STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

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

DATE: May 19, 1954

FROM : W. S. Twenhofel, USGS Acting Member, Uranium Commodity Committee

SUBJECT: Report of examination, DMEA Docket 3280 (Uranium), Manuel L. Obregon, Lena claims, Pima County, Arizona

The Field Team report concerning the property identified above has been reviewed. Data contained in the report indicate that the proposed exploration probably would be unsuccessful in discovering a significant amount of uranium. Therefore, I concur with the recommendations as set forth in the Field Team report that the application be denied.

Copies to: E. Wm. Ellis (2)

W. S. Twenhofel

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

COPY

224 New Customhouse
Denver 2, Colorado

April 30, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3280 (Uranium), Manuel L. Obregon, Lena Claims, Pima County, Arizona.

Enclosed are four copies of the report of examination on the subject docket, a copy of the letter of denial, and two copies of Form 3b.

/s/ W. H. King

/s/ E. N. Harshman
for A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

5-12-54
(date)

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

COPY

224 New Customhouse
Denver 2, Colorado

April 29, 1954.

Mr. Manuel L. Obregon
515 South Park Avenue
Tucson, Arizona

Re: Docket DMEA-3280

Dear Mr. Obregon:

Reference is made to your application for Government aid on the Iena claims.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of Uranium is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

/s/ W. H. King
Field Team, Region IV

HMC:cwm

cc: Administrator, DMEA
AFShride
AHKoschmann
WRStorms
EEThurlow
Docket
Chron.

/s/ E. N. Harshmann for
A. H. Koschmann
Field Team, Region IV

Reviewed by
DMEA OPERATING COMMITTEE
5-12-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

April 30, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination - DMEA Docket 3280 (Uranium), Manuel L. Obregon, Lena Claims, Pima County, Arizona.

Enclosed are the original and ten copies of the engineering report of examination on the subject property.

The applicant requested $13,325.00 to explore the Lena #1 by sinking the shaft 100 feet and drifting 100 feet from the bottom of the shaft.

The examining engineer found no reason to believe that the sparse mineralization showing in the present workings will improve in depth and he recommends that the application be denied. We concur in this recommendation.

W. H. King

W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5-12-54
(date)

March 31, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Report on Docket DMEA-3280, Manuel L. Obregon's Lease No. 1 Uranium Claim, Sierrita Mountains, Pima County, Ariz.

Enclosed are original and 10 copies of the section on Summary, Conclusions and Recommendations by T. M. Remsle of the Bureau of Mines and J. N. Faick of the Geological Survey, and the section on Engineering by Remsle for the above report. A separate section on Geology will be submitted by the Geological Survey.

As it seems that the proposed exploration work would not discover a significant amount of uranium ore, the DMEA examiners have recommended that the application for an exploration lease be denied. I concur with their recommendation.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. H. King (10)
A. F. Shride
DMEA-3280
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE

5-12-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

April 27, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3280, Manual Obregon's Lena No. 1 Claim (uranium), Pima County, Arizona

Enclosed are 11 copies of the geologic report by John N. Falck of the U. S. Geological Survey covering the above docket.

It has been recommended that the application be denied.

E. M. Hirschman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

Reviewed by
DMEA OPERATING COMMITTEE
5-12-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 - University Station
Tucson, Arizona

April 21, 1954

Memorandum

To: Mr. A. E. Koschmann, Denver, Colorado

From: John N. Faick, Geologist, Tucson, Arizona

Subject: Manuel Moreno's Lena No. 1 Claim (Uranium)
Pima County, Arizona
DME 3260.

Enclosed are the original and ten copies of a report on the field examination of the above property.

The report recommends denial of the application for Government aid in exploration.

John N. Faick
Geologist

cc - 10 Koschmann

RECEIVED
APR 1954
U.S. Geological Survey
Mineral Deposits Branch
Denver

Reviewed by
DMEA OPERATING COMMITTEE
5-12-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-3280, Obregon's Lena No. 1 Uranium Claim

Pima County, Arizona

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

John N. Faick, Geologist
U. S. Geological Survey

April 1954

Reviewed by
DMEA OPERATING COMMITTEE

5-12-54
(date)

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By T. M. Romslo[1] and John N. Faick[2]

In March 1954, Manuel L. Obregon applied to the Defense Minerals Exploration Administration under the Defense Production Act of 1950, as amended, for Governmental participation in an exploratory project at the Lena No. 1 uranium claim, Pima County, Ariz. The application was docketed as DMEA-3280. The proposed project was designed to further explore a uranium prospect at an estimated cost of $13,325.00.

The applicant discovered an anamolous radioactive zone on the Lena No. 1 claim in 1949, and during the following years explored the zone by sinking a shaft to a depth of 17 feet. In 1951, the mineralized zone was examined by the U. S. Geological Survey. No ore has been produced from the property.

Rocks, cropping out within a several hundred feet of the shaft, are confined to pre-Cambrian granite and a few widely scattered, dark-colored dikes. The granite is cut by weak fractures, most of which trend northeasterly and dip steeply to the southwest. Anomalous radioactivity occurs in granite along one of the fractures. The radioactive zone has been exposed to the bottom of the shaft and is traceable for about 25 feet on the surface. It averages about 