive, situated in Sierra Ancha mining district, Gila County, Arizona, the Notices of Location of which are recorded in the office of the County Recorder of Gila County, Arizona, in Docket 6, pp. 343-358.

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

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

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

Continuation of this condition contained in Paragraph 3.

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

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

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

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

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

5. Added provision: ~~provided, however, that the provisions of this paragraph (02) pertaining to the Government lien, percentage royalty and production of minerals, shall apply only to ores discovered as a result of the exploration work done by the use of such loan funds, and that the undersigned will subordinate their rights only to the 50% returns from ores discovered by such exploration work to the extent (and not in excess) that the first five percent (5%) of such returns may be applied to the repayment of any such loan.~~

Dated this _____ day of _____, 195__.

Maurice Sharp [Seal]
Maurice Sharp

Carrol Wilbanks [Seal]
Carrol Wilbanks

Charlie Nichols [Seal]
Charlie Nichol

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

_____
[Corporate Seal]

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Gerald Gidwitz dba Western Mines Development Company
Docket No. DMEA-4323
Contract No. Idm-E
Contract Date

RECEIVED
AUG - 1 1956

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Gila, State of Arizona, described as follows:1/

Unpatented lode mining claims, Hope Nos. 1-16, inclusive, situated in Sierra Ancha mining district, Gila County, Arizona, the Notices of Location of which are recorded in the office of the County Recorder of Gila County, Arizona, in Docket 6, pp. 343-358,

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

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

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

Continuation of this condition contained in Paragraph 5.

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

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

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

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

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

5. Added provision: **provided, however, that the provisions of this paragraph (#2) pertaining to the Government lien, percentage royalty and production of minerals, shall apply only to ores discovered as a result of the exploration work done by the use of such loan funds, and that the undersigned will subordinate their rights only to the ~~XXXX~~ returns from ores discovered by such exploration work to the extent (and not in excess) that the first five percent (5%) of such returns may be applied to the repayment of any such loan.**

Dated this _____ day of _____, 195__.

Maurice Sharp [Seal]
Maurice Sharp

Carrol Willbanks [Seal]
Carrol Willbanks

Charlie Nichols [Seal]
Charlies Nichol

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

_____
[Corporate Seal]

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Gerald Gidwitz dba Western
Docket No. DMEA-4323 /Mines Develop-
Contract No. Idm-E /ment Company
Contract Date

RECEIVED
AUG - 1 1956

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Gila, State of Arizona, described as follows:1/

Unpatented lode mining claims, Hope Nos. 1-16, inclusive, situated in Sierra Ancha mining district, Gila County, Arizona, the Notices of Location of which are recorded in the office of the County Recorder of Gila County, Arizona, in Docket 6, pp. 343-352.

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

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

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

Continuation of this condition contained in Paragraph 5.

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

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

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

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

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

5. Added provision: **provided, however, that the provisions of this paragraph (#2) pertaining to the Government lien, percentage royalty and production of minerals, shall apply only to ores discovered as a result of the exploration work done by the use of such loan funds, and that the undersigned will subordinate their rights only to the XXXX returns from ores discovered by such exploration work to the extent (and not in excess) that the first five percent (5%) of such returns may be applied to the repayment of any such loan.**

Dated this _____ day of _____, 195__.

Maurice Sharp [Seal]
Maurice Sharp

Carrel Wilbanks [Seal]
Carrel Wilbanks

Charlie Nichols [Seal]
Charlies Nichol

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

_____
[Corporate Seal]

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Gerald Gidwitz dba Western
Docket No. DMEA-4323 /Mines Develop-
Contract No. Idm-E /ment Company
Contract Date

RECEIVED
AUG - 1 1956

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Gila, State of Arizona, described as follows:1/

Unpatented lode mining claims, Hope Nos. 1-16, inclusive, situated in Sierra Ancha mining district, Gila County, Arizona, the Notices of Location of which are recorded in the office of the County Recorder of Gila County, Arizona, in Docket 6, pp. 343-358.

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

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

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

Continuation of the exceptions contained in Paragraph 2.

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

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

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

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

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

5. Added provision: ~~provided, however, that the provisions of this paragraph (02) pertaining to the Government lien, percentage royalty on production of minerals, shall apply only to ores discovered as a result of the exploration work done by the use of such loan funds, and that the undersigned will subordinate their rights only to the gate returns from ores discovered by such exploration work to the extent (and not in excess) that the first five percent (5%) of such returns may be applied to the repayment of any such loan.~~

Dated this _____ day of _____, 195__.

Maurice Sharp [Seal]
Maurice Sharp

Carrel Wilbanks [Seal]
Carrel Wilbanks

Charlie Nichols [Seal]
Charlie Nichol

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

_____
[Corporate Seal]

Extra cop[illegible]r docket

MF-203
Revised March 24, 1955

For Government's Use Only
EXPLORATION PROJECT CONTRACT
Operator Ronald Gidwitz dba Montana
Docket No. DMEA-4323 /Mines Develop-
Contract No. Idm-E /ment Company
Contract Date

CONSENT TO LIEN

To the United States of America:

Referring to that certain land in the County of Gila, State of Arizona, described as follows:1/

Unpatented lode mining claims, Hope Nos. 1-26, inclusive, situated in Sierra Ancha mining district, Gila County, Arizona, the Notices of Location of which are recorded in the office of the County Recorder of Gila County, Arizona, in Docket 6, pp. 343-358.

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

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

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of a percentage royalty on production as may be provided for by the contract;2/ and represents and undertakes that there are no claims, liens, or encumbrances upon the undersigned's right, title, or interest in the land prior to that hereby granted to the Government other than the following:3/

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

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

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

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

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

5. Added provision: _____

_____

_____

_____

_____

_____

_____

_____

Dated this _____ day of _____, 195__.

_____ [Seal]
Maurice Sharp

_____ [Seal]
Carrel Wilbanks

_____ [Seal]
Charlie Nichol

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

_____
[Corporate Seal]

urname copy

700

I Thurner
Ellis
Nelson

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

August 3, 1956

Memorandum

To: Associate Solicitor,
Division of Mineral Resources

From: Ernest Wm. Ellis, Chief
Rare and Miscellaneous Metals Division

Subject: Consent to Lien
Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz, d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Kindly refer to Mr. Traver's memorandum to the Operating Committee, dated July 30, 1956, and review the undated Consent to Lien forms signed by Maurice Sharp, Carrel Wilbanks, and Charlie Nichols.

As stated by Mr. Traver, the Consent to Lien was prepared in Washington and forwarded to the Arizona Continental Uranium, Inc. by the Administrator's letter of June 27, 1956, to be signed by the owners. However, the owners have added a provision under "5." which Mr. Traver states voids the true intent of the Consent to Lien.

/s/ Ernest Wm. Ellis

Ernest Wm. Ellis

FLKnouse/gla
cc to: Docket
Mr. Knouse

Surname copy 700

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

F L Knouse
Ellis
Martin
J E Johnson
Whitehead

AUG - 3 1956

Mr. W. N. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4323 (Uranium)
Gerald Cidwitz, d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Dear Mr. Traver:

This will acknowledge your memorandum, dated July 30, 1956, enclosing the original and four copies of the Consent to Lien, prepared in Washington, which was signed by Maurice Sharp, Carrel Wilbanks, and Charlie Nichols. As soon as the Legal Division reviews the provision added by the owners, we will advise you.

Enclosed is an extra copy of the application, referred to in our letter of July 13 which was inadvertently omitted at the time of mailing.

Sincerely yours

W. S. Martin (By ESF)
ACTING Chairman, Operating Committee

Enclosure

FLKnouse/gla
8-3-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700, Mr.Knouse

APPROVED:
/s/ Robert W. Geehan (By ESF)
Member, Bureau of Mines

N. E. Nelson (By ESF)
Member, Geological Survey

8/1/56

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

RECEIVED
AUG - 1 1956

July 30, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 4323 (Uranium) Gerald Gidwitz, d/b/a Western Mines Development Company (Hope group of Claims), Gila County, Arizona

Enclosed are the original and four copies of Owner's Consent to Lien forwarded this office by the Applicant. These Consents to Lien were prepared in your office and the Administrator's letter to the Applicant dated June 27, 1956 requested him to return the executed copies to you.

Please note that the owners have apparently added a provision which voids the true intent of the Consent to Lien.

Your letter to the Executive Officer dated July 13, 1956 has the following postscript:

> "In accordance with recent arrangements on 'Washington-processed' applications, we are enclosing an extra copy of the application for the use of your office."

We have, as yet, not received the extra copy of the application. Will you please advise.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

8/2/56

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

RECEIVED
AUG - 1 1956

July 30, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: W. R. Storms
W. L. Emerick

From: Field Team, Region III

Subject: Docket DMEA 4323 (Uranium) Gerald Gidwitz, d/b/a Western Mines Development Company (Hope group of Claims), Gila County, Arizona

Enclosed is a copy of our letter to the subject Applicant in reply to his letter to the Executive Officer dated July 25, 1956, an excerpt of which is as follows:

> "I have not had any notification from our Arizona Division that the Field Team has been into the property yet. We would certainly appreciate your expediting this project as much as possible due to the fact that it is of grave importance, not only to ourselves, but also to the Dripping Springs-Quartzite area, and the Cutter Ore Buying Station in particular. As you are aware, there are several other DMEA projects in the area, and we certainly believe ours will have the best chance of hitting quick ore under the proposed exploration."

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosure

HMC:ab

cc: Chair. Op. Comm. (2)
Docket 4323
Marshman
Chron.

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

RECEIVED
AUG - 1 1956

July 30, 1956

224 New Customhouse
Denver 2, Colorado

Mr. Robert C. Pruess, Manager
Continental Uranium, Inc.
P. O. Box 1550
Grand Junction, Colorado

Re: Docket DMEA 4323 (Uranium) Gerald Gidwitz, d/b/a Western Mines Development Company (Hope group of claims), Gila County, Arizona

Dear Mr. Pruess:

This will acknowledge receipt of your letter dated July 25, 1956 enclosing the original and four copies of Consents to Lien on the captioned property.

The Consents to Lien have been forwarded to the Washington Office, DMEA, for their final action.

As soon as the date of examination of this property can be scheduled, you will be advised so that you or your representative may be present to accompany the field examiners.

Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Chair. Op. Comm. (2)
Docket 4323
Harshman
Storms
Emerick
Chron.

7-25-56

RECEIVED
JUL 25 1956

July 23, 1956

Memorandum

To: W. R. Storms

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4323 (Uranium), Gerald Gidvitz, d/b/a Western Mines Development Company (Hope Group of Claims), Gila County, Arizona

Enclosed is the application for Gerald Gidvitz, d/b/a Western Mines Development Company, DMEA 4323, in the amount of $127,902.00.

A field examination and suitable report are required. The completed report should be forwarded directly to the Executive Officer with a copy of the memorandum of transmittal to this office.

JOHN F. SHAW

John F. Shaw

Enclosure

cc: W. M. Traver (3)
E. W. Harshman
W. L. Emerick
Sec. Op. Com. (2)

7/23/56

RECEIVED
JUL 23 1956

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

July 19, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
W. L. Emerick

From: Field Team, Region III

Subject: Docket DMEA 4323 (Uranium) Gerald Sidwitz, d/b/a Western Mines Development Company (Mage Group of Claims), Gila County, Arizona

Enclosed is the subject application in the amount of $127,902.00. A field examination and suitable report are requested.

Please note in the Chairman's letter dated July 13, 1956, copy of which is attached, that the subject Applicant has been changed from the Arizona Continental Uranium, Inc. to the one shown above. This change has been noted in red on Form MF-103 of the engineer's copy of the brochure. An undated copy of a letter from Robert C. Preess, Continental Uranium, Inc. to Mr. C. O. Mittenderf, Administrator, is also attached which clarifies somewhat the change of applicants. Your attention is also directed to the additional information required if you recommend an exploration program.

Also enclosed are copies of a review of the application by James Pearce and N. E. Nelson.

Please return the brochure with the Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures
MMC:nb
cc: Sec. Op. Comm. (2)
Marshman
Docket 4323
Chron.

700

FILE COPY
Surname:

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

Mr. Robert C. Praess, Manager JUL 13 1956
Gerald Gidwitz
d/b/a Western Mines Development Company
205 East Camelback Road
Phoenix, Arizona

Re: Docket No. DMEA-4323 (Uranium)
Hope Group of Claims
Gila County, Arizona

Dear Mr. Praess:

As requested in your letter of July 6, 1956, the name of the Applicant has been changed from the "Arizona Continental Uranium, Inc." to "Gerald Gidwitz d/b/a Western Mines Development Company." Please correct your records accordingly.

There are enclosed the original and six copies of Form MF-203 "Consent to Lien" for execution by the landowners, listed therein, that we will require in lieu of the instruments transmitted with the above letter. After the document has been signed, please return the original and five copies to this office.

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

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

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

Sincerely yours,

G. O. Mittendorf

Administrator

FLKnouse/gla/izm 7-13-56
cc to: Docket
Code 700
Mr. Knouse
Admr.'s Reading File
Operating Committee
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

R.C.P.

700

FILE COPY

Surname:

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

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

JUL 13 1956

Re: Docket No. DMEA-4323 (Uranium)
Gerald Gidwitz, d/b/a
Western Mines Development Company
Hope Group of Claims
Gila County, Arizona

Dear Mr. Traver:

Please note that the name of the subject Applicant has been changed from the Arizona Continental Uranium, Inc., to the one shown above. Please correct your records accordingly.

The captioned application is referred to your office for either a field examination and report on the proposed project or the Field Team's recommendations based on information available to your office. A copy of the application was retained by your office.

Enclosed are copies of memoranda, dated June 8 and 12, 1956, from Mr. James Paone, USBM, and Mr. N. E. Nelson, USGS, respectively, relating to the subject project. In addition, there are enclosed copies of a letter (minus the attachments), dated July 6, 1956, from the Applicant.

If the Field Team recommends an exploration program, we will require, in addition to the usual information, the following:

1. Nine copies of a map or maps showing the mineralized exposures, with sample locations and assay values (shown on Applicant's maps and of any additional samples taken by the examining team), locations of drill holes and underground workings, and recommended work, all in relation to the claim boundaries; and

2. Bids from three contractors if drilling is recommended and is to be done by an independent contractor.

We have forwarded Consent to Lien forms to the Applicant for execution by the landowners. If these forms have not been executed and returned to this office, when the examination is made, please advise the Operator this executed document will be required in order to process the application. We shall notify you when it is received.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures
APPROVED:

/s/ Robert W. Geehan

Member, Bureau of Mines

N. E. Nelson

Member, Geological Survey

P. S. In accordance with recent arrangements on "Washington-processed" applications, we are enclosing an extra copy of the application for the use of your office.

Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

cc to: Docket
Code 700
Mr. Knouse
Admr.'s Reading File
Operating Committee

LKnouse/izm 7-13-56

7/9/56 gla

CONTINENTAL URANIUM INC.
P. O. BOX 1550
GRAND JUNCTION, COLORADO

July 6, 1956

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

Re: Docket No. DMEA-4323 (Uranium)
Hope Group of Claims
Gila County, Arizona

Dear Mr. Mittendorf:

Thank you very much for your letter of June 27th. After conferring with Mr. Gidwitz, we believe the most expeditious way to handle the authorization would be for us to change the designation of the loan to "Gerald Gidwitz dba Western Mines Development Company." Arizona Continental Uranium, Inc. actually is the working management group, but title to the leases resides in Gerald Gidwitz dba Western Mines Development Company. Arizona Continental Uranium, Inc. is now under the direct management and supervision of our Continental Uranium, Inc. group here in Grand Junction. By changing the designation of the loan from Arizona Continental Uranium, Inc. to the above, it should simplify the whole affair since the consents to lien attached are by the lessors direct to Gerald Gidwitz dba Western Mines Development Company, the lessee.

Enclosed are the executed copies of the consents to lien from the lessors who actually have title to the ground.

We are most anxious to expedite this project due to the possibility the ore receiving depot in the area will be shut down if added reserves are not developed shortly. We are anxious to help in any way possible to expedite our project.

Sincerely yours,

CONTINENTAL URANIUM, INC.

Robert C. Pruess

Robert C. Pruess
Manager

RCP:ro
cc: GG
LCB
GW
RCP
File

RECEIVED
JUL 9 - 1956

CONSENT TO D.M.E.A. LIEN AND
SUBORDINATION OF INTEREST

WHEREAS, on the 27th day of July, 1954, Maurice Sharp, Charlie Nichols, and Carrel Wilbanks, as Lessors, entered into a mining lease agreement with Vance Thornburg, Agent, and which lease agreement on Hope claims #1 through #16 in the Sierra Ancha mining district, Gila County, Arizona, and more particularly described in said lease, has been assigned by the said Thornburg to Arizona Continental Uranium, Inc., an Arizona corporation, and

WHEREAS the said lease in part provides as follows:

> "Lessee plans to do exploration work for the discovery of uranium and other ores, and he shall have the right to make application for an exploration loan from the United States of America or from any agency or instrumentality thereof, for the purpose of exploring for uranium and any other ores upon the leased premises. In case of any such application, lessors will subordinate their rights to the returns from ores discovered by such exploration work done with funds furnished by the United States of America or any agency or instrumentality thereof, to the extent that the first 5% of such returns may be applied to the repayment of any such loan; provided, however, that the provisions of this paragraph shall apply only to ores discovered as a result of work done by the use of such loan funds, and in no event for a period in excess of ten years, and provided further that the application of any such percentage to the repayment of any such loan shall not result in a reduction of a percentage royalty payable to lessors hereunder. Lessors shall be furnished with copies of all documents furnished to any lending agency which may require the signature or consent of lessors, or which may result of the imposition of a lien on lessors' property."

and

WHEREAS the said Arizona Continental Uranium, Inc. is making an application for a Defense Minerals Exploration Administration loan on the said mining claims.

NOW, THEREFORE, in consideration of the foregoing, the said lessors do hereby subordinate their rights to the returns from ores discovered by such exploration work done by funds furnished by the D.M.E.A. to the extent that the first five per cent (5%) of such returns may be applied to the repayment of any such loan; provided, however, that this consent and subordination apply only to ores discovered as the result of work done by the use of said D.M.E.A. loan funds, and further conditioned that the application of any such percentages of the repayment of any such loans shall not result in the reduction of the percentage royalty payable to said lessors under the said lease.

IN WITNESS WHEREOF the said lessors have hereunto set their hands this 1st day of June, 1956.

Maurice Sharp
Maurice Sharp

Charlie Nichols
Charlie Nichols

Carrel Wilbanks
Carrel Wilbanks

STATE OF ARIZONA)
) ss.
COUNTY OF)

On this, the 1st day of June, 1956, before me, the undersigned Notary Public, personally appeared MAURICE SHARP, CHARLIE NICHOLS and CARREL WILBANKS, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged that they executed the same for the purpose therein contained.

IN WITNESS WHEREOF I hereunto set my hand and official seal.

Harold A. Bellan
Notary Public

My commission expires:
Sept. 2, 1956

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

140 Indritz 6/26/56

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

JUN 27 1956

Re: Docket No. DMEA-4323 (Uranium)
Hope Group of Claims
Gila County, Arizona

Gentlemen:

According to the exhibits attached to your application (DMEA-4323) for aid in an exploration project, the property involved (unpatented lode mining claims, Hope Nos. 1-16, inclusive, in Sierra Ancha mining district, Gila County, Arizona) is held, under lease and assignment, by Mr. Gerald Gidwitz, an individual doing business as Western Mines Development Co. Mr. Gidwitz is also apparently a vice president of your company.

Mr. Gidwitz' letter of May 7, 1956, a copy of which is attached to your application, authorizes your company to act on his behalf "to execute all documents and to do all acts necessary or desirable to secure a Defense Minerals Exploration Administration loan with respect to the above claims in such amount and on such terms as you see fit." Such authorization may be adequate to constitute your company as agent for Mr. Gidwitz, but appears inadequate to give your company "possession or the right to acquire the possession of the land for a term long enough for the purposes of the exploration contract" as required under DMEA Circular 20 (revised).

In order to permit us to continue processing your application, it is suggested that Mr. Gidwitz either assign his interest in the land to your company, or sublease it to your company for at least five years, and that you furnish us with two copies of the instrument thus executed by Mr. Gidwitz.

It will also be necessary, before a DMEA contract is executed, that the owners of the claims (who are apparently Messrs. Sharp, Nichols, and Wilbanks) execute five copies of the enclosed Consents to Lien, to be filed with us.

Sincerely yours,

G. O. Mittendorf

Administrator

Enclosures PIndritz/wog--June 26, 1956
Copy to: DMEA Docket
THKiilsgaard, USGS
Field Team, RegIII
Pending
Admin. Reading File
JECrawford/3643
RPDwyer
Chron.
Operating Com.
EWEllis (2)
PIndritz

Surname copy

700

FLKnouse
Ellis

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

June 14, 1956

Memorandum

To: Associate Solicitor,
Division of Mineral Resources

From: Ernest Wm. Ellis, Chief
Rare and Miscellaneous Metals Division

Subject: Docket No. DMEA-4323 (Uranium)
Arizona Continental Uranium, Inc.
Hope Group of Claims
Gila County, Arizona

Please review the file on the subject proposed project and determine if the Applicant has sufficient interest in the land concerned for an exploration project contract. If the Applicant's interest is short of the requirements, please write a letter for the Administrator's signature, setting forth the requirements. Please supply two extra copies of the letter for the Field Team, Region III.

Ernest Wm. Ellis

Ernest Wm. Ellis

FLKnouse/gla
cc to: Docket
Code 700
Mr. Knouse

6-13-56

IN REPLY REFER TO:

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

RECEIVED
JUN 13 1956

June 12, 1956

Re: DMEA 4323
Arizona Continental Uranium, Inc.
A. C. U. Hope Claims
Gila Co., Arizona
$127,902.00 - Uranium

Memorandum

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

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

Subject: Review of application

The applicant requests assistance in exploring by cross-cutting, drifting and drilling 4 steeply-dipping uranium-bearing fractures in the Dripping Springs quartzite.

Considerable work has already been done and about 3,000 tons of ore worth $49,000 has been shipped, in large part, from stopes in the Nos. 2 and 3 veins. The readily available ore having been mined, the proposed work is designed to develop and explore the downward extensions of the ore yielding ore shoots and to prospect for lateral and downward projections of the low grade veins, No.1 and No. 4.

As shown in section, the ore shoot in 3 vein is of limited, 60 feet, height as now understood, and according to Plate VI the distance from No. 3 tunnel level to the diabase sill is only 110 feet. At the average grade shipped, 0.185% U_3O_8 and the average value per ton, $16.43, the dollar producing potential of the short low height ore shoots is limited, and as the applicant says, the operation involving much pioneering, has been anything but profitable. Such being the case, justification of the application rests largely on the chance of finding better grade material. Perhaps the total experience with the Dripping Springs type of ore body affords a measure of that chance.

Referral of the application to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

6-8-56

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

RECEIVED
JUN - 8 1956

June 8, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Application for assistance, DMEA Docket 4323, Arizona Continental Uranium, Inc., Hope Claims 1 - 16, Sierra Ancha Mining District, Gila County, Arizona

I have reviewed the attached application, Arizona Continental Uranium, Inc., Hope Claims 1 - 16, Sierra Ancha Mining District, Gila County, Arizona, DMEA Docket 4323, dated May 15, 1956, and received in this office June 4, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant is desirous of exploring for uranium with Government assistance the Hope group of claims, Gila County, Arizona, with a two-phase program. Phase "A" consists of 4005 feet of diamond drilling at $10 per foot, 20 feet of crosscutting at $35 per foot, and 365 feet of drifting at $45 per foot. Phase "B" consists of 950 feet of crosscutting at $35 per foot, 700 feet of drifting at $35 per foot, and 1000 feet of access road at $1.25 per foot. The estimated cost of the project is $127,902.

The Government has completed some drilling in the area and it would be advisable that the field team investigate the results of such exploration work prior to further processing of the application for assistance. The proposed work appears to be elaborate in view of the nature of the material encountered to date. It is also suggested that the field team consult with E. E. Thurlow, Salt Lake Exploration Branch, Atomic Energy Commission, regarding the application.

James Paone

James Paone

Attachment

June 4, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

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

DMEA
-4323 **Arizona Continental Uranium, Inc.**

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

June 4, 1956

Arizona Continental Uranium, Inc.
205 East Camelback Road,
Phoenix, Arizona

Subject: DMEA-4323
Re: Exploration Assistance
Hope Mine

Gentlemen

The receipt of your application dated May 15, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4323 and referred to the Rare & Misc. Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

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

RECEIVED
JUN - 1 1956

May 29, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Arizona Continental Uranium, Inc. (Hope Group), Gila County, Arizona

Enclosed are three copies of the subject application in the amount of $127,902.00. One copy of the application is being retained in our file.

DMEA Field Team, Region III

By J. W. Townsend
Acting Executive Officer

Enclosures

I N D E X

Introduction.

Application.
With Supplements to Form MF-103.

Illustrations.

Exhibits:
Authorization from Western Mines Development Co.
Consent To Lein.
Mining Lease.

Maps.

RECEIVED

CONTINENTAL URANIUM, INC.
P. O. BOX 1550
GRAND JUNCTION, COLORADO

May 15, 1956

W. M. Traver
Executive Officer, DMEA
Field Team, Region III
224 New Customhouse
Denver 2, Colorado

RECEIVED
JUN 1 1956

Dear Mr. Traver:

Attached is our formal application for DMEA aid on the Arizona Continental Uranium, Inc. properties. Our group is in charge of the management of the properties.

Arizona Continental Uranium, Inc. was incorporated in 1954, in the State of Arizona, to explore for and develop uranium bearing mineral properties in that state. Mining efforts have been concentrated on the Hope claims in the Sierra Ancha Mining District, where primary uranium ore in the form of uraninite occurs in a favorable horizon in the Dripping Spring quartzite near the diabase sills. Over 3,000 tons of uranium ore has been shipped from the Hope adits 1, 2 and 3, to the Buying Station at Cutter, Arizona, fifty-four miles distant.

Because of the recent discovery of higher grade ore below the present workings, the company desires to further explore and delineate the uranium ore bodies on these claims.

Having worked for Vanadium Corporation of America and being familiar with the Marysvale, Utah, hydrothermal vein deposits, I firmly believe these deposits have great potential. The Arizona mineralization is strikingly similar to the impoverished upper zones in Marysvale. The high grade large ore bodies at Marysvale were found below. Similar type of high temperature, strong vein controlled uranium deposits today make up a larger part of the uranium production from the Congo also.

The proposed exploration program will require a considerable expenditure, with only a small return from ore shipments during the exploration period; therefore, Arizona Continental Uranium, Inc., is requesting assistance in the form of a DMEA loan.

We sincerely hope this program will be evaluated as soon as possible, and we are anxiously awaiting your direction whereby we can furnish further information.

Yours very truly,

ARIZONA CONTINENTAL URANIUM, INC.

Robert C. Pruess
Manager

RCP:re

MF-103
(Revised April 1952)

DMEA
Date Rec'd.
MAY 28 1956

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

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUN 1 1956
BUREAU OF MINES
~~Denver, Colorado~~

Not to be filled in by applicant

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

Docket No. DMEA-4323
Metal or Mineral Uranium
Date Received 6/1/56
Estimated Cost $127,902.00
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: **Arizona Continental Uranium, Inc.**
205 East Camelback Road, Phoenix, Arizona
Incorporated in State of Arizona

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

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

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

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

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

See Supplements Attached

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated ....May 15...., 195..6

Arizona Continental Uranium, Inc.
(Applicant)

By Robert C. Pruess

Robert C. Pruess
General Manager

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

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

SUPPLEMENTS

to

Form MF-103

Loan Application for Arizona Continental Uranium, Inc.

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

1. (c) The company officers are:

Mr. Willard Gidwitz, President
4401 West North Avenue
Chicago 39, Illinois

Mr. Gerald Gidwitz, Vice-President
Mr. Joseph Gidwitz, Vice-President
4401 West North Avenue
Chicago 39, Illinois

Mr. Max H. Braum, Secretary-Treasurer
4401 West North Avenue
Chicago 39, Illinois

Mr. E. E. Yount, Asst. Secretary-Treasurer
4401 West North Avenue
Chicago 39, Illinois

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

3. (a)

Hope group - Sections 29 and 30, T6N, R14E.

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

3. (b)

Hope Mine

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

3. (c)

Lessee

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

3. (d)

See "Exhibits"

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

3. (e)

Not owned

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

3. (f)

Hope 1 to 16 inclusive. Docket 6, pages 343 - 358,

Gila County, Arizona.

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

4. (a)

HISTORY OF EXPLORATION FOR URANIUM IN THE SIERRA ANCHA MINING DISTRICT

Uranium was first discovered in this district by Mr. Carl Larson, in February, 1950, on his Red Bluff Mining claims, located about thirty miles northwest of Globe, Arizona. Mr. Larson produced and shipped several hundred tons of uranium ore on a fringe area contract in 1953. Because of this prospect, and other uranium occurrences in Arizona, an A.E.C. exploration sub-office was established in Phoenix, Arizona, early in 1953, to stimulate prospecting for uranium. As a result of their investigations an A.E.C. airborne radiometric reconnaissance of the Sierra Ancha Mining District was conducted during the spring of 1954. These activities caused a widespread surge of interest in the district and soon resulted in the staking and filing of about 7,000 mining claims. During this period, the Red Bluff property was sold to the Sierra Ancha Mining Co., a subsidiary of the Pittston Company. The Sierra Ancha Mining Co. shipped about 2,000 tons of uranium ore on a fringe area contract requiring a minimum grade of 0.20% U_3O_8. An additional 1,600 tons of submarginal ore was stockpiled on the property.

During the fall of 1954, the majority of the operators concentrated on exploring and developing their ore bodies in an

attempt to determine the nature of the uranium occurrences and the most economical system of mining the deposits. The exploration and development ore produced in this manner was stockpiled awaiting more favorable terms for shipment. The A.E.C. conducted an appraisal of the district and favorable ore reserve estimates indicated that the district warranted an ore buying station. The buying station was constructed at Cutter, Arizona, located seven miles east of Globe, adjacent to the Southern Pacific railroad. This 600 ton per day buying station was opened in July, 1955, some fifty-four miles distance from Arizona Continental's operations at Workman Creek. Shipments received at the buying station to date have consisted primarily of development ore.

The A.E.C. has aided in exploration in the district by drilling diamond drill holes on various properties in search of geologic knowledge pertinent to the deposits. They have also considered the properties in the vicinity of Cherry Creek to have a wufficient uranium production potential to justify the construction of a twenty-five mile access road to them. The construction of this road was started in 1956.

EXPLORATION AND DEVELOPMENT
URANIUM PROPERTIES IN THE SIERRA ANCHA MINING DISTRICT

The most popular means of exploring for uranium in the district is to drive adits into the hillside along narrow mineralized fractures. In addition there has been a great deal of both

diamond core drilling and wagon drilling and a few operations have attempted open pit mining methods.

An estimate of the extent and type of work completed by the various operators other than Arizona Continental Uranium, Inc., from south to north follows. (Exploration and development work undertaken on A.C.U. properties is described in the section entitled "Company Program.") The location of some of the most promising properties in the Sierra Ancha Mining District are shown on Plate III.

On the RED BLUFF property, approximately six adits have been driven into the cliff face on the west side of a canyon along mineralized, nearly vertical fractures, striking N 70° W, for a maximum distance of 200 feet. These fractures are exposed on the east side of the canyon, but have been faulted downward for about 200 feet. An adit has been driven along one of these mineralized fractures trending S 67° E for a distance of 200 feet. About 100 feet from the portal, two dirfts were driven at right angles to the main adit along cross fractures for about seventy-five feet. About 5,000 feet of drilling has been completed on this property. It is reported than an ore body has been blocked out. The property is not being mined at the present time.

The SUE PROSPECT was first explored by about 600 feet of drifting and crosscutting during 1954-1955. The extent of subsequent exploration is not known, but it is understood that exploration is being continued by means of D.M.E.A. aid.

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

MIAMI COPPER COMPANY is reported to have driven an adit in ore along a fracture on a prospect immediately north of A.C.U.'s Deep Creek claims.

The LUCKY STOP claims in the Workman Creek area have been explored by opern pits, adits, crosscuts and drilling. An unknown quantity of ore has been shipped from the property.

The LOST DOG claims, immediately to the east of the Lucky Stop prospect, have been explored in a similar manner. At the present time they are held by the Blue Bonnet Uranium Co., and are producing ore.

The DON & JON claims, immediately east of the Hope claims, are being explored by driving an adit along a mineralized fracture. This fracture parallels the fracture system on the Hope claims.

Uranium was discovered on the WILSON CREEK property in 1953. It was explored from a creek bed by driving adits along vertical fractures. Ore was hoisted over an inclined track on the north rim of a cliff and stockpiled on the property.

MIAMI COPPER COMPANY has completed an extensive drilling program on their claim near Young.

The operators of the BLACK BRUSH property have been granted a B.M.E.A. loan. The property is located a short distance northeast of A.C.U.'s Hope claims.

Although other operators are active in the district, the writer has no information regarding their exploration and development programs.

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

COMPANY PROGRAM

Company exploration activities were first concentrated in the Sierra Ancha District. Two planes and crews carried out a radiometric airborne reconnaissance of the district, and at the same time the remainder of the technical staff examined and evaluated all available uranium claims in the district. As a result, the company staked numerous claims and acquired the Hope, Deep Creek, Don & Jon, Workman and Cline properties. These claims were surveyed, access roads built to them and their radioactive outcrops explored. Company operations were centered in Workman Creek where the most promising mining properties are situated.

The following is a resume of the company's exploration program on the most promising properties:

DEEP CREEK: The Deep Creek property of twenty-six mineral claims, located in Sections 19 and 24, T5N, R14E, Gila County, Arizona, about twenty-five miles north of Globe, was first explored by sampling completely across the surface outcrops. After studying the results of this sampling, a diamond core drilling program designed to cut across the most radioactive fractures behind the outcrops was conducted in the summer of 1954. This proved the persistence of the mineralized structure, but did not disclose uranium ore in mineable widths. One of the mineralized outcrops was prospected by means of an open cut, in 1955. A 14" sample, across a mineralized bed, assayed 0.32% U_3O_8. Further exploration

was suspended pending the construction of a suitable access road and the compilation of additional knowledge concerning the nature of these deposits.

WORKMAN GROUP: The Workman group of sixteen mineral claims, located in Sections 19 and 30, T6N, R14E, forty-seven miles north of Globe, are immediately to the north and contiguous to the Hope claims on the north side of Workman Creek.

Three adits were driven into radioactive outcrops on this property and also a series of wagon drill holes were drilled in an effort to discover mineralized fissure veins below the radioactive outcrops.

Workman Adit #1 was advanced 160 feet along a mineralized, narrow, vertical fracture. The adit was started on a diabase-quartzite contact and went out of mineralized ground when the diabase dipped under the floor of the adit. An incline was started which followed the contact for 100 feet, but was discontinued when the ore began to occur in pockets instead of a relatively consistent mineralized vein. Thirty tons of marginal ore (0.12% U_3O_8) were shipped from this adit in 1955. A block of 100 tons of ore, estimated at 0.20% U_3O_8, was mined from the portal of this adit in 1956.

Workman Adit #2 was driven for 85 feet as a crosscut to cut several radioactive outcrops. No ore was encountered and the adit was discontinued when it en tered diabase.

ArizonaContinental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

Workman Adit #3 was advanced 70 feet along and 18" radioactive bed during 1955. Although the radioactivity persisted, no ore was encountered. A thorough radiometric travers of these claims was made and a total of 600 feet of wagon drilling completed in an effort to evaluate the radioactive outcrops. The results obtained did not prove any mineable ore.

HOPE GROUP: The Hope group of sixteen contiguous, unpatented lode mining claims, located in Sections 29 and 30, T6N, R14E, are adjacent to the Workman claims and are situated north of Workman Creek, forty-seven miles north of Globe. A 1.1 mile dirt road leads southeastward from the Globe-Young highway to the mine. Exploration and development these mining claims consisted of geologic and radiometric mapping of the outcrops, stripping, road building, drifting and long hole drilling.

Hope Adit #1, at an elevation of 5,920 feet above sea level has been driven for over 350 feet N 20° E, along a narrow ore shoot. It was advanced about 100 feet in secondary uranium mineralization before mineable primary ore was encountered. The ore went into the floor at 300 feet and the drift was advanced another 60 feet, encountering only pockets of marginal ore. A total of thirteen holes, about 100 feet deep were drilled at various angles from the face of the drift, but failed to disclose ore. A winze was sunk on the ore in the floor, which disclosed a narrow ore shoot about 14" wide, to be dipping steeply to the east. The winze was discontinued when it

was discovered that the ore could not be mined at a profit in this manner. Three raises driven into the back went out of ore four feet to twenty-four feet above the back of the drift. About 125 tons of ore were mined between the two raises. 916 tons of ore, averaging 0.17% U_3O_8, were shipped from these workings during 1955-1956. At the present, an estimated 600 tons of 0.22% U_3O_8, of the remaining developed ore reserve is being mined.

Hope Adit #2, an inclined adit, was started on an outcrop at an elevation of 5,931 feet above sea level, about 500 feet northwest of the Hope #1, and advanced for 85 feet N 20° D. A raise was driven 20 feet from the portal from which 100 tons of ore was stoped. Drilling has disclosed the ore body to be in the floor to a depth of at least 27 feet, and to be pitching to the north. 227 tons of ore have been shipped from this adit. It is estimated, from the limited exploration to date, that about 350 tons of 0.20% U_3O_8, has been developed below the floor of the incline.

Hope Adit #3. The Hope #3 vein outcrops 100 feet east of the Hope #2 veing. A 50 foot long crosscut, at an elevation of 5,944 feet above sea level, cut this vein 40 feet below the outcrop. The vein was opened up laterally in a N 20° E direction by drifting north and south along its strike for 300 feet. The ore values for the first 160 feet were quite consistent over a 3 foot to 6 foot mining width, but dropped in grade as the adit advanced through

the top of the ore shoot where pockets of ore were encountered. The ore above the drift was developed by spacing raises every 25 feet. Two holes were drilled below raise #7, which revealed ore (0.30% U_3O_8) to a depth of 50 feet. A winze was sunk under raise #9, 50 feet north of these holes, to a depth of 13 feet in ore averaging 0.30% U_3O_8. A hole in the bottom of this winze extended in the ore for another 13 feet. At the present, a drift is being driven northward from the bottom of the winze to the limits of the ore.

The A.E.C. has completed a vertical diamond drill hole starting in the mineralized fracture immediately south of the Hope #2 portal, and extending downward into the diabase. They are now drilling a horizontal hole eastward under the Hope #3 vein for additional geological information.

A total of 1,721 tons of ore, averaging 0.20% U_3O_8, has been shipped from the Hope #3 adit, to the buying station at Cutter, Arizona, fifty-four miles distand, as of March 1, 1956.

Hope Adit #4 was opened up along a radioactive outcrop and advanced for 15 feet N 20° E, in 1955. A 2 foot vein, averaging 0.20% U_3O_8, is exposed in the face of the adit. Work on this vein has been temporarily suspended.

CLINE GROUP: The Cline group of fourteen contiguous claims, located in Section 1, T5N, R13E, is about one and one-half miles south of Workman Creek near the Globe-Young highway. The

exploration work on these claims consists of geologic mapping, radiometric prospecting, the construction of an access road and the driving of three adits along mineralized fractures.

Cline Adit #1 is located on a mineralized fracture striking N 20° E, that can be traced over a vertical distance of 100 feet and a width of 30 feet. The adit was started in ore and driven for a distance of 120 feet. After passing through the surface crust it was discovered that the uranium mineralization was confined to narrow fractures assaying from .08% to .09% U_3O_8, across a 4 foot width. A highly oxidized cross-fault was encountered 85 feet from the portal and the grade of the ore beyond the fault dropped below .09% U_3O_8. A raise about 70 feet north of the portal and a more thorough examination of the outcrop revealed a higher grade zone about 10 feet above the back of the drift. An adit was driven along this zone for 80 feet in marginal ore. 15 to 20 foot long test holes ;into the sides of the drift revealed mineralization, but no ore. Work in the drift has been discontinued and no ore was shipped from it.

Cline Adit #2 was driven along a mineralized vein for a distance of 65 feet. Although it remained in mineralized ground, no ore was encountered. Work in this adit has been discontinued.

Arizona Continental Uranium, Inc.
205 East Camelback Raod
Phoenix, Arizona

SCOPE OF EXPLORATION AND DEVELOPMENT

Arizona Continental Uranium, Inc., has expended in excess of $500,000 in exploration for, and development of, uranium mining claims in the Sierra Ancha Mining District, Gila County, Arizona. Over 3,000 tons of uranium ore have been shipped to the buying station at Cutter, Arizona, and currently about 500 tons of ore per month is being produced.

The amount of physical exploration carried out in the Workman Creek area alone is tabulated below:

Physical Exploration in Workman Creek Area

Adit	Access Road	Drift Footage	Crosscut Footage	Raise Footage	Incline	Sub-Level	Long Hole
Hope Group	2,400						2,300
#1		350		60			
#2		85		15	70		
#3		300	50	117		47	
Workman Group	14,000						900
#1		160			100		
#2			85				
#3			70				
Cline Group	5,600	200	15				
#1							
#2		65					
TOTALS	22,000	1,160	220	192	170	47	3,200

Arizona Continental Uranium, Inc.
205 East Camelback Road
Phoenix, Arizona

4. (b)

PRODUCTION

It is estimated that a total of 6,000 tons of uranium ore has been shipped to the buying station at Cutter, Arizona, of which the Hope claims, operated by Arizona Continental Uranium, Inc., have supplied well over half the total shipments. (See settlement sheets section.) Other production in the district has been from the Workman, Lucky Step, Don & Jon, Lost Dog, Wilson Creek, Sue and Red Bluff claims. This district has not developed as rapidly as expected due to the inaccessibility of the mining claims, the difficulty experienced in exploration, development and mining of the uranium ore bodies, as well as the lack of geologic knowledge concerning these deposits. These difficulties present problems quite different from those experienced by operators on the Colorado Plateau, who mine from flay lying deposits in sandstone and have many years of accumulated knowledge of those deposits for reference.

Current estimated rate of shipments to the Cutter station from the Hope group is about 400 tons per month. Ore reserves on the Hope group are about 1,000 tons of 0.25% U_3O_8.

GEOLOGY

The rocks in the Sierra Ancha Mountain Range consist of metamorphosed sediments of the Precambrian Apache group, the Cambrian Troy formation and the post Pennsylvanian diabase dikes

and sills that intrude all the formations of the Apache group. The Apache group consists of a vesicular basalt flow underlain in turn by the Mescal limestone, the Dripping Spring quartzite, the Barnes conglomerate, the Pioneer shale and Scanlon conglomerate. A schematic diagram of a portion of the Apache group is attached. (Plate II) The Dripping Spring quartzite has been divided into two units; an upper thin-bedded, rusty colored, fine-grained, arkosic quartzite, and a lower massive-bedded, buff colored, medium grained quartzite. The upper member of the Dripping Spring quartzite varies from a feldspathic siltstone through the metasediment sequence to a true quartzite.

The uranium in the Sierran Ancha District is found in nearly vertical fractures as well as along bedding planes in a favorable horizon in the upper member of the Precambrian Dripping Spring quartzite. This horizon is usually found from 150 to 200 feet below the Mescal-Dripping Spring contact.

STRUCTURE

The most prominent structure consists of a series of block faults in which the east block is generally the down-drop block resulting in a graben to the east centered in Cherry Creek. Minor faults, fractures and joint planes are abundant in the upper member of the Dripping Spring quartzite. Most of the uranium mineralization appears to follow fractures striking N 20° E in the proximity

of diabase sills. The next most prominent fracture pattern striking N 70° W is frequently mineralized with uranium.

MINERALOGY

Meta-torbernite, a hydrous copper uranium phosphate is the most common secondary uranium mineral found in the oxidized zone in the quartzite. It usually occurs as clusters of green platy crystals which coat the surfaces of open fractures. Autunite and uranophane have also been found in this zone. Primary, finely disseminated uraninite is found in the unoxidized zone. Associate minerals are pyrrhotite, pyrite, and marcasite. Galena and chalcopyrite occur less commonly and cobalt and silver occur as trace elements. The uranium is nearly in quilibrium since the radiometric assays of the primary ore compare very closely with chemical assays.

ORE OCCURRENCES ON THE WORKMAN AND HOPE CLAIMS

The uranium ore occurs as uraninite in a favorable horizon in thin beds of the upper member of the Dripping Spring quartzite along narrow fractures striking N 20° E and dipping steeply to the southeast. The ore shoots along the fractures mined to date have ranged from 2 feet to 12 feet in width and from 6 feet to 60 feet in height. They have been followed for about 200 feet where a more detailed examination has revealed the shoot to rake downward to the northeast, indicating that the drifts have been driven through the top of the shoot. Above the drift levels, the shoots are offset enechelon toward the northwest and below toward the

southeast. The uranium is believed to follow the diabase sills which appear to dip northward in this area at a steeper angle than the bedding of the quartzite. The highest grade occurs adjacent to the fractures and gradually diminishes in grade outward until an assay limit is reached. All ore bearing veins found to date are parallel. The uranium is associated with pyrrhotite and occurs in a very dark quartzite. It is leached near the surface where secondary minerals such as metatorbernite, autunite and uranophane coat hematite stained fracture faces; however, primary uraninite is found in the unoxidized zone. The uranium ore has averaged 0.20% U_3O_8 over a 3 to 4 foot width. The most recent development in the form of an exploration winze in the Hope #3 mine has revealed the ore to assay in excess of 0.40% U_3O_8 across a 3 1/2 foot face of the winze. The veins mined to date were found as highly radioactive surface outcrops in creek beds or cliff faces; overburden covers the intervening space. No attempt has been made to discover additional veins by subsurface exploration, nor to discover the frequency of spacing of them fractures. Plate IV, Geologic Map of the Hope and Workman Claims, is attached.

COMPARISON WITH OTHER VEIN DEPOSITS

The tabulated information listing geologic features of pitchblende veins, Figures II through VI, with the exception of Figure II, Sierra Ancha District, Gila County, Arizona, is published in the Econimic Geologic Bulletin, Vol. 48, No. 2, March-Arpil, 1953,

entitled, "The Geologic Character of Typical Pitchblende Veins" by Donald L. Everhart and Robert J. Wright. Four of the thirteen tabulations from this article are presented to illustrate the close comparison of other vein deposits with the Sierra Ancha deposits. (See Section - Illustrations) Several striking resemblances are apparent when the deposits are compared in this manner:

1. The host rocks are metamorphosed and predominently of Pre Cambrian age.

2. Diabase has some control over the mineralization in a few of the other deposits.

3. Iron sulfides, galena, chalcopyrite, cobalt and silver are associated with uranium oxide in other vein deposits as well as in the Sierra Ancha deposits.

4. The structural control appears obvious in all.

FACTORS IN FAVOR OF FURTHER EXPLORATION WORK ON THE HOPE CLAIMS

Uranium ore has been and is being produced from the property. The recent development 13 feet below the drift level in the Hope #3 adit had revealed the ore shoot to be pitching down to the northeast to an unknown depth. The development has also shown the values in the adit to increase from an average of 0.20% U_3O_8 to 0.40% U_3O_8 across the structure. (Plate V - Assay Map of the Hope 1, 2 and 3 adits, is attached) It is estimated that this ore shoot averages 60 feet in thickness from the development work to date. Hope #2

adit, 110 feet to the west, and Hope #1 adit, 210 feet to the east of Hope #3, also contain parallel uranium bearing ore shoots that pitch downward to the north under the present workings. Nothing is known about the occurrence or spacing of additional uranium bearing fractures between these adits. Because of these favorable factors, and the similarity of this deposit with other primary uranium bearing veins, Arizona Continental Uranium, Inc. desires to further explore and delineate the possible uranium ore bodies on its Hope claims. Since this proposed exploration program will require a considerable expenditure, with little or no income from ore shipments during the exploration phase, Arizona Continental Uranium, Inc., is requesting assistance in the form of a D.M.E.A. loan.

The Hope group of claims was leased by Vance Thornburg, agent for Gerald Gidwitz dba/Western Mines Development Company, from the owners Maurice Sharp, Charlie Nichols and Carroll Willbanks, all of Gila County, Arizona, July 27, 1954. Arizona Continental Uranium, Inc. is the operating company for Western Mines Development Company. (See Exhibits)

The Hope group consists of sixteen unpatented mining lode claims, recorded in Docket 6, pages 343 through 358, in the office of the County Recorder, Gila County Courthouse, Globe, Arizona. The lease stipulates that the lessee shall pay unto the lessors royalty equal to 10% of the lessee's gross receipts from mining operations conducted on the leased premises.

The Hope claims have been certified by the A.E.C. and allotted the Certification No. D.U.P. C6-C-498.

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4. (d)

The Sierra Ancha Mining District is located in Gila County, Arizona extending from approximately 33° 45' north latitude to 34° 15' north latitude and from 111° 45' west longitude to 110° 45' west longitude, or from T4N, R13E, northward to T10N, R15E, GSRB&M. (Plate I Map of Arizona Showing Location of Sierra Ancha Mining District) It comprises an area approximately forty miles long and thirty miles wide. The district can most easily be reached, at the present time, by travelling north of Globe, Arizona, for distances ranging from forty to ninety miles, on a well maintained secondary road, commonly referred to as the Globe-Young highway. The greater percentage of this district is within the Tonto National Forest, in which 8,000 acres has been withdrawn from mineral entry by the Department of Interior, for continuation of the Sierra Ancha Watershed research project. The Sierra Ancha Mountain Range within this district presents a very rugged topography of nearly vertical canyons, steep hillsides and sloping mesas. Elevations range from 4,000 feet to 7,500 feet above sea level. Vegetation above 4,000 feet consists of manzanita, scrub oak and pine forests.

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4. (e)

Aztec Lodge, located at the junction of the Globe-Young highway and Workman Creek road, consisting of ten building, is leased from the U. S. Forest Service and serves for a camp. A continuous and adequate water supply both for culinary and mining purposes is obtained from Workman Creek which flows northwestward past the lodge. Electric power for the camp is obtained from a 15 KW-110V AC company owned, power plant. Power lines, as well as water lines, are installed in some of the cabins. Experienced miners are available at Globe, Arizona, a distance of forty-seven miles from the lodge. Abundant oak and pine trees, growing on the mining claims, are used as timber in the mining operations. Dimensional pine lumber is supplied from a saw mill at Young, about twenty miles north of the lodge.

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5. (b)

The proposed exploration program is outlined as Phase "A" and Phase "B". However, it is desired that these phases be left flexible so that they can be modified dependent upon additional geologic knowledge acquired upon the completion of the current A.E.C. diamond drill program on the Hope claims, as well as additional knowledge gained as the proposed program progresses through its various phases.

PHASE "A"

(Plate VI - Plan and Cross Section of Hope Adits 2 and 3, showing Proposed Exploration Program, is attached.)

Cost for exploration in the quartzite is usually higher than exploration of other rock types. This increased cost is reflected in the estimates.

It is proposed that the initial exploration plan consist of twelve diamond drill holes shown on Plate VI would explore the downward extension of the Hope Nos. 3, 4, 2 and 1 veins, as well as to probe for possible intervening parallel veins. It is estimated that this diamond drilling will cost $10.00 per foot; therefore, the total cost of this drilling would be $28,050.00. It is proposed that a 20 foot cross drift be driven to the east from adit #3, 110 feet north of the portal as a diamond drill station; necessary head room for the diamond drill can be slabbed. The estimated cost for this work is: 20' drifing at $35.00 per foot = $700, plus $100 for slabbing, or a total of $800.00.

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Should the above drilling fail to disclose ore at depth below the crosscut to Hope #3, it is proposed that an inclined drift be driven from a point just north of the crosscut to Hope #3, along the footwall of the ore shoot. It is proposed that this incline be advanced at least 365 feet, at an estimated cost of $45.00 per foot, which would amount to $16,425.00. At lease 1,200 feet of holes should be drilled from the incline to explore for additional ore, at an estimated cost of $10.00 per foot.

The total estimated cost of Phase "A" is tabulated as follows:

2805' drilling	@ $10.00/ft.	$ 28,050.00
20' crosscut	@ 35.00/ft.	700.00
Slabbing		100.00
365' incline	@ 45.00/ft.	16,425.00
1200' drilling	@ 10.00/ft.	12,000.00
		57,275.00
10% Contingency		5,727.00
		$ 63,002.00

PHASE "B"

At this writing the A.E.C. is drilling a horizontal diamond drill hole (No. 2 on Plate No. VI) which should cut the projection of the Hope #1 vein, or any other structure. Should ore be encountered in this hole, and other holes drilled to the east, it is proposed that the crosscut to the Hope #3 vein be extended at least 400 feet. At least 300 feet of drifting should be done on the vein or veins cut. Should ore be encountered in the deeper holes (Nos. 3, 4, 5, 8, 9 and 12) in proposed Phase "A"

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it is recommended that a crosscut be started a short distance above the diabase contact and advanced at least 550 feet at an estimated cost of $35.00/ft. for a total of $19,250.00. At least 400 feet of drifting from this crosscut would be required at a cost of $35.00/ft., or $14,000.00.

A proposed location of this crosscut is shown on Plate No. VI, as "B". Should this drilling in Phase "A" reveal that the ore shoot extends to this elevation, but pitches to the north, this crosscut should be driven in location "C". In order to drive adit "C", 1,000 feet of access road would be required, at an estimated cost of $1.25 per lineal foot, or a total of $1,250.00.

The estimated cost of Phase "B" is as follows:

950' crosscut @ $ 35.00/ft.	$ 33,250.00
700' drifting @ 35.00/ft.	24,500.00
1000' access road @ 1.25/ft.	1,250.00
	59,000.00
10% Contingency	5,900.00
	$ 64,900.00

Total Program:

Phase "A"	$ 63,002.00
Phase "B"	64,900.00
	$127,902.00

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5. (d)

Operations are under the direction of Mr. Robert C. Pruess, Mining Engineer, who has had many years world wide experience as a mining engineer, and is supervising Continental Uranium's mining operations on the Colorado Plateau. He is a graduate of the Colorado School of Mines and has worked for Climax Uranium as Superintendent of Mines and Superintendent of Production, Manager of their lead-gold and manganese operations in Costa Rica and coordinator of the Florida Project. Formerly he was Chief Engineer for the Sidney Mining Company in the Coeur d'Alenes; Research Metallurgist, Geologist and Mine and Mill Superintendent with Vanadium Corporation of America in Peru, Argentina and the Colorado Plateau. He has had other varied experience in the exploration, development and coordination of mineral operations.

Mr. Forest M. McConochie is retained as Mine Manager, and has approximately forty years expeience in the mining field. He began as a miner in the Bisbee, Arizona, district in 1916. Subsequently he advance into the mine management field and became president of a mining company operating the Logan and War Eagle Mines in the Cripple Creek gold district. He later mined uranium deposits in Colorado during the period 1950-1954. Mr. McConochie has been with Arizona Continental Uranium, Inc. since 1954.

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Mr. Gerald Weathers, Geologist, and Manager of the Phoenix Office, was formerly associated with the American Zinc Company of Tennessee, and the A.E.C. as a Geologist, before joining the geological staff of Arizona Continental Uranium, Inc., in 1954.

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6. (a)

The proposed diamond drilling program will be let out on an independent contract at an estimated cost of $10.00 per foot. The total footage is estimated at 2,805 feet or a cost of $28,050.00. An estimated 1,000 feet of access road at $1.25 per lineal foot will be contracted at an estimated cost of $1,250.00.

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6. (b)

Arizona Continental Uranium, Inc., plans to use its own technical staff, office and mining personnel to complete the proposed exploration program. An itemized schedule of the cost for this service is as follows:

1 - Mining Engineer	$ 750.00/month
1 - Geologist	625.00/month
1 - Secretary	350.00/month
1 - Mine Manager	650.00/month
2 - Miners per drift heading	1.75/hour + overtime
1 - Trammer	1.50/hour + overtime
1 - Camp Cook	350.00/month

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6. (c)

Operating Materials and Supplies

An itemized list of the supplies, materials, power, water and fuel necessary for further exploration of the Hope property is as follows:

1. Powder ($21.00/100 lb.), fuse and caps ($29.75/M)

2. 16 lb. rail @ $260/ton, delivered at the mine. Ties, $0.25 each.

3. Steel pipe for compressed air and vent tube for ventilation.

4. 4 pieces of 6 ft. lengths of carbide steel per miner per week @ $19.90 each.

5. Sets of air and water hose for drills, set air hose for mucker.

6. Diesel fuel for 365 compresser and AC power unit, gasoline for trucks, etc. Butane for cook stove and refrigerator.

7. Office and lodge rental, engineer and office equipment and supplies.

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6. (d)

Operating Equipment

The equipment in use at the Hope mine is rented from Equipment Rental Company. Alist of the equipment to be used on the Hope property is as follows:

	Monthly Rental
1954 Willys Jeep, Ser. No. 454GB2-15743	$ 30.12
G. D. 36JCFM Compressor, No. 184934 (Cat. 659335)	242.27
HEE Slusher #190210	25.08
1, 30" Slusher Bucket	8.12
1, C. W. 122 Cutting and Welding Outfit	7.37
1954 Willys Station Wagon, Ser. No. 6543A2-10243 (Ambulance)	46.15
1, Heater for Jeeps	1.12
G. D. 10 Mine Car Loader, Ser. #187034	85.19
1942 Used Chevrolet Truck, Model G-7117, Motor BV581228	21.32
Light Plant 15 KVA, Serial #387538	63.67
CF89-H Drifter 48" Steel Mtg. Chge. & Hole Spotter, Serial #191920	46.02
Allis Chalmers HD-5G Tracte-Shevel, Serial #HD-5G-26761	418.60

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	Monthly Rental
1955 F-100 Ford Pickup Ser. #F10B5L-15548 (Miner and Supplies)	$ 112.82
1955 Chevrolet Model 3104 Pickup Ser. #H255L012511 (McConochie)	100.73
1955 Chevrolet Model 3104 Pickup Ser. #H255L010328 (Weathers)	97.79

Additional equipment that may be needed on rental purchase agreement:

1 - Tugger, working capacity 2000 lb. @ 410'	115.00
1 - Sump Pump VP4 (or similar)	36.00
1 - Gardner Denver 500 Compressor	750.00

It may be necessary to rent a small trammer for longer haulage. I suggest a 1 1/2 ton electric trammer bought on rental purchase plan, complete with charging equipment.

300.00

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6. (e)

None

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6. (f)

None

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6. (g)

Miscellaneous Expenses

1.	Cost of Maintenance of Equipment	$ 450.00/month	
2.	Analytical work	100.00	"
3.	Accounting: $350.00 Chicago 350.00 Deming	700.00	"
4.	Workmen's Compensation	450.00	"
5.	Employers Liability Insurance	35.00	"
6.	Payroll Taxes	200.00	"

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6. (h)

Contingencies

10% of estimated exploration cost.

FIGURE II

SIERRA ANCHA DISTRICT, GILA CO., ARIZ.

HOST ROCK	MINERAL ASSOCIATION	PARAGENESIS	STRUCTURAL RELATIONSHIPS	HYDROTHERMAL ALTERATION	GEOLOGIC AGE
1. Formational Name Dripping Spring quartzite 2. Petrography Thin bedded dark red feldsphatic siltstone meta-sediments & quartzite 3. Age Pre-Cambrian	1. Major Metallic Minerals Pyrrhotite commonly with uraninite Pyrite Marcasite Chalcopyrite Galena Vanadium Trace Elements Cobalt Silver 2. Gangue Minerals Quartz, Quartzite & feldspar	1.Uraninite 2.Coffenite 3.Pyrrhotite, molybdenite, chalcopyrite, marcasite.	Uraninite occurs along narrow fractures near a diabase sill Major fracture system N20°E Lesser N70°W Both nearly vertical Spacial distribution unknown at present	Pyrrhotite and uraninite localized around veins decreasing in grade away from veins	Incomplete Galena 1. Tertiary 2.Precambrian

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FIGURE III

SHINKOLOBWE MINE, BELGIAN CONGO

HOST ROCK	MINERAL ASSOCIATION	PARAGENESIS	STRUCTURAL RELATIONSHIPS	GEOLOGIC AGE
1. Formational Name Mine series 2. Petrography Host rock is mainly siliceous dolomite. In detail most of the ore is in thin-bedded quartzite 3. Age Pre-Cambrian	1. Major Metallic Minerals Co-Ni sulfides Pyrite Chalcopyrite Bornite Chalcocite Covellite Pendlandite Molybdenite Native copper Native gold 2. Gangue Minerals Quartz Dolomite Siderite Calcite Chlorite Talc	Stage A Quartz with monazite, tourmaline and apatite Stage B Pitchblende or uraninite (in cubes) Stage C Sulfides 1. Pyrite 2. Co-Ni sulfides 3. Chalcopyrite Stage D Dolomite or siderite	Fracture filling was the chief mode of emplacement of the ore. Hydrothermal veins possibly are related to granite intrusives near the Katanga-Rhodesian border	610 to 676 X 10^6 yrs. Early Cambrian or late Precambrian

FIGURE V

GREAT BEAR LAKE DEPOSITS, NORTHWEST TERRITORIES, CANADA

HOST ROCK	MINERAL ASSOCIATION	PARAGENESIS	STRUCTURAL RELATIONSHIPS	HYDROTHERMAL ALTERATION	GEOLOGIC AGE
1. Formational Name Echo Bay group (three lowest members) 2. Petrography a) Fine-grained to dense dark-colored tuff b) Quartzose sediments: Quartzite chert and iron-rich quartzose sediments with minor argillites, limestone, and conglomerate c) Feldspar porphyry (sill rock) 3. Age Proterozoic	1. Major Metallic Minerals Fe oxides Sulfides Sulfarsenides Co-Ni sulfides, arsenides, and sulfarsenides Native Bi Molybdenite Sphalerite Galena Cu-bearing sulfides Native Ag Ag sulfides Mn oxides 2. Gangue Minerals Quartz Dolomite Rhodochrosite Witherite Barite	Stage A Pitchblende Quartz Safflorite-Rammelsbergite Cobalt-nickel minerals Stage B Quartz Smaltite Cobaltite Other cobalt-nickel minerals Stage C Dolomite Lead Zinc Copper sulfides Stage D Ferruginous rhodochrosite Copper and silver sulfides Native silver	Regularly distributed vein-bearing fractures at 600' intervals Strikes converge to N65°E; dips are northwesterly No. 1 Vein: strong shear zone 40' wide with horizontal displacement of 300' No. 2 and 3 Veins: Minor shears and related tension fractures, with displacements of less than 20'. No. 5 (Dumpy) Vein: Strong shear parallel to No. 1. The two define a block with subsidiary minor fractures. Fractures formed by shearing action; opened by later tension.	1.Alteration is prominent in vicinity of mine. 2.Coloration of wall rock by hematite and obliteration of original textures marked within 4 or 5' of the veins. 3.Uranium deposits are related to quartz-hematite period of mineralization. 4.Greatest alteration effects are most intense in quartzose sediments. 5.Altered rock contains: quartz hematite, magnetite, sericite, chlorite and carbonate 6.Magnetite is localized around vein deposits, decreasing away	1251 to 1420 X 10^6 years Early or middle Precambrian

FIGURE

MONTREAL RIVER DISTRICT, ONTARIO, CANADA

HOST ROCK	MINERAL ASSOCIATION	PARAGENESIS	STRUCTURAL RELATIONSHIPS	HYDROTHERMAL ALTERATION	GEOLOGIC AGE
1. Formational Name Algoman or Algonkian granite and granite gneiss and Keeweenawan diabase dikes. 2. Petrography Pink granite and granite gneiss-porphyritic and pegmatitic in spots. Quartz is very fine-grained. Two types of diabase dikes: older olivine-free types, fine-grained near contacts and medium grained toward center of dikes; younger olivine type. 3. Age Granite is Algoman or Proterozoic. Diabase is Keeweenawan.	1. Major Metallic Minerals Hematite Pyrite Native silver Calusthalite 2. Gangue Minerals Dolomite Calcite Quartz Jasper	1. Calcite with hematite 2. Pitchblende 3. Hematite 4. Calcite 1. Pitchblende (intermixed with other metallic minerals) 2. Hematite (Partly contemporaneous with pitchblende) 3. Carbonates and quartz	Open, vein filled fissures and shatter zones are in and along contacts of east-trending diabase dikes that cut granite. Stockworks and feather fractures.	Hematitization of gangue minerals and wall rock. Considerable silicification of wall rock. Little carbonization and no argillization.	Post-Keeweeanwan

FIGURE

COEUR D'ALENE DISTRICT, IDAHO

HOST ROCK	MINERAL ASSOCIATION	PARAGENESIS	STRUCTURAL RELATIONSHIPS	HYDROTHERMAL ALTERATION	GEOLOGIC AGE
St. Regis quartzite Belt series (Precambrian) 1. Formational Names St. Regis quartzite of the Belt series. 2. Petrography Thin-bedded purplish gray quartzite and argillite. Pore-space filling by quartz and sericite with resultant "bleaching" effect. 3. Age Precambrian	1. Major Metallic Minerals Pyrite Arsenopyrite Chalcopyrite Stibnite Tetrahedrite Galena Erythrite is formed on some mine workings. No primary cobalt mineral has been recognized. 2. Gangue Minerals Quartz Siderite	1. Pyrite 2. Arsenopyrite 3. Tetrahedrite 4. Pitchblende Chalcopyrite follows tetrahedrite but its age relation with pitchblende is not clear.	Pitchblende is found in veinlets closely related to the main Sunshine vein system which is a tension fracture trending east and dipping 60-80° south. Pitchblende is found only below 2500'. Pitchblende bearing veins are fissure veins up to 18" wide. Pitchblende forms small spherulites up to 10 microns in diameter which replace vein quartz. Quartzite wall rock and to a lesser extent tetrahedrite.	Quartzite near pitchblende veins is stained red-brown as far as 1' away from the vein walls. Coloration appears to originate as blades and grains of a red mineral (probably hematite) which forms in sericite interstitial to quartz grains.	Generally considered Tertiary. According to new data by Kerr and Kulp: Precambrian

COLORADO PLATEAU URANIUM ORE PROJECT

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American Smelting and Refining Company Ore Purchasing Agent For
United States Atomic Energy Commission

Receiving Station [illegible] Grand Junction, Colorado [illegible] 19 55

Consignment No. [illegible] Lot No. [illegible] Shippers Lot No. [illegible]

Bought of [illegible] A.E.C. License No. [illegible]

Address [illegible]

Type of Ore [illegible] Contract No. [illegible] Date Received [illegible]

Mining Claim [illegible] Mining District [illegible] File No. [illegible]

[illegible] State - Arizona [illegible]

Lot No.	Wet Weight Pounds	H_2O	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	V_2O_5	$CaCO_3$	CONTENTS POUNDS U_3O_8	V_2O_5	$CaCO_3$
[illegible]	[illegible]	[illegible]	[illegible]	0.14		0.1	41.58		29.70
[illegible]	[illegible]	1.00	[illegible]	0.12		0.5	57.67		136.95
[illegible]	[illegible]	1.60	[illegible]	0.22		0.2	73.25		66.50
[illegible]	[illegible]	1.91	[illegible]	0.19		-	108.92		-
[illegible]	[illegible]	[illegible]	[illegible]	0.10		0.6	55.50		132.90
[illegible]	[illegible]	[illegible]	[illegible]	0.21		0.1	129.22		61.54
[illegible]	[illegible]	1.82	[illegible]	0.11		0.5	60.07		149.15
[illegible]	[illegible]	2.55	[illegible]	0.11		0.5	66.33		126.35
21	[illegible]	2.72	[illegible]	0.16		1.0	235.60		1847.50
[illegible]	[illegible]	2.36	[illegible]	0.20		0.4	243.64		487.29
[illegible]	[illegible]	[illegible]	[illegible]	0.20		0.6	225.22		756.06
[illegible]	[illegible]	1.57	[illegible]	0.18		0.3	104.37		173.95
[illegible]	[illegible]	[illegible]	[illegible]	0.29		[illegible]	117.38		176.07
	[illegible]	2.58	[illegible]	.166783		0.5	1563.25		[illegible]

	Per Lb.	Per Ton	Short Tons	Total Value
.166783 x 3.33566 at	2.43566	9.48600	470.1475	$4447.03
Moral point allowance 1.33566 at	.50	1.56733	"	784.13
TOTAL USAE PAYMENT		11.12663	470.1475	$5231.16
Haulage allowance (57) 11 miles @ 64 per wet ton mile			482.9350	1477.23
TOTAL GROSS PRICE				$6709.39
Less Hours				- - - -
NET PROCEEDS				$6709.39

Correct JTK
Checked PPF
Approved [illegible]

Paid 8-10-55
V.O. No. 6/129
Check No. 17678

jcw

I certify that I am the lawful owner or authorized Representative of the Lawful Owner, of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amount as shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5—U_3O_8 ratio, for sums due to me on account of the ore deliveries described herein.

Arizona Consolidated Uranium Corp.
By: James S. Fuller
Title: Manager
Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

COLORADO PLATEAU URANIUM ORE PROJECT

American Smelting and Refining Company, Ore Purchasing Agent For
United States Atomic Energy Commission

Receiving Station Globe, Arizona — Grand Junction, Colorado September 15, 1955

Liquidation No. 8568 — Lot No. Various 61

Bought of Arizona Continental Uranium, Inc. — Shippers Lot No.

Address 205 East Camelback Road; Phoenix, Arizona — A.E.C. License No. [illegible]

Type of Ore Uraninite — Contract No. AT(05-1)-402 — Date Received August 8, 1955

Mining Claim Hope No. 1, Workman — Mining District Sierra Ancha — Pile No. 2

Lot No	Wet Weight Pounds	H_2O	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	V_2O_5	$CaCO_3$	CONTENTS POUNDS U_3O_8	V_2O_5	$CaCO_3$
M 28	62,380	1.55	61,412	0.35	0.4		214.95		245.65
M 29	62,910	2.59	61,283	0.24	0.5		147.13		306.52
M 31	97,130	2.64	94,569	0.19	0.6		179.68		567.41
M 34	62,880	2.56	61,279	0.14	0.5		85.79		306.39
M 37	60,630	3.46	58,529	0.12	0.3		70.23		175.59
M 40	64,770	2.58	62,883	0.15	0.5		94.34		314.46
M 44	67,380	3.51	64,939	0.12	0.5		77.93		324.69
M 54	69,560	4.48	66,445	0.11	0.5		73.09		332.23
M 60	67,720	2.75	65,848	0.20	0.3		131.70		197.54
M 61	65,250	1.75	64,111	0.18	0.5		115.40		320.56
	680,430	2.63	661,326	.170978	0.5		1,190.24		3,071.04

U308

	Per Lb.	Per Ton	Short Tons	Total Value
.179978% = 3.59956# at	$3.09956	$11.15704	330.6630	$3,689.82
Development allowance 3.59956# at	.50	1.79978	"	595.12
TOTAL U3O8 PAYMENT		$12.95683	330.6630	$4,284.94
Haulage allowance Various* Miles @ 6¢ per wet ton mile			348.2650	1,097.00
TOTAL				$5,381.94

V205

TOTAL GROSS PRICE	$5,381.94
Deductions:	
TOTAL	$5,381.94
Mileage Adjustment (Detail Attached)	$ 86.94
NET PROCEEDS	$5,468.88

Correct CPA — Checked DPA — Paid September 19, 1955 Check No. 374 — Voucher No. 9/217

SP

I certify that I am the lawful owner or authorized Representative of the Lawful Owner, of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amount as shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5—U_3O_8 ratio, for sums due to me on account of the ore deliveries described herein.

Mine Detail	Miles	Net Tons	Allowance
Type No. 1	54	309.9500	$1,004.24
Workman	33	38.2150	92.70

By Arizona Continental Uran., Inc.
Title
Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

Form No. O-4 6-54 25M

C_ _ORADO PLATEAU URANIUM RE PROJECT

American Smelting and Refining Company, Ore Purchasing Agent For
United States Atomic Energy Commission

Receiving Station [illegible] Grand Junction, Colorado [illegible] 1955

Liquidation No. [illegible] Lot No. [illegible] Shippers Lot No.

Bought of [illegible] A.E.C. License No. [illegible]

Address [illegible]

Type of Ore [illegible] Contract No. [illegible] Date Received [illegible]

Mining Claim [illegible] Mining District [illegible] File No. [illegible]

Lot No.	Wet Weight Pounds	Moisture	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	V_2O_5	CaO	CONTENTS POUNDS U_3O_8	V_2O_5	CaO
Hopo #3									
74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
Subtotal	[illegible]		[illegible]				[illegible]		[illegible]
Hopo #2									
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]

[illegible]	Unit No.	Unit Price	Total Value
[illegible] - [illegible] at	[illegible]	[illegible]	[illegible]
Development allowance [illegible] at	.50	[illegible]	[illegible]
Premium in excess of [illegible] per ton ([illegible] - [illegible]) = [illegible] at	.75	[illegible]	[illegible]
TOTAL ORE PRICE		[illegible]	[illegible]
Storage Allowance [illegible] miles [illegible] per net ton mile			[illegible]
TOTAL GROSS PRICE			[illegible]
Deductions:			
NET PROCEEDS			[illegible]

Contract [illegible]
Checked [illegible]
Approved [illegible]

Paid 10/20/[illegible]
To. No. 10/[illegible]
Check No. [illegible]

I certify that I am the lawful owner or authorized Representative of the Lawful Owner of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amount as shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5—U_3O_8 ratio, for sums due to me on account of the ore deliveries described herein.

Arizona Continental Corporation, Inc.
By [illegible]
Title
Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

Form No. O-4 8-54 25M

COLORADO PLATEAU URANIUM ORE PROJECT

American Smelting and Refining Company, Ore Purchasing Agent For
United States Atomic Energy Commission

Receiving Station: Globe — Grand Junction, Colorado: December 12, 19[illegible]

Liquidation No.: 9194 — Lot No.: Various 194 — Shippers Lot No.:

Bought of: Arizona Continental Uranium, Incorporated — A.E.C. License No.: [illegible]

Address: [illegible] E. Camelback Road, Phoenix, Arizona

Type of Ore: Uranium — Contract No.: AT (05-1)-[illegible] — Date Received: October Deliveries

Mining Claim: Kaye #2 & #3 — Mining District: Silver Arch — Pile No.: 2

Lot No	Wet Weight Pounds	H_2O	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	SETTLEMENT ASSAYS V_2O_5	SETTLEMENT ASSAYS $CaCO_3$	CONTENTS POUNDS U_3O_8	CONTENTS POUNDS V_2O_5	CONTENTS POUNDS $CaCO_3$
86-2	65170	3.54	62854	0.15	0.7		94.30		440.05
88-2	65850	2.14	64467	0.13	1.4		83.81		902.54
91-2	66190	2.55	64500	0.12	0.6		77.40		416.00
Kaye #3									
87	66710	3.25	64542	0.19	0.5		122.63		322.71
90	68168	3.25	65704	0.21	0.4		140.08		262.82
92	64650	2.50	62235	0.19	0.5		118.28		311.18
95	61020	1.83	60266	0.19	0.8		114.51		180.53
96	67159	1.75	65955	0.19	0.2		125.32		131.91
97	66900	2.05	65572	0.18	0.3		114.43		196.72
98	68310	1.20	66936	0.19	0.4		126.90		267.84
99	69170	1.70	67994	0.23	0.5		156.38		339.97
100	66400	1.50	65231	0.20	0.8		130.46		521.92
101	65850	1.95	64567	0.17	0.6		109.76		387.40
102	66850	1.95	65526	0.21	0.7		137.60		458.86
104	67650	1.80	66434	0.22	0.5		146.15		332.17
103	10450	1.70	10271	0.28	0.4		28.76		41.08
	1021840	2.15	1001728	.187909	0.5		1882.32		5149.45

	Per Lb.	Per Ton	Short Tons	Total Value
U308 .187909% = 3.75818% at	3.2500	75.1636	500.9140	$37651.61
Development allowance 3.75818% at	.50	1.87909	"	941.26
TOTAL USES PAYMENT		14.12332	500.9140	$7074.57
Haulage allowance 54 miles @ 4¢ per net ton mile			511.0460	1659.39
TOTAL GROSS PRICE				$8733.97
Deductions:				- - - -
NET PROCEEDS				$8733.97

Correct CJT
Checked DFR
Approved RCJ

Paid 11/22/55
Vo. No. 11/296
Check No. 1447

JCV

I certify that I am the lawful owner or authorized Representative of the Lawful Owner, of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amount as shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5—U_3O_8 ratio, for sums due to me on account of the ore deliveries described herein.

Arizona Continental Uranium

By: [signature]
Title

Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

COLORADO PLATEAU URANIUM ORE PROJECT

Under Joint Atomic Energy Commission

Receiving Station: Gloco

Location No.: 9.05 Lot No.: Various 120 Settlement Date: December 13, 1955

Bought of: Arizona Continental Uranium Inc. AEC Contract No.: P-2489

Address: 205 N. Camelback Road, Phoenix, Arizona

Type of Ore: Uraninite Contract No. AT (05-1)-402 Date Received: November Deliveries

Mining Claim: Hope #1 Mining District: Slocum Arizona Pile No.: 2

Lot No.	Wet Weight Tons	Moisture %	Dry Weight Tons	SETTLEMENT ASSAYS V_2O_5 %	$CaCO_3$ %	CONTENTS POUNDS V_2O_5	$CaCO_3$
105	65910	2.15	64494	0.27	0.5	174.13	322.47
107	64720	1.65	63423	0.29	0.5	169.73	317.12
108	65040	1.87	63827	0.26	0.4	165.95	255.31
109	64210	2.05	62893	0.33	0.4	207.55	251.57
111	65640	1.70	64523	0.27	0.3	174.22	193.53
112	63610	1.70	62492	0.28	0.5	176.73	312.01
113	60650	2.25	59352	0.22	0.1	129.69	59.35
114	61020	0.15	60904	0.26	0.5	157.05	302.02
117	61000	3.90	60630	0.25	0.3	151.64	181.89
120	62630	2.66	61161	0.18	0.4	110.09	244.64
121	63650	2.90	61801	0.17	0.0	104.06	-
123	64140	3.76	59529	0.30	0.4	171.26	
124	64890	2.92	62956	0.18	0.5	113.32	252.51
125	62720	1.72	61648	0.18	0.2	110.97	114.75
126	66930	2.20	65459	0.14	0.5	91.64	123.30
129	24710	2.60	24097	0.13	0.2	31.26	127.30
	1001860	2.35	978030	.22[illegible]	0.4	2237.01	3714.24

	Per Ton	Per Ton	Short Tons	Total Price
1369 .22[illegible] = 4.59330# at	3.26	16.04365	490.0150	7829.55
Overlapping allowance 1.59330# at	.50	2.29135	"	1118.51
Premium in excess of 4# per ton (4.59330# - 4#) = .59330# at	.75	.44793	"	218.72
TOTAL U3O8 PAYMENT		18.77353	490.0150	9166.78
Haulage allowance 34 miles @ 5¢ per net ton mile			500.0100	1673.62
TOTAL GROSS PRICE				$10724.38
Deductions				- - - -
NET PAYMENT				$10724.38

Correct CFT
Checked DPS
Approved KCY

Paid December 20, 1955
Voucher No. 12/[illegible]
Check No. [illegible]

I certify that I am the lawful Owner or the Representative of the Lawful Owner, of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amount as shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5 - U_3O_8 ratio, for items due to mistake in account of the ore deliveries described herein. Arizona Continental Uranium

By [illegible]
Title

Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

COLORADO PLATEAU URANIUM ORE PROJECT

[illegible] Atomic Energy Commission

Receiving Station: Elura — Grand Junction, Colorado — January 16, 19[illegible]

Identification No.: 9521 — Lot No.: Various 152 — Shipper Lot No.:

Business of: Arizona Continental Uranium, Inc. — A.E.C. License No.: R-2439

Address: 215 E. Camelback Road; Phoenix, Arizona

Shipper: Uranialta — Contract No.: AT (05-1)-402 — Date Received: December [illegible]

Mining Co.: Mesa 53 — Mine: Sierra Anita — Car No.: 8

Lot No.	Wet Weight Pounds	Moisture %	Dry Weight Pounds	Settlement Assays U3O8 %	Settlement Assays V2O5 %	Contents Pounds U3O8	Contents Pounds V2O5
149	69600	3.30	67301	0.17	0.8	114.02	134.60
151	70850	2.55	67871	0.18	0.5	122.17	339.35
155	66250	1.55	65223	0.17	0.9	110.88	587.01
156	66090	2.03	64786	0.15	0.9	103.58	582.71
157	67150	2.54	65388	0.14	1.2	91.54	784.66
142	64530	1.60	63618	0.20	0.5	127.23	318.09
143	66060	2.39	64550	0.18	0.7	116.19	451.85
152	33140	1.[illegible]	32437	0.20	0.5	64.87	162.19
	504140	2.53	491132	.173240	0.7	850.98	3424.08

Item	Per Lb.	Per Ton	Short Tons	Total Value
.173240% = 3.46480# at	3.5649	10.17360	245.4660	$2522.85
Development allowance 3.46480# at	.50 %	1.73240	"	425.14
TOTAL U3O8 PAYMENT		12.00600	245.4660	$2948.29
Haulage allowance 56 miles @ 6¢ per wet ton mile			252.0700	316.71
TOTAL GROSS PRICE				$3265.00
Mileage adjustment (detail attached)				7.28
Deductions:				- - - -
NET PROCEEDS				$3272.28

Correct CFX
Checked DPR
Approved WJ

Paid January 19, 19[illegible]
Voucher No. 1-23
Check No. [illegible]

I hereby certify that I am the lawful owner or authorized Representative of the Lawful Owner of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amounts shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5—U_3O_8 ratio, for same due to me on account of the ore delivered described herein.

Arizona Continental Uranium

By: _____
Title

Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

Form No. O-18-54 25M

C[illegible]ORADO PLATEAU URANIUM [illegible]RE PROJECT

American [illegible]elting and Refining Company, Ore Purchasing [illegible]nt For
United States Atomic Energy Commission

Receiving Station [illegible] Grand Junction, Colorado [illegible] 19[illegible]

Liquidation No. [illegible] Lot No. [illegible] Shippers Lot No. [illegible]

Bought of [illegible] A.E.C. License No. [illegible]

Address [illegible]

Type of Ore [illegible] Contract No. [illegible] Date Received [illegible]

Mining Claim [illegible] Mining District [illegible] Pile No. [illegible]

Lot No.	Wet Weight Pounds	H_2O	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	V_2O_5	$CaCO_3$	CONTENTS POUNDS U_3O_8	V_2O_5	$CaCO_3$
153-3	[illegible]	2.19	[illegible]	0.10	—	0.6	119.[illegible]	—	[illegible]
159-3	[illegible]	2.00	[illegible]	0.[illegible]	—	0.4	[illegible]	—	[illegible]
163-3	[illegible]	2.00	[illegible]	0.17	—	0.3	[illegible]	—	121.[illegible]
164-3	[illegible]	2.25	[illegible]	0.17	—	[illegible]	[illegible]	—	[illegible]
170-3	[illegible]	1.21	[illegible]	0.14	—	0.2	57.60	—	[illegible]
172-3	[illegible]	2.00	[illegible]	0.10	—	0.6	[illegible]	—	[illegible]
169-3	[illegible]	1.44	[illegible]	0.11	—	0.6	[illegible]	—	[illegible]
174-3	[illegible]	3.95	[illegible]	0.17	—	0.7	[illegible]	—	[illegible]
175-3	[illegible]	4.00	[illegible]	0.16	—	0.8	[illegible]	—	[illegible]
176-3	[illegible]	1.64	[illegible]	0.16	—	0.5	[illegible]	—	[illegible]
178-3	[illegible]	2.58	[illegible]	0.17	—	0.8	[illegible]	—	[illegible]
177-3	[illegible]	2.03	[illegible]	0.19	—	0.9	[illegible]	—	[illegible]
180-1	[illegible]	2.53	[illegible]	0.16	—	0.5	[illegible]	—	[illegible]
183-1	[illegible]	2.20	[illegible]	0.16	—	0.3	109.50	—	[illegible]
184-1	[illegible]	0.68	[illegible]	0.14	—	0.1	[illegible]	—	[illegible]
187-1	[illegible]	[illegible]	[illegible]	0.14	—	[illegible]	[illegible]	—	[illegible]
	[illegible]	2.31	[illegible]	0.16[illegible]	—	0.5	[illegible]	—	[illegible]

[illegible] [illegible] [illegible] [illegible]

0.16466[illegible] @ [illegible] [illegible] [illegible] [illegible] [illegible]

Development allowance [illegible] [illegible] [illegible] [illegible]

TOTAL GROSS PAYMENT [illegible] [illegible] [illegible]

Haulage allowance [illegible] miles @ [illegible] per wet ton mile [illegible] [illegible]

TOTAL GROSS PRICE [illegible]

Deductions [illegible]

NET PAYMENT [illegible]

Correct [illegible] Paid [illegible]
Checked [illegible] Voucher No. [illegible]
Approved [illegible] Check No. [illegible]

I certify that I am the lawful owner or authorized Representative of the Lawful Owner, of the Ore described in the Settlement Sheet and have legal right to deliver the same to the Commission.

I certify that I hold the A. E. C. Source Material License numbered above.

I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.

I will accept the amount as shown above as "Total Gross Price" in full settlement, except for final quarterly adjustment for average V_2O_5—U_3O_8 ratio, for sums due to me on account of the ore deliveries described herein.

[illegible]

By [illegible]
Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.
All rates paid are based on U. S. Atomic Energy Commission Published Schedules.

Form No. O-4 (Rev) 5M-1-56 W&Y

WESTERN URANIUM PROJECT
LUCIUS PITKIN, Inc.

Ore Purchasing Agent for United States Atomic Energy Commission

Receiving Station Globe — Grand Junction, Colorado 3/22/56 19__

Liquidation No. 170 — Lot No. Var 6 — Shippers Lot No.

Bought of Arizona Continental Uranium, Inc. — A.E.C. Licence No. R-2450

Address 205 East Camelback Rd Phoenix, Arizona

Type of Ore Uranium Bearing — Contract No. AT(55-1)-472 — Date Received Feb 6th.

Mining Claim Home #3 — Mining District Sierra Ancha — File No. 8

Lot No.	Wet Weight Pounds	H_2O	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	V_2O_5	$CaCO_3$	Cu	CONTENTS POUNDS U_3O_8	V_2O_5	$CaCO_3$	Cu
2	50250	4.09	56778	0.14		0.5		79.49		284.	
3	61250	4.70	58350	0.17		0.4		99.25		234.	
4	62170	4.09	59629	0.17		0.7		101.37		417.	
5	64940	4.20	61255	0.15		0.6		91.88		368.	
6	63600	1.56	62366	0.15		0.4		93.55		249.	
Var 6	302170	3.60	291386	0.156007		0.5		463.52		1552.	

	Per Lb.	Per Ton	Short Tons	Total Value
U3O8				
0.156007% - 3.12014 at	2.62014	5.17520	149.1960	1219.73
Development allowance 3.120147 at	.50	1.56007		233.71
TOTAL U3O8 PAYMENT		9.73527	149.1960	1453.44
Haulage allowance 54 miles @ 60¢ per net ton mile			155.0450	500.49
TOTAL				1954.93
V2O5				- - - -
TOTAL GROSS PRICE				1954.93
Deductions:				- - - -
				1954.93
NET PAYMENT				1954.93

Correct DM
Checked VT
Approved MER

Paid March 23, 1956
Voucher No. 3-378
Check No. 412

I certify that I am the lawful owner or authorized Representative of the Lawful Owner, of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.
I certify that I hold A. E. C. Source Material License numbered above.
I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.
I will accept the amount as shown above as "Total Gross Price" in full settlement for sums due to me on account of the ore deliveries described herein.

Arizona Continental Uranium, Inc.
Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.

All rates paid are based on U. S. Atomic Energy Commission Published Schedules unless otherwise provided in contract applicable to ore delivery described herein.

By _____

Title _____

Form [illegible] (Rev) 1M-1-56 W&Y

WESTERN URANIUM PROJECT
LUCIUS PITKIN, Inc.

Ore Purchasing Agent for United States Atomic Energy Commission

Receiving Station Globe Grand Junction, Colorado April 20, 19 56

Liquidation No. 430 Lot No. Var. 24 Shippers Lot No.

Bought of Arizona Continental Uranium, Inc. A.E.C. License No. P-2499

Address 205 East Camelback Road; Phoenix, Arizona

Type of Ore Uraninite Contract No. AT(05-1)-672 Date Received March Del.

Mining Claim Hope #3 Mining District Sierra Ancha Pile No. 8

Lot No.	Wet Weight Pounds	H_2O	Dry Weight Pounds	SETTLEMENT ASSAYS U_3O_8	V_2O_5	$CaCO_3$	Cu	CONTENTS POUNDS U_3O_8	V_2O_5	$CaCO_3$	Cu
8	63,020	2.50	61,442	0.15	-	0.3	-	92.16	-	184.	
13	60,390	1.95	59,210	0.15	-	0.7	-	88.82	-	414.	
15	63,010	1.72	61,928	0.20	-	1.1	-	123.86	-	681.	
16	62,840	1.75	61,739	0.16	-	0.7	-	98.78	-	432.	
20	65,760	1.65	64,674	0.16	-	0.5	-	103.48	-	323.	
24	32,490	1.20	32,100	0.19	-	0.6	-	60.99	-	193.	
Var 24	347,510	1.85	341,093	0.166550	-	0.7		568.09		2227.	

U_3O_8	Per Lb.	Per Ton	Short Tons	Total Value
0.166550 % = 3.33100 # at	2.83100	9.43006	170.5465	1,608.26
Development allowance 3.33100 # at	.50	1.66550		284.05
TOTAL U_3O_8 PAYMENT		11.09556	170.5465	1,892.31
Haulage allowance 54 miles @ 6¢ per wet ton mile			173.7550	562.97
TOTAL GROSS PRICE				2,455.28
Deductions:				- - - - -
NET PROCEEDS				2,455.28

Correct RLP Paid April 24, 1956
Checked WSJ Voucher No. 4-325
Approved HER Check No. 973

mw

I certify that I am the lawful owner or authorized Representative of the Lawful Owner, of the Ore described in this Settlement Sheet and have legal right to deliver the same to the Commission.
I certify that I hold A. E. C. Source Material License numbered above.
I hereby transfer to the Commission, effective as of the date of delivery of the ore, all my right, title and interest in and to said ore.
I will accept the amount as shown above as "Total Gross Price" in full settlement for sums due to me on account of the ore deliveries described herein.

Arizona Continental Uranium, Inc.
Seller or Agent

Buyers assays govern if Seller fails to submit his assays prior to acceptance of payment.

Rates paid are based on U. S. Atomic Energy Commission Published Schedules unless otherwise provided in contract applicable to ore delivery described herein.

By

Title

WESTERN MINES DEVELOPMENT CO., INC.

4401 West North Avenue

Chicago 39, Illinois

RECEIVED

JUN - 1 1956

May 7, 1956

Arizona Continental Uranium, Inc.
520 South 9th Street
Grand Junction, Colorado

Gentlemen:

The undersigned, Gerald Sidwitz doing business as Western Mines Development Co., is the owner of the leasehold interest in these sixteen unpatented mining claims in Sierra Ancha Mining District, Gila County, Arizona, known as Zone 1-16. You have been operating these claims on behalf of the owner.

You are hereby authorized and directed on behalf of the undersigned to execute all documents and to do all acts necessary or desirable to secure a DMEA loan with respect to the above claims in such amount and on such terms as you see fit.

Sincerely,

Gerald Sidwitz, doing
business as Western Mines
Development Co.

RECEIVED
JUN - 1 1956

MINING LEASE

DATE: July 27, 1954.

LESSORS: Maurice Sharp, Charlie Nichols and Carrel Wilbanks, all of Gila County, Arizona.

LESSEE: Vance Thornburg, Agent, of Phoenix, Maricopa County, Arizona.

In consideration of the rents, royalties, covenants and agreements hereinafter set forth, lessors have leased, let and demised, and do by these presents hereby lease, let and demise unto lessee the following-described unpatented lode mining claims located in the Sierra Ancha mining district, Gila County, Arizona, and all recorded in the office of the County Recorder of Gila County, Arizona, in the books and at the pages herein after set forth:

	Docket	Page
Hope #1	6	343
Hope #2	6	344
Hope #3	6	345
Hope #4	6	346
Hope #5	6	347
Hope #6	6	348
Hope #7	6	349
Hope #8	6	350
Hope #9	6	351
Hope #10	6	352
Hope #11	6	353
Hope #12	6	354
Hope #13	6	355
Hope #14	6	356
Hope #15	6	357
Hope #16	6	358

TO HAVE AND TO HOLD unto lessee for a term of ten (10) years from this 27th day of July, 1954 to and including the 26th day of July, 1964, unless sooner forfeited or determined through a violation of any of the covenants herein required to be performed and kept by lessee, but with the specific understanding as hereinafter set forth that this lease may be renewed for successive additional ten-year periods on the same terms and conditions hereinafter set forth, if the covenants of this lease

shall be fully performed by the said lessee.

Lessors do hereby for themselves, their heirs, executors and administrators, warrant that they are in actual possession of said mining claims; that they have a good possessory title thereto, and they hereby bind themselves, their heirs, executors and administrators, to warrant and defend their possession and possessor title to said property, and all and singular the said mining claims unto the said lessee, his heirs and assigns, against every person whomsoever lawfully claiming, or to claim the same, or the possession thereof, or any part thereof.

Lessee has paid to lessors the sum of $15,000, in cash, the receipt whereof by lessors is hereby confessed and acknowledged, which said sum of $15,000 is an advance royalty payment and shall at all times hereafter be deemed and held to be advance royalty. In addition to the said $15,000 advance royalty payment, lessee has paid to lessors the sum of $1,500 for labor performed by the said lessors on the said property and for the benefit of the lessee.

Until the royalties otherwise payable hereunder, as hereinafter provided, shall equal the sum of $15,000, no royalty shall be paid by lessee hereunder unto lessors, but the aforesaid sum of $15,000 as advance royalties shall be credited against the same with the monthly payment of royalty to be resumed immediately after royalties otherwise payable hereunder shall equal the said sum of $15,000.

Lessee will immediately take possession of the said mining claims and commence work thereon in a manner necessary to good and economic mining so as to remove therefrom the greatest amount of ore possible, with due regard to the development and preservation of said claims as workable mining property. Lessee will install underground timbering whenever

and wherever necessary, if good mining practice under the circumstances shall indicate that such timber is required. Lessee shall permit lessors, or their agent or agents, at any reasonable time to enter in and upon the premises for the purpose of inspecting the same; provided, however, that lessors will indemnify and save lessee harmless from any injuries received by the said lessors or their agent in the course of any such inspection.

V.T. M.S. Lessee agrees to spend at least $2,000 per month upon ~~or in connection with~~ the said property during the term of this lease, or any renewal hereof.

Lessee will promptly pay and discharge all claims and accounts incurred by him, and shall indemnify and save lessors harmless of and from all actions and causes of action of any nature whatsoever which may or might arise out of the mining operations carried on by lessee, and lessors shall in no event be liable to lessee or any of lessee's employees for any injuries which may be sustained by lessee or any of lessee's employees in carrying out any mining operations hereunder.

If lessee shall employ three or more persons in and about the conduct of its mining operations on said property; lessee shall forthwith procure workmen's compensation and maintain the same throughout the term of this agreement, furnishing lessors with due proof thereof, provided that upon lessee's failure to comply with the workmen's compensation law of the State of Arizona, this lease may at the option of lessors be forfeited.

All taxes assessed against the aforesaid mining claims and against ores mined and shipped hereunder shall be promptly paid by lessee. Lessee shall post notices on each of the claims herein described showing that such claims are being operated by lessee and that all creditors must look to

lessee for the payment of the accounts incurred after lessee shall commence mining operations, and lessee shall hold lessors harmless from any and all claims, demands, debts or dues arising or growing out of the exploration development and operation of said claims by lessee.

Lessee shall perform on each of the aforesaid claims the assessment work required by law and shall file notice of performance of the same with the County Recorder of Gila County, Arizona, on or before the first day of May of each year during the term of this lease. Lessee shall continuously and diligently mine the said claims, unless prevented therefrom by strikes, federal or state orders or restrictions, acts of God, or any other conditions over which the lessee shall have no control.

Lessee shall have the right at any time to abandon this lease in the event that commercial ores cannot, in the opinion of lessee, be produced on the claims hereinabove referred to, but, upon lessee determining to abandon the same, he shall give to lessors written notice at lessors' address as herein stated, by registered mail, not less than ten days prior to any such abandonment. In the event of the failure of this lease or its forfeiture or termination as herein provided, lessee shall have a reasonable time within which to remove from said mining claims any and all equipment, or machinery. ~~buildings or mine and surface improvements, whether affixed to the realty or otherwise, excluding, however, timber or underground supports.~~ M.S. V.T. (C.L.)

Subject to the application thereto of advance royalties hereinabove referred to, lessee shall pay unto lessors as rent hereunder royalty equal to 10% of lessee's gross receipts from mining operations conducted on the leased premises: provided, however, that the term 'gross receipts' as used herein shall

include all receipts from mills and smelters for ores shipped from the leased premises and shall exclude all development allowances and haulage allowances. Lessee will furnish to lessors a copy of all settlement sheets showing all ores shipped and the amounts received therefrom and settlement sheets (together with royalties as the same shall be due), which shall be mailed by lessee to lessors not later than thirty days after mill settlement, with such mailing to be at the address specified herein or at such other address as lessors may hereafter furnish lessee.

Upon the violation by lessee of any of the covenants herein provided, this lease may be terminated by lessors by giving lessee not less than thirty days written notice at lessee's address as hereinafter stated, with such notice to be by registered mail. Any such notice shall advise lessee of his failure to perform hereunder and shall set out the facts as to any default or breach of this lease, whereupon, on the failure or refusal of lessee to cure or correct such default within thirty days from the receipt of such notice, this lease shall be at an end, and lessee shall surrender and deliver up possession of the said mining claims and relinquish all of his rights hereunder.

Lessee plans to do exploration work for the discovery of uranium and other ores, and he shall have the right to make application for an exploration loan from the United States of America or from any agency or instrumentality thereof, for the purpose of exploring for uranium and any other ores upon the leased premises. In case of any such application, lessors will subordinate their rights to the returns from ores discovered by such exploration work done with funds furnished by the United States of America or any agency or instrumentality thereof, to the extent that the first 5% of such returns may be applied

to the repayment of any such loan; provided, however, that the provisions of this paragraph shall apply only to ores discovered as a result of work done by the use of such loan funds, and in no event for a period in excess of ten years, and provided further that the application of any such percentage to the repayment of any such loan shall not result in a reduction of a percentage royalty payable to lessors hereunder. Lessors shall be furnished with copies of all documents furnished to any lending agency which may require the signature or consent of lessors, or which may result of the imposition of a lien on lessors' property.

All notices hereunder or in connection herewith shall be deemed served upon the lessors or the lessee when mailed in an envelope addressed to the lessors or lessee, enclosed in a sealed envelope on which the postage is prepaid, one day after having been mailed in the United States mail and addressed to the lessors at Box 612 Globe, Arizona, and the lessee at 3501A North Central Avenue, Phoenix, Arizona.

All the terms and conditions of this lease shall extend to and bind the heirs, executors, administrators, successors and assigns of the parties hereto.

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

Maurice Sharp
Maurice Sharp

Charlie Nichols
Charlie Nichols

Carrel Wilbanks
Carrel Wilbanks

LESSORS

Vance Thornburg
Vance Thornburg, Lessee

LESSEE

M.S.
V.T.

STATE OF ARIZONA
County of Gila } ss

On this the 27th day of July, 1954, before me, the undersigned Notary Public, personally appeared Maurice Sharp, Charlie Nichols and Carrel Wilbanks, known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same for the purpose therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires Nov. 11, 1957.

Louise C. Rothengatter
Notary Public

STATE OF ARIZONA
County of Gila } ss

On this the 27th day of July, 1954, before me, the undersigned Notary Public, personally appeared Vance Thornburg, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purpose therein contained.

IN WITNESS WHEREOF I hereunto set my hand and official seal.

My commission expires Nov. 11, 1957.

Louise C. Rothengatter
Notary Public

ASSIGNMENT

RECEIVED
JUN - 1 1956

KNOW ALL MEN BY THESE PRESENTS:

That VANCE THORNBURG, for and in consideration of One Dollar ($1.00) and other good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby by these presents sell, assign, transfer, convey and set over unto GERALD GIDWITZ, doing business as WESTERN MINES DEVELOPMENT CO., all of the right, title and interest of any and every kind whatsoever which the said Vance Thornburg might or could have under and by virtue of that certain Mining Lease agreement dated July 27, 1954, wherein Maurice Sharp, Charlie Nichols and Carrel Wilbanks are the Lessors, and Vance Thornburg, Agent, is the Lessee.

The said Vance Thornburg does hereby acknowledge that at all times in the negotiation and execution of the said Mining Lease he was acting as the agent of Gerald Gidwitz, doing business as Western Mines Development Co., and that the principal and true owner and true Lessee was at all times Gerald Gidwitz, doing business as Western Mines Development Co.

The said Vance Thornburg by these presents does hereby remise, release, grant and quit-claim unto Gerald Gidwitz, doing business as Western Mines Development Co., all rights and interests under and by virtue of the aforesaid Mining Lease, which is now of record in the office of the County Recorder of Gila County, Arizona, in Docket 19 of Official Records, Page 14, Records of Gila County, Arizona, and in and to all of the mining claims therein described.

IN WITNESS WHEREOF, the said Vance Thornburg has hereunto set his hand this 22nd day of November, 1954.

Vance Thornburg

This assignment recorded 11/26/54 in Docket 21 of Official Records, Page 99.

STATE OF ARIZONA)
) ss.
County of Maricopa)

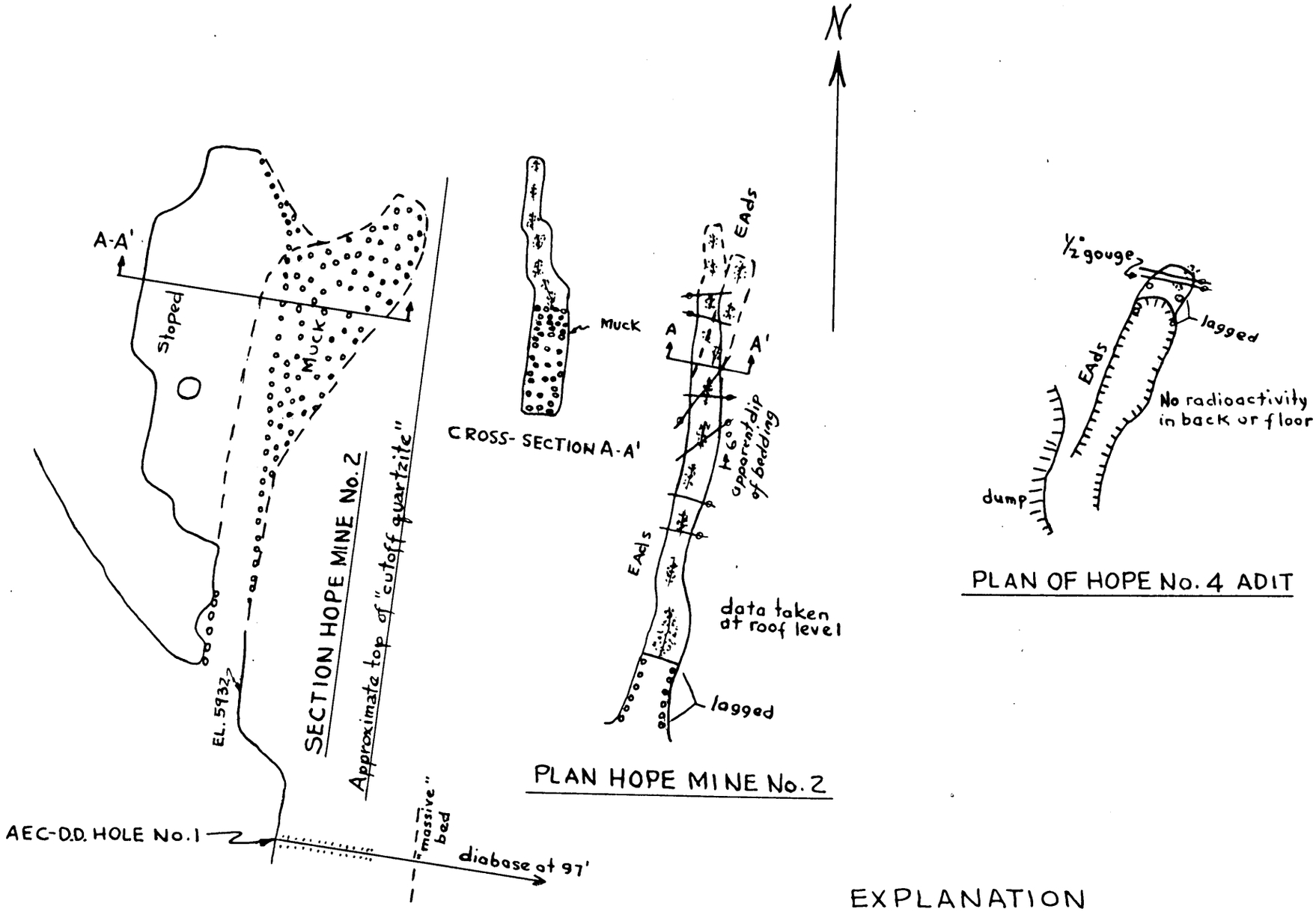
On this the 22nd day of November, 1954, before me, the undersigned Notary Public, personally appeared VANCE THORNBURG, known to me to be the person whose name is subscribed to the foregoing Assignment, and acknowledged that he executed the same for the purpose and consideration therein expressed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My commission expires

(SEAL) August 7, 1958.

Lelia G. Long
Notary Public



EXPLANATION

EAds — PRE-CAMBRIAN DRIPPING SPRING QUARTZITE (SILTSTONE AND METAMORPHIC EQUIVALENT).

FRACTURE - VERTICAL

STIPPLED - ZONE OF HIGHEST RADIOACTIVITY AND WITHIN ASSAY LIMITS MINABLE ORE.

DMEA 4323

SCALE 1" = 20'

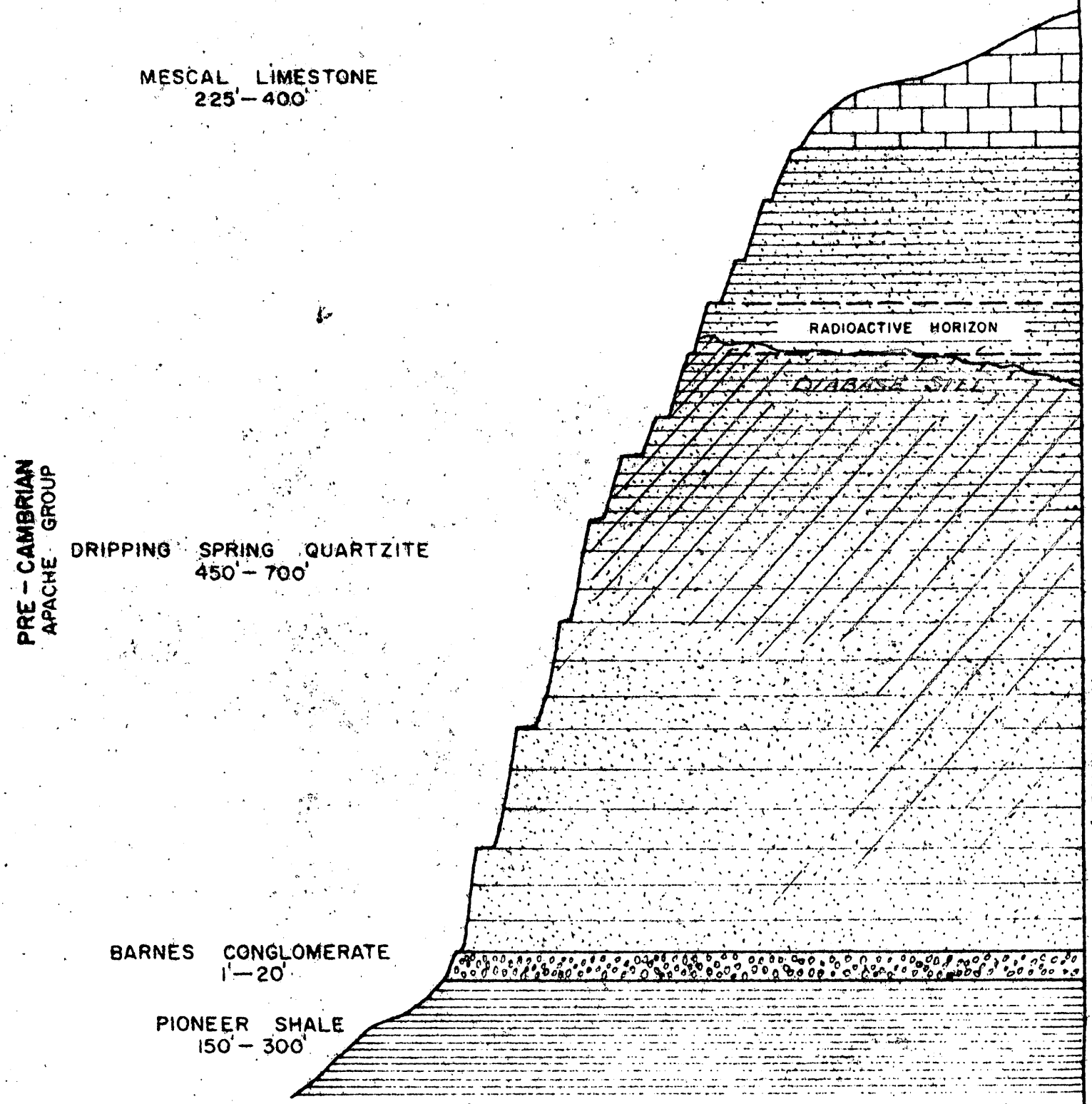
FROM MAPS BY R. J. Schwartz, AEC., 1956

FIGURE 5. — GEOLOGY OF THE HOPE Nos. 2 & 4 MINES, WESTERN MINES DEVELOPMENT COMPANY (HOPE GROUP OF CLAIMS) GILA CO., ARIZONA

RECEIVED
OCT - 3 1956

PLATE II

SIERRA ANCHA AREA



SCALE 1" = 100'

GENERALIZED COLUMNAR SECTION AND TOPOGRAPHY OF A PORTION OF THE APACHE GROUP.

4-56

RECEIVED
JUN - 1 1956

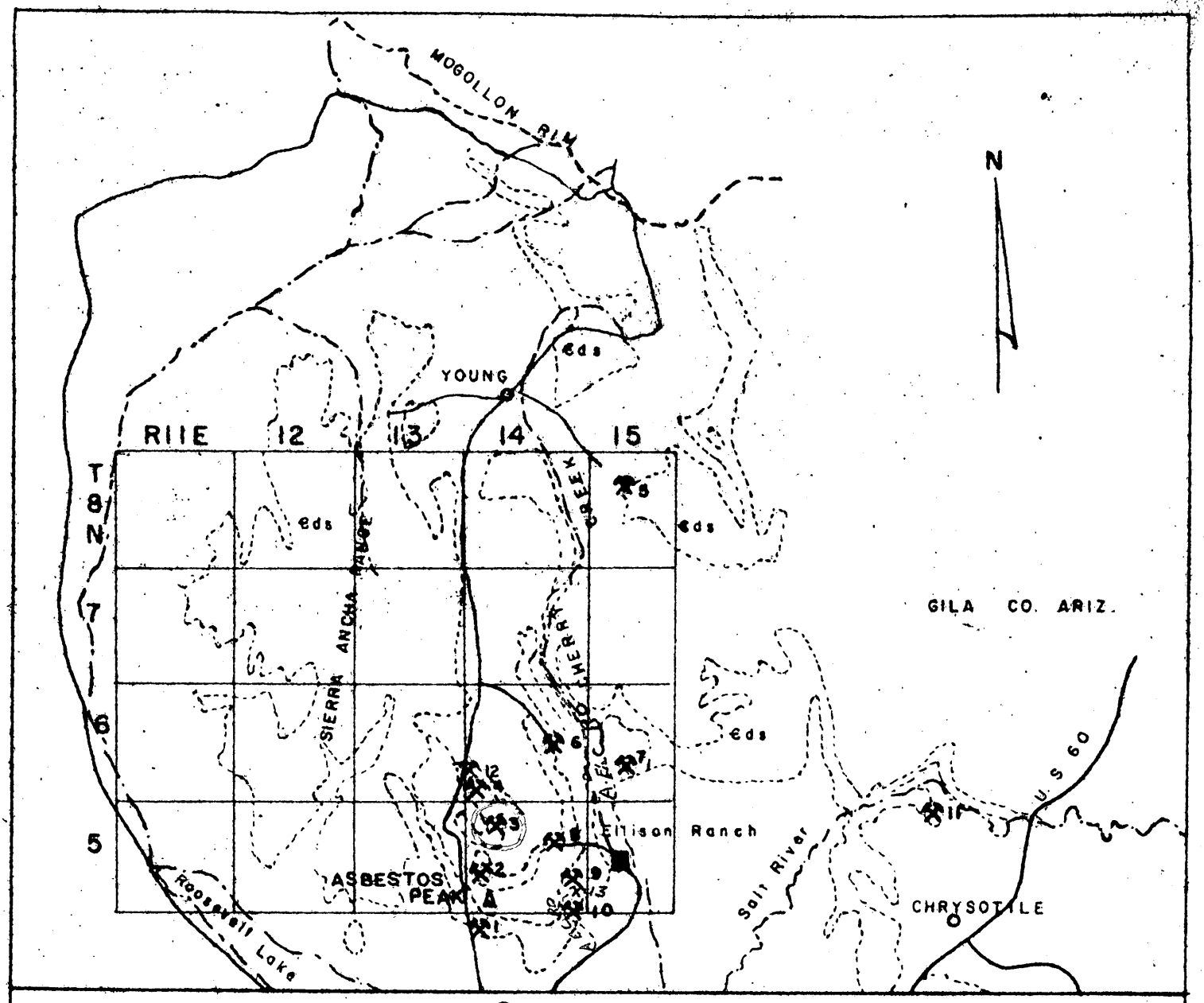


PLATE III

MAP OF

SIERRA ANCHA MINING DISTRICT

SHOWING LOCATION OF URANIUM PROPERTIES

SCALE

10 0 Miles 10

LEGEND

GEOLOGY

Ꞓds

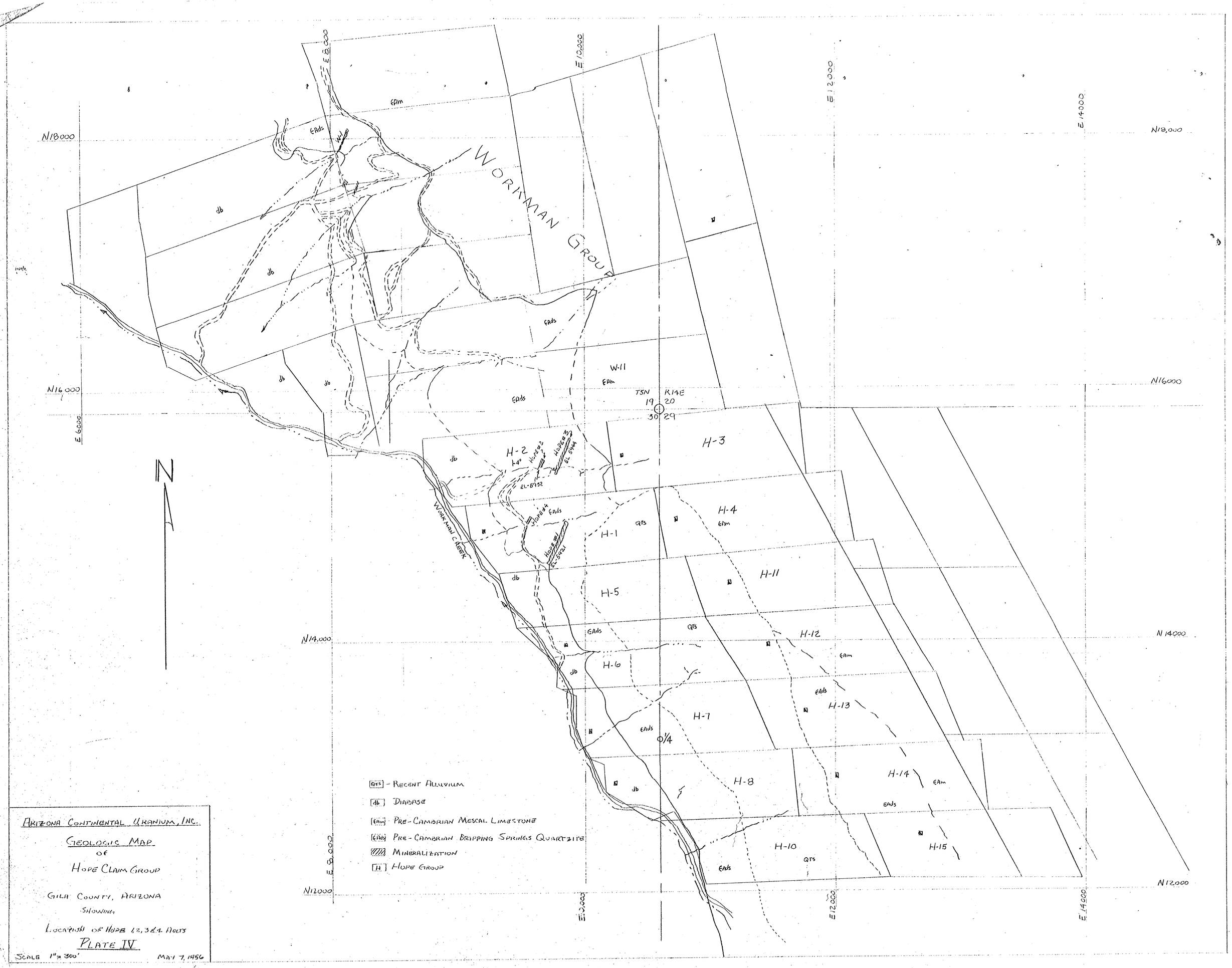
PRE-CAMBRIAN DRIPPING SPRING QUARTZITE

URANIUM PROPERTIES

1. RED BLUFF
2. CLINE
3. HOPE
4. WORKMAN
5. WILSON CREEK
6. BLACK BRUSH, DMEA GRANTED
7. APRIL FOOL
8. GRINDSTONE
9. MIAMI COPPER
10. SUE, DMEA GRANTED
11. JACOBSON
12. JOE GROUPS
13. DEEP CREEK

4-56

RECEIVED
JUN - 1 1956



ARIZONA CONTINENTAL URANIUM, INC.

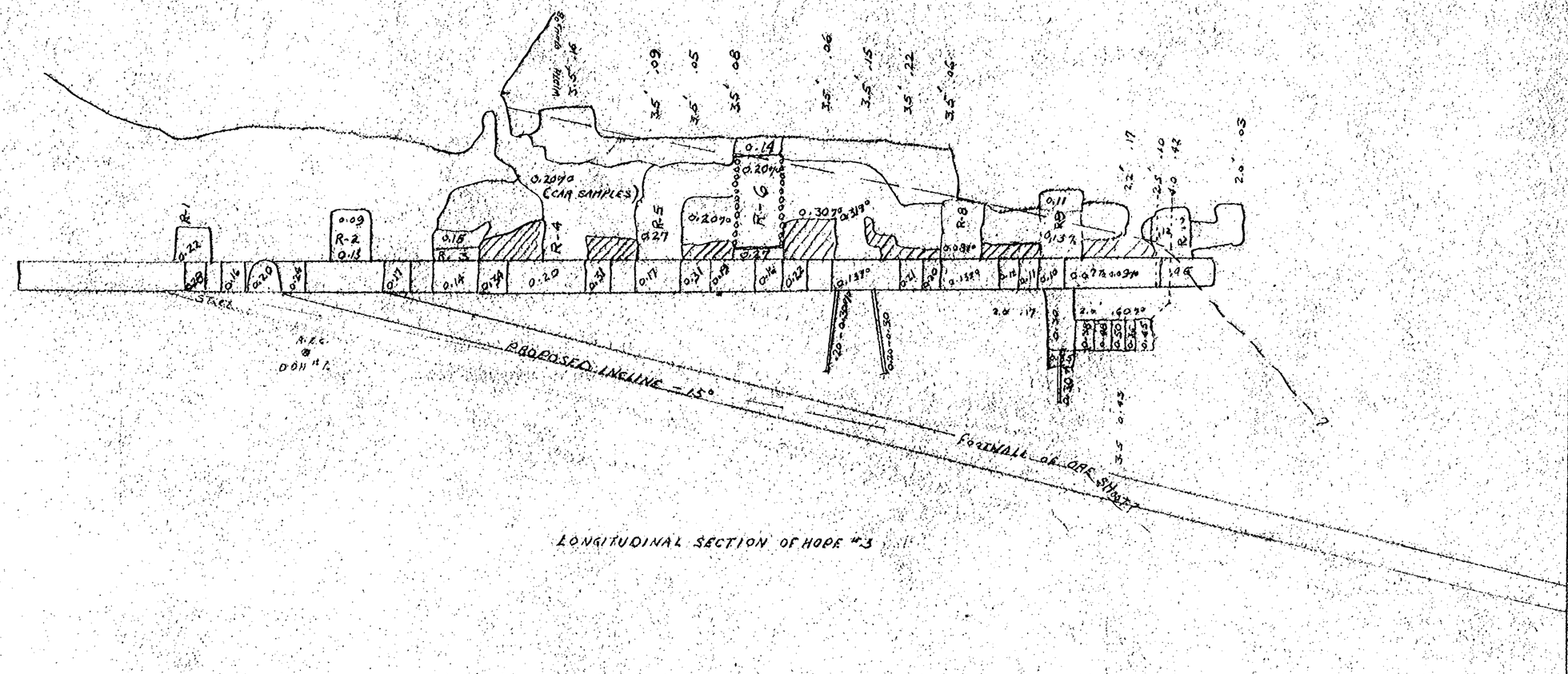
GEOLOGIC MAP
OF
HOPE CLAIM GROUP

GILA COUNTY, ARIZONA
SHOWING
LOCATION OF HOPE 12,324 HOLES

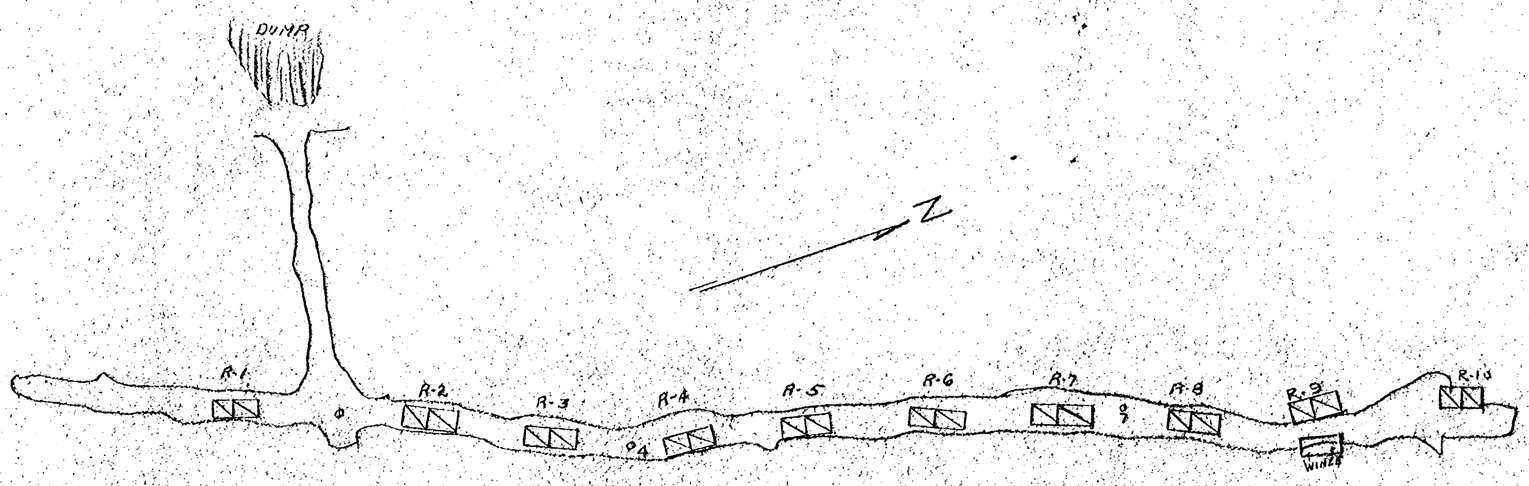
PLATE IV

SCALE 1" = 300'

MAY 7, 1956



LONGITUDINAL SECTION OF HOPE #3



PLAN OF HOPE #3

ARIZONA CONTINENTAL URANIUM INC.

PLATE VII

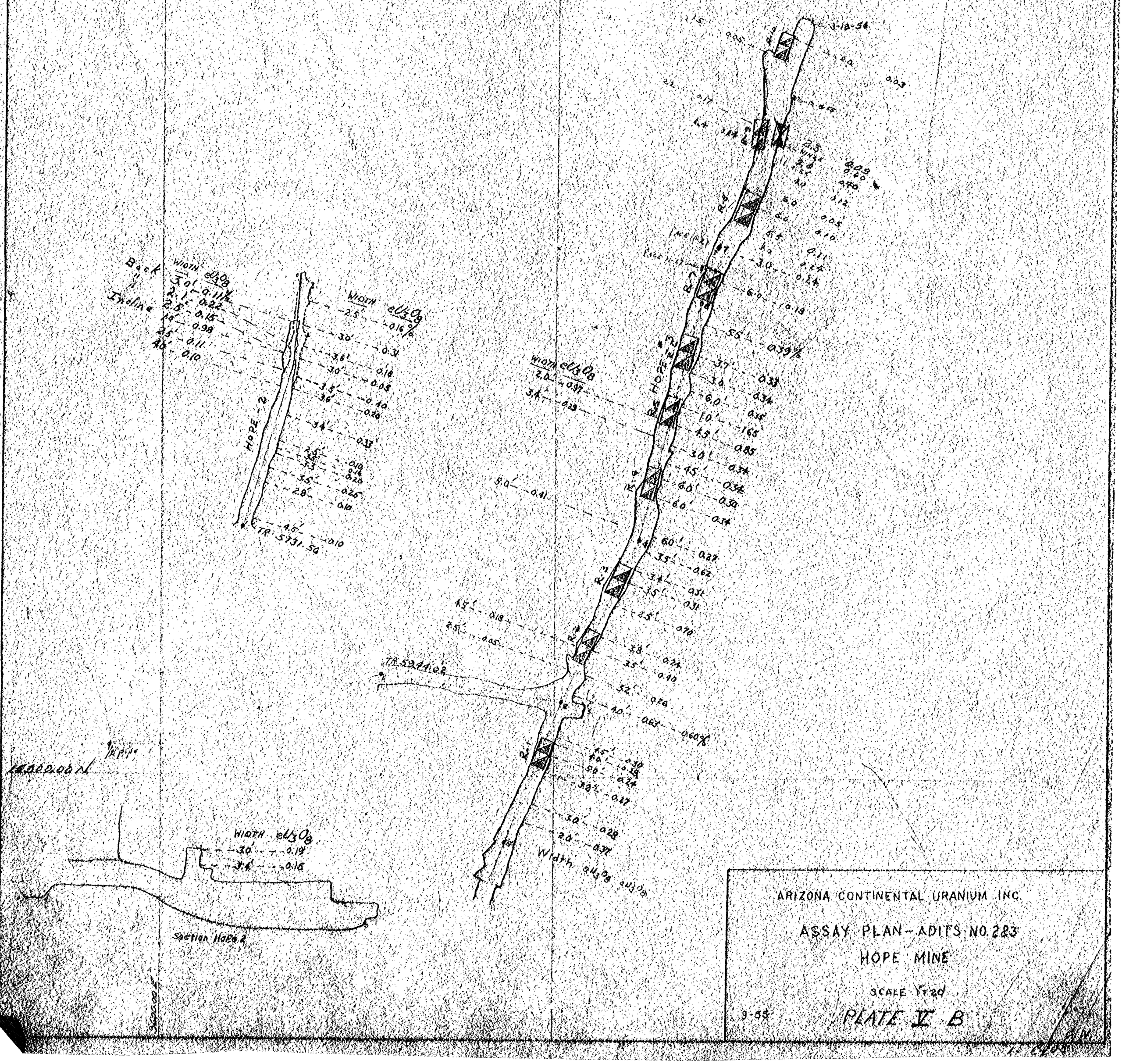
HOPE NO 3 MINE

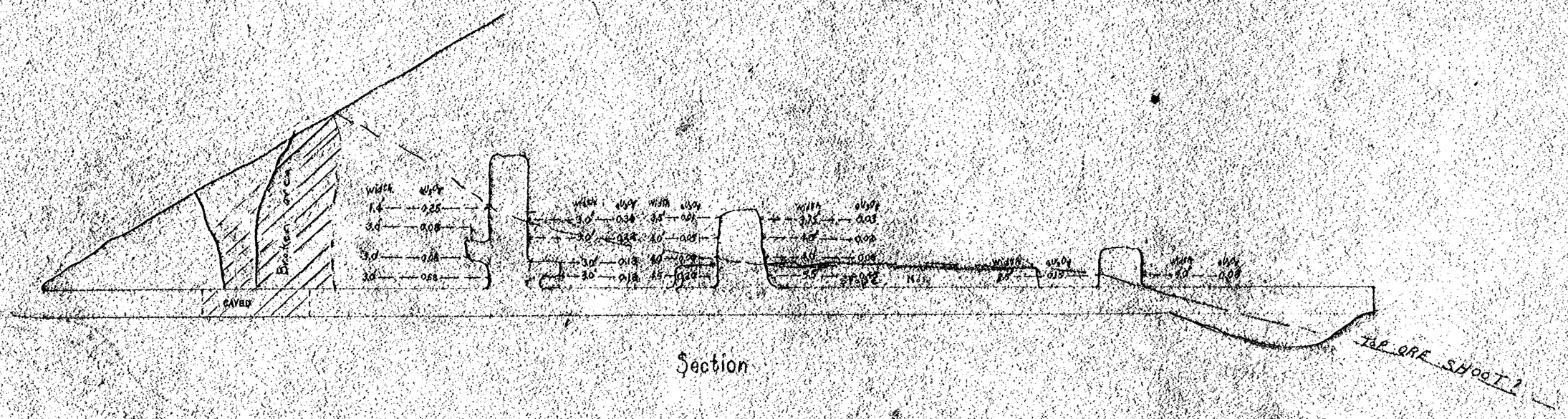
PLAN & SECTION

SHOWING PROPOSED INCLINE

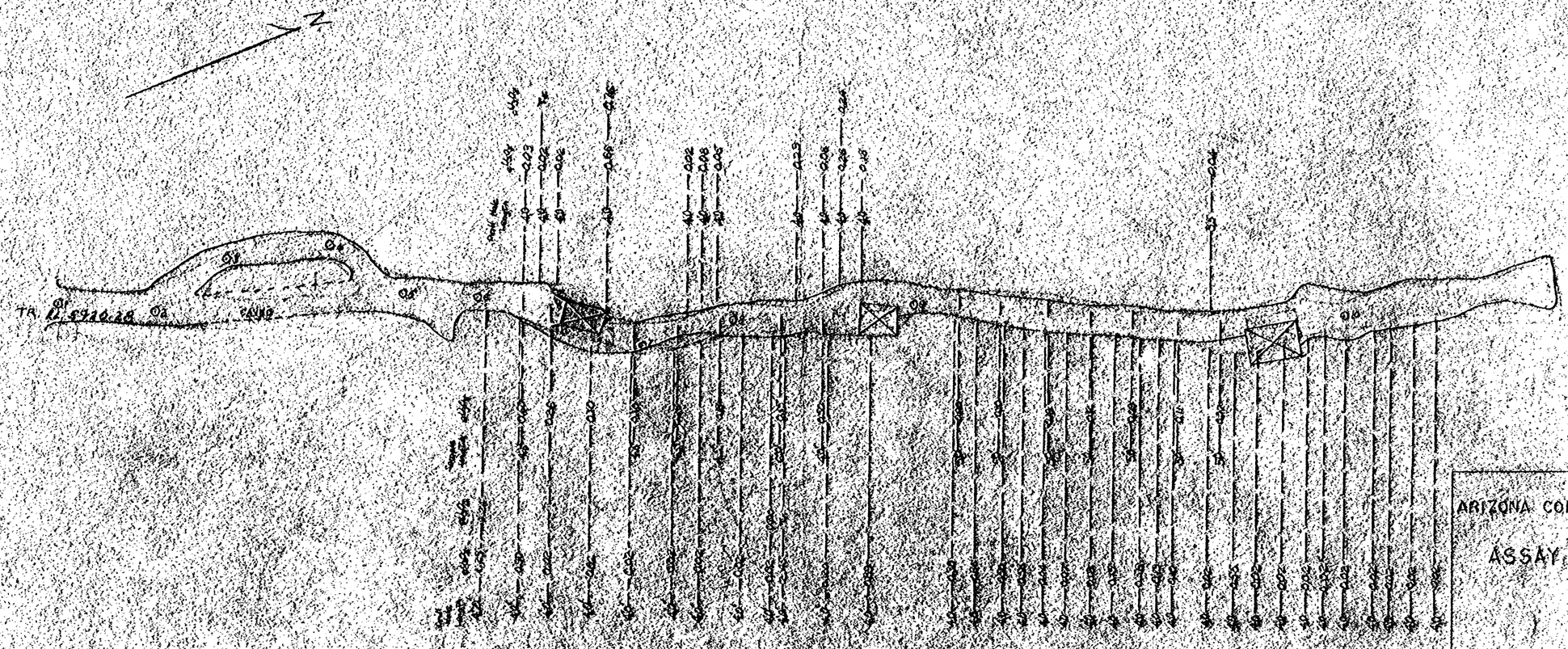
SCALE 1" = 20'

R.W. A-56


Back Incline
HOPE - 2
TR 5731.56
TR 5941.02
Section Hope 2
Width eU3O8
ARIZONA CONTINENTAL URANIUM INC.
ASSAY PLAN - ADITS NO. 2&3
HOPE MINE
SCALE 1" = 20'
9-55
PLATE V B



Section



ARIZONA CONTINENTAL URANIUM INC.

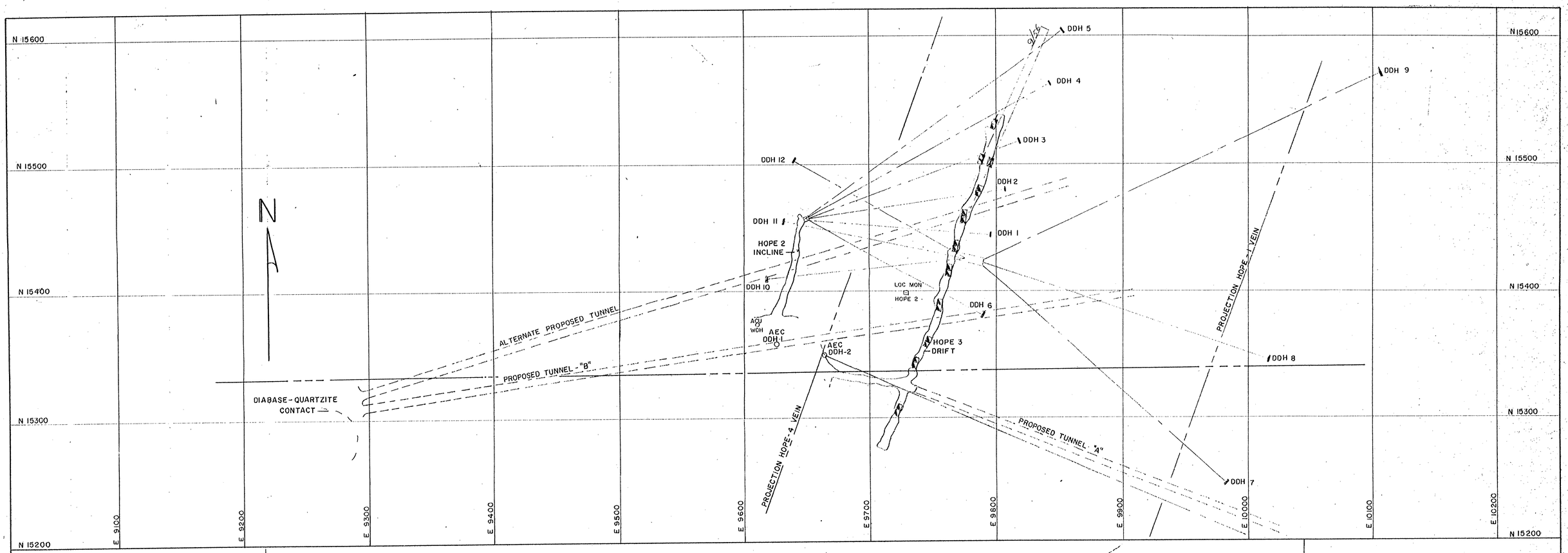
ASSAY PLAN-ADIT NO. 1

HOPE MINE

Showing Vein

SCALE 1" = 20'

PLATE II A.

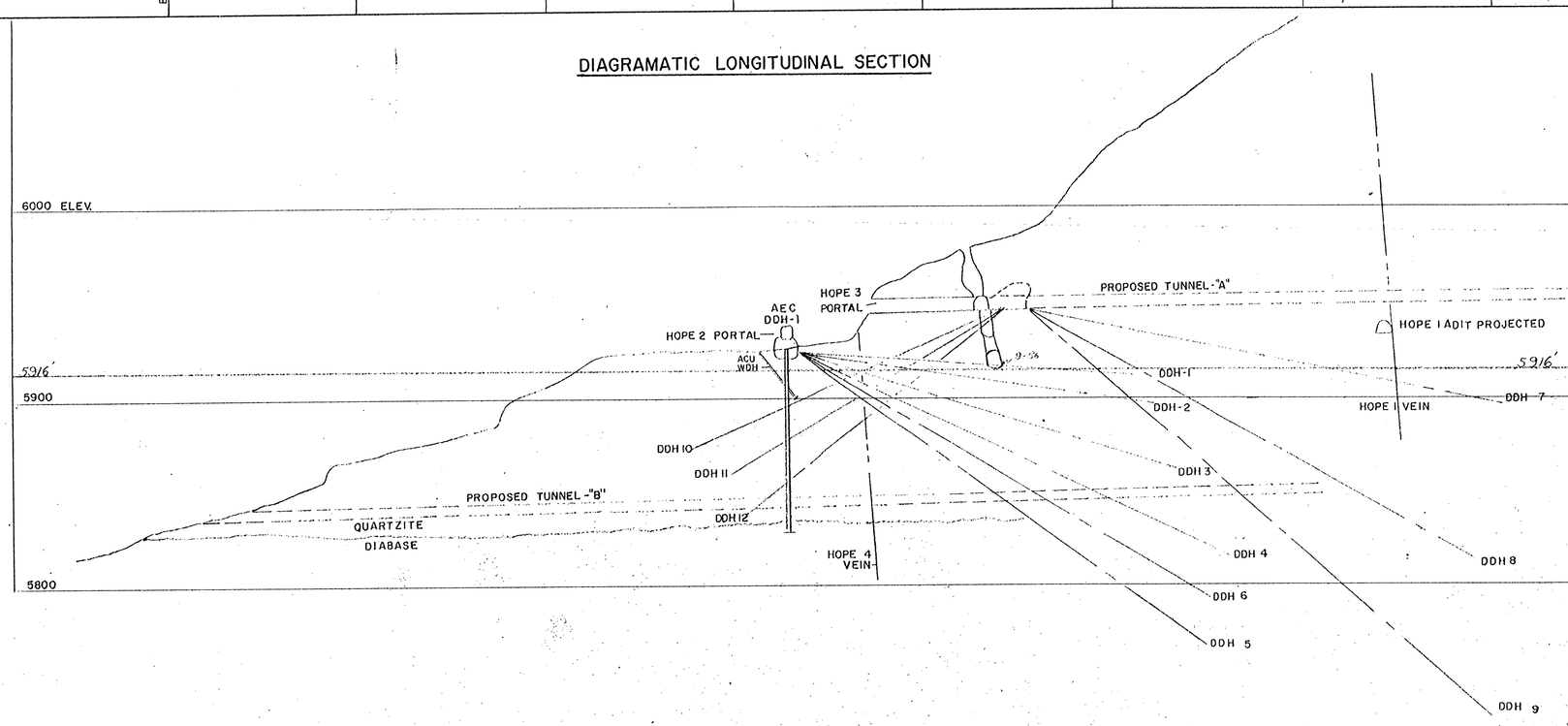


LEGEND

- SECTION LINE
- PROPOSED WORKINGS
- PROPOSED DIAMOND DRILLING
- PROJECTION OF VEIN
- RAISE
- WINZE
- DRILL HOLE COLLAR

DDH	BEARING	VERT ∠	HOR DIST	TRUE DIST
1	S 85 E	-3°	145	146
2	N 82 E	-7°	160	161
3	N 70 E	-15°	180	186
4	N 61 E	-25°	220	243
5	N 54 E	-35°	250	305
6	S 62 E	-30°	160	185
7	S 48 E	-12°	260	266
8	S 72 E	-30°	240	277
9	N 64 E	-42°	350	471
10	S 85 W	-23°	160	174
11	N 78 W	-30°	150	173
12	N 60 W	-38°	160	198

DIAGRAMATIC LONGITUDINAL SECTION



ARIZONA CONTINENTAL URANIUM

PROPOSED DRILLING & DEVELOPMENT

HOPE NO. 2 CLAIM

SIERRA ANCHA MINING DISTRICT

GILA COUNTY, ARIZONA

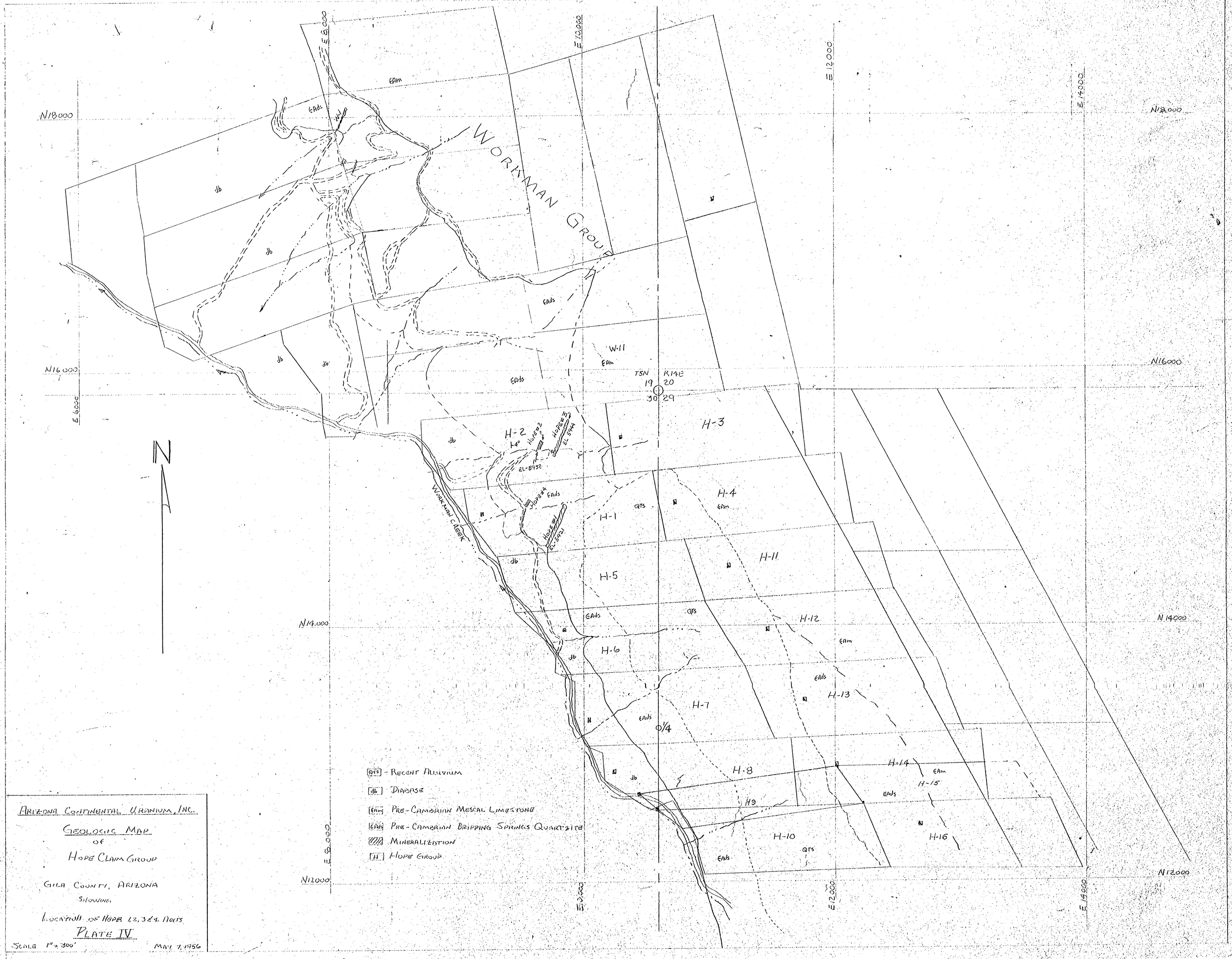
PLATE VI

SCALE 1" = 40'

DRAWN J.W.

DATE MAY 7, 1956

TRACED L.A.B.



ARIZONA CONTINENTAL URANIUM, INC.

GEOLOGIC MAP
OF
HOPE CLAIM GROUP

GILA COUNTY, ARIZONA

SHOWING
LOCATION OF HOPE 1, 2, 3 & 4 ADITS

PLATE IV

SCALE 1" = 300'

MAY 7, 1956

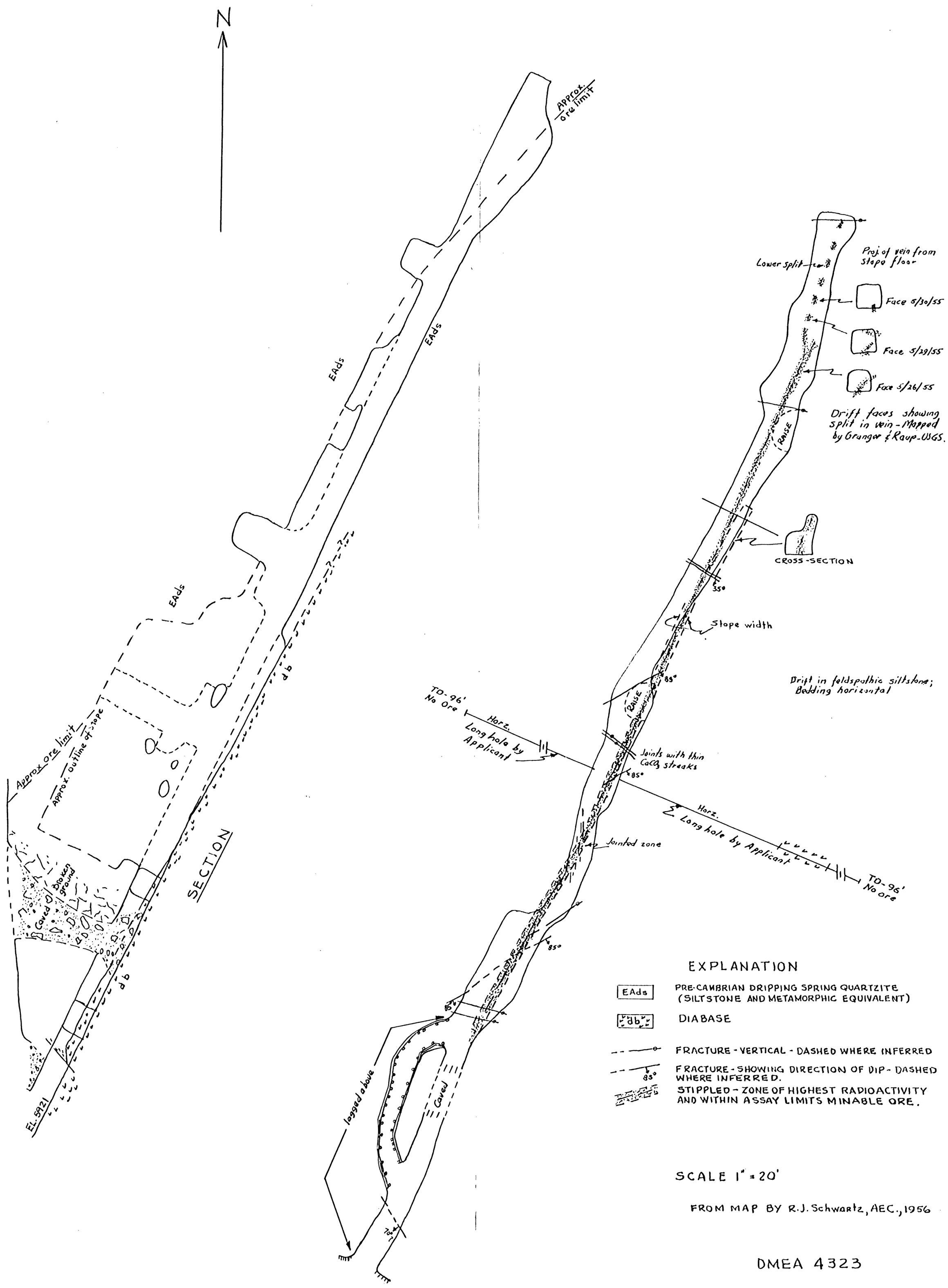


FIGURE 4.- GEOLOGY OF THE HOPE No. 1 MINE, WESTERN MINES DEVELOPMENT COMPANY (HOPE GROUP OF CLAIMS) GILA COUNTY, ARIZONA

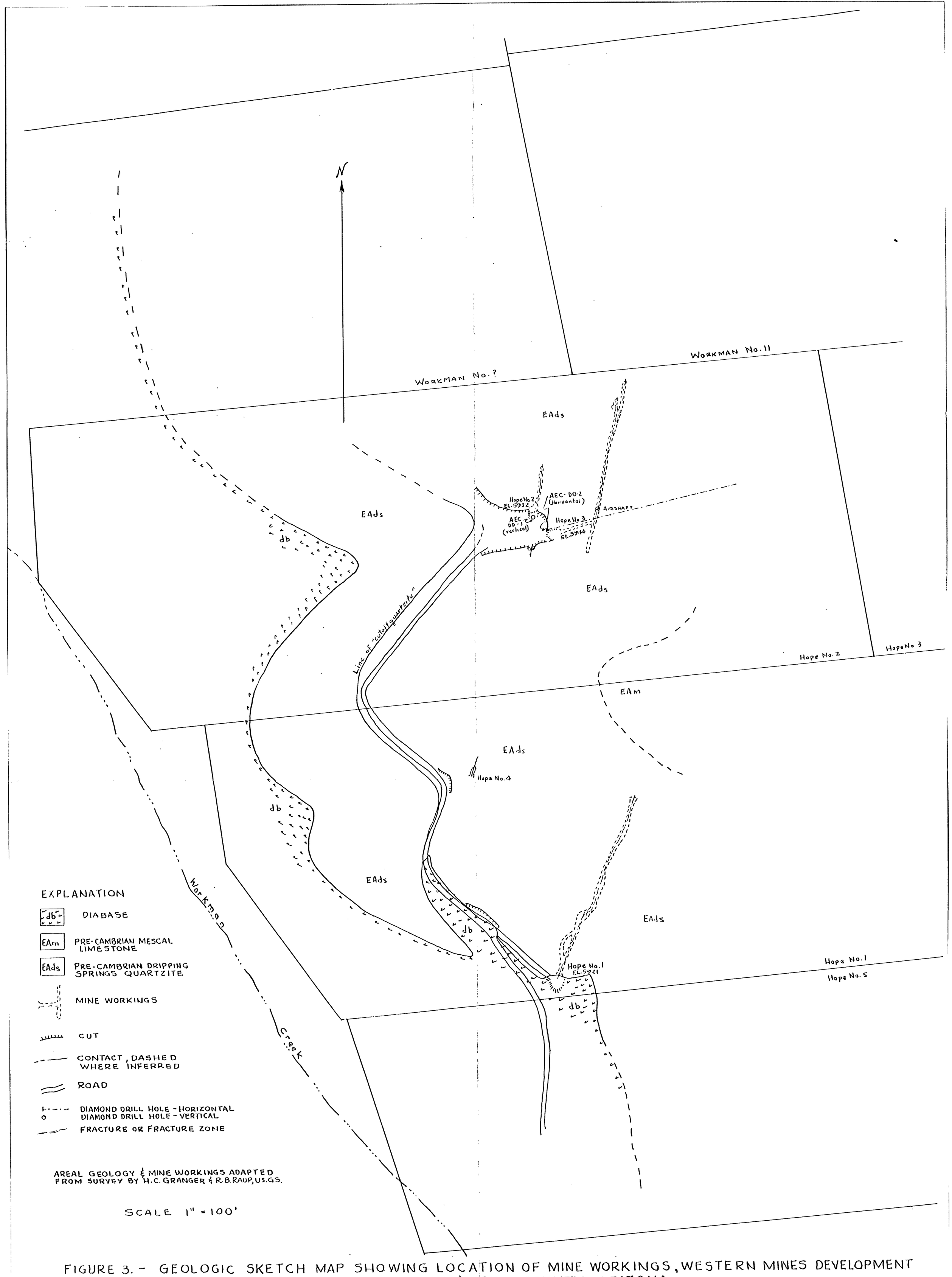


FIGURE 3. - GEOLOGIC SKETCH MAP SHOWING LOCATION OF MINE WORKINGS, WESTERN MINES DEVELOPMENT COMPANY (HOPE GROUP OF CLAIMS), GILA COUNTY, ARIZONA

DMEA 4323

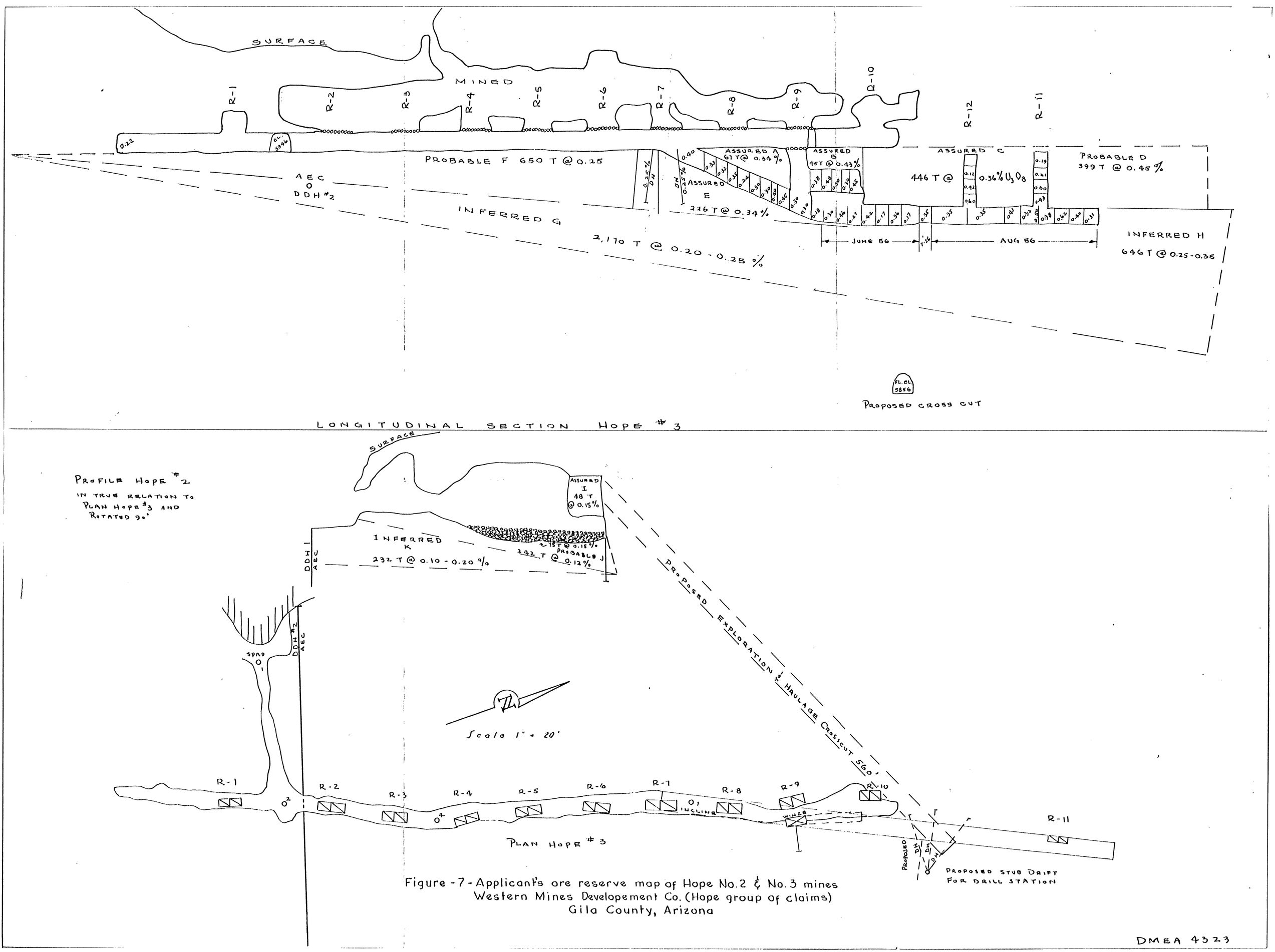
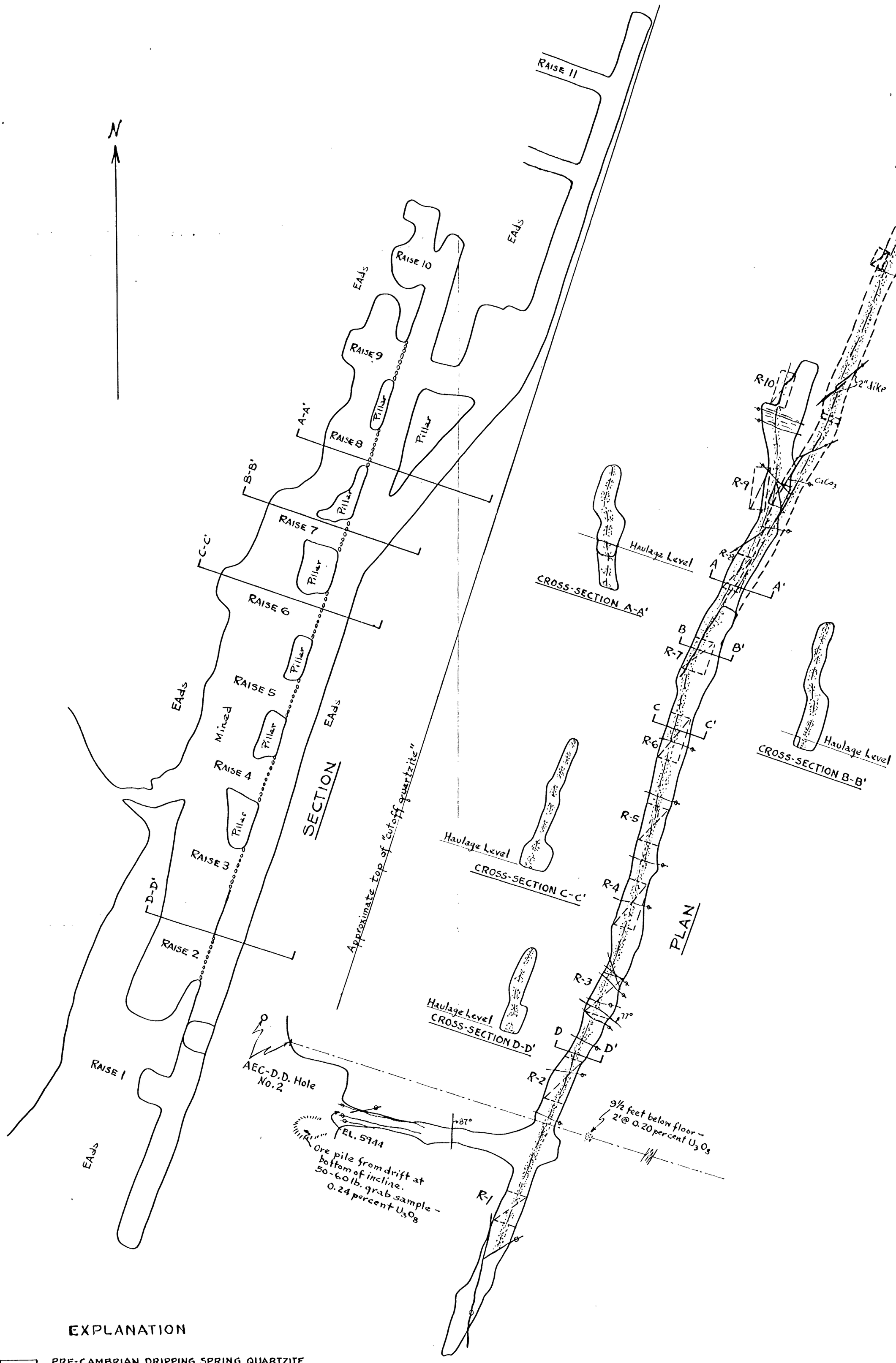


Figure - 7 - Applicant's ore reserve map of Hope No. 2 & No. 3 mines
Western Mines Developement Co. (Hope group of claims)
Gila County, Arizona

DMEA 4323



EXPLANATION

EAds	PRE-CAMBRIAN DRIPPING SPRING QUARTZITE (SILTSTONE AND METAMORPHIC EQUIVALENT)
	FRACTURE - VERTICAL
77°	FRACTURE - SHOWING DIRECTION OF DIP
	STIPPLED – ZONE OF HIGHEST RADIOACTIVITY AND WITHIN ASSAY LIMITS MINABLE ORE.
AND O	DIAMOND DRILL HOLE

SCALE 1" = 20'

DMEA 4323

FIGURE 6. – GEOLOGY OF THE HOPE No. 3 MINE, WESTERN MINES DEVELOPMENT COMPANY, (HOPE GROUP OF CLAIMS) GILA COUNTY, ARIZONA.

FROM MAP BY R. J. Schwartz (AEC) and applicant, 1956.

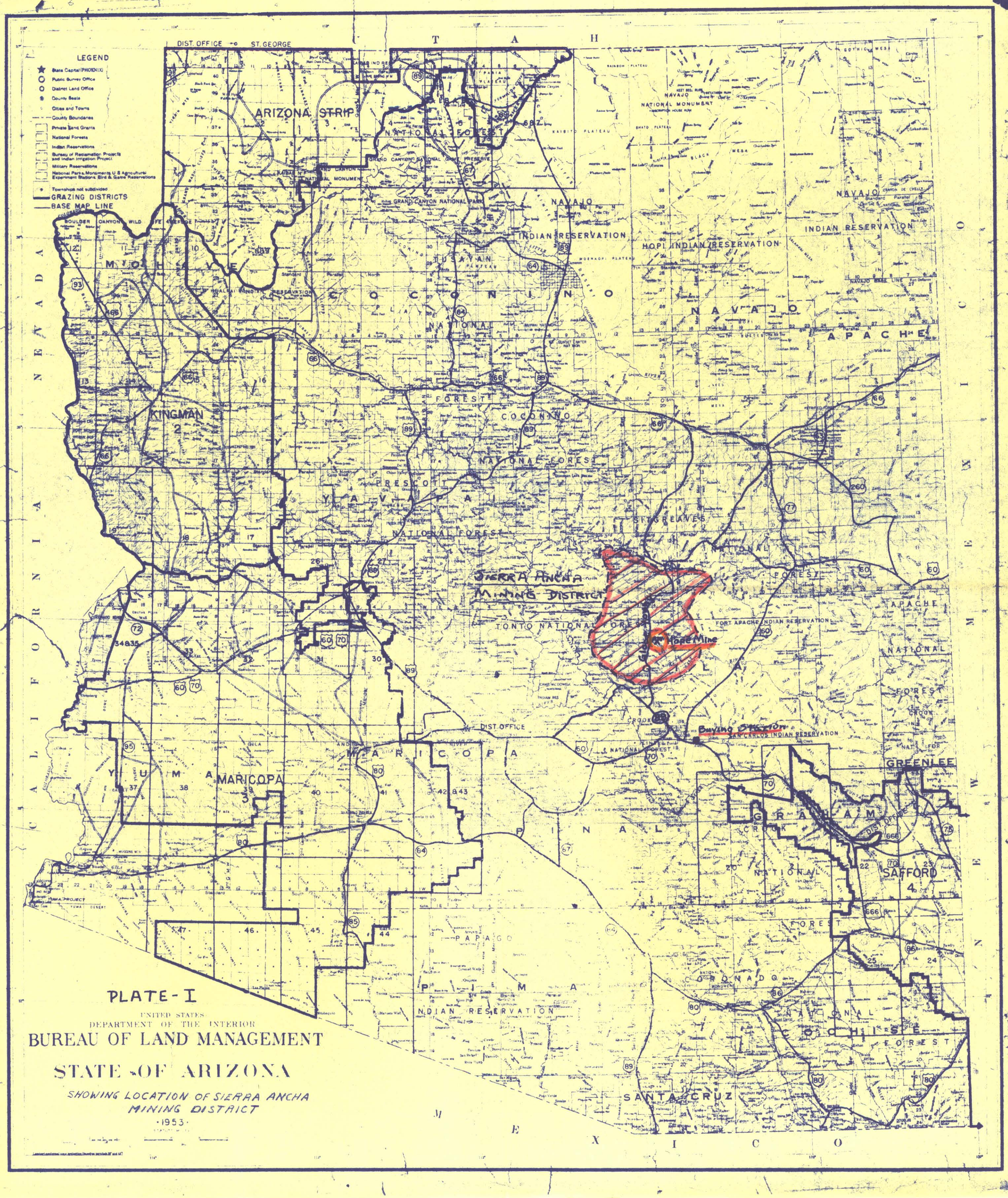


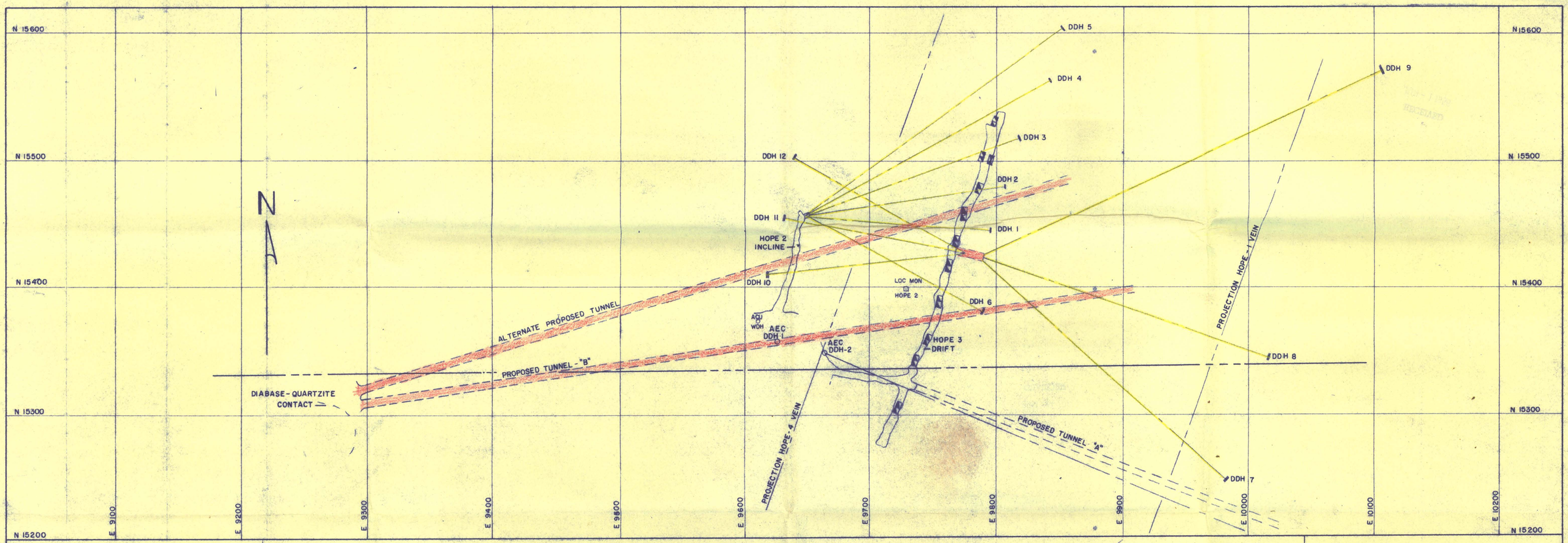
PLATE-I

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STATE OF ARIZONA

SHOWING LOCATION OF SIERRA ANCHA MINING DISTRICT

·1953·

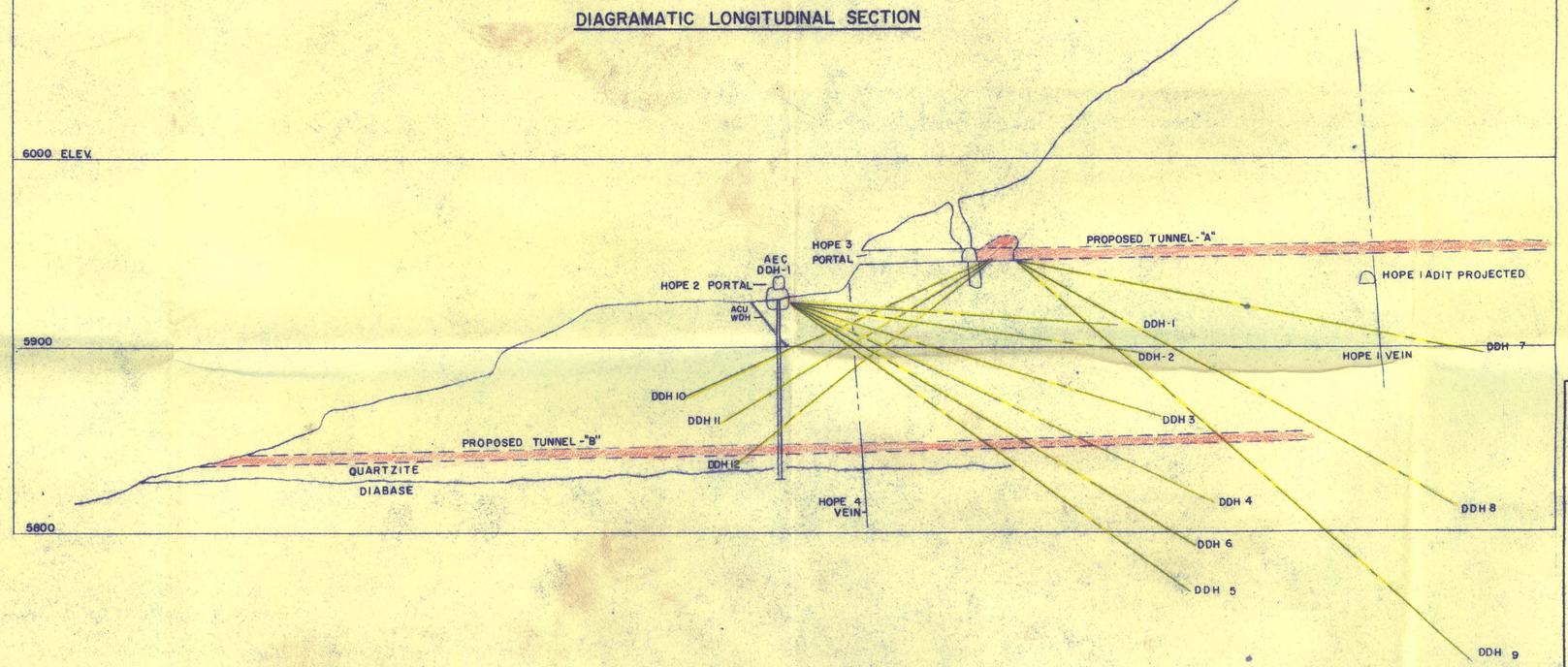


LEGEND

- SECTION LINE
- PROPOSED WORKINGS
- PROPOSED DIAMOND DRILLING
- PROJECTION OF VEIN
- RAISE
- WINZE
- DRILL HOLE COLLAR

DDH	BEARING	VERT ∡	HOR DIST	TRUE DIST
1	S 85 E	-3°	145	146
2	N 82 E	-7°	160	161
3	N 70 E	-15°	180	186
4	N 61 E	-25°	220	243
5	N 54 E	-35°	250	305
6	S 62 E	-30°	160	185
7	S 48 E	-12°	260	266
8	S 72 E	-30°	240	277
9	N 64 E	-42°	350	471
10	S 85 W	-23°	160	174
11	N 78 W	-30°	150	173
12	N 60 W	-38°	160	198

DIAGRAMATIC LONGITUDINAL SECTION



ARIZONA CONTINENTAL URANIUM

PROPOSED DRILLING & DEVELOPMENT

HOPE NO. 2 CLAIM

SIERRA ANCHA MINING DISTRICT

GILA COUNTY, ARIZONA

PLATE VI

SCALE 1" = 40'

DRAWN J.W.

DATE MAY 7, 1956

TRACED L.A.B.

(DIAMOND BUTTE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

MCFADDEN PEAK QUADRANGLE
ARIZONA-GILA CO.
15 MINUTE SERIES (TOPOGRAPHIC)

(ROOSEVELT) 1:125 000

Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and USFS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1947. Field check 1949

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

Unchecked elevations are shown in brown

TRUE NORTH
MAGNETIC NORTH
14°
APPROXIMATE MEAN DECLINATION, 1949

SCALE 1:62 500

1 ½ 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1 .5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS		DRY WEATHER ROADS
Heavy-duty	4 LANE OR 2 LANE	Improved dirt
Medium-duty	4 LANE OR 2 LANE	Unimproved dirt

Loose-surface, graded, or narrow hard-surface

U. S. Route — State Route

MCFADDEN PEAK, ARIZ.
N3345—W11045/15

EDITION OF 1950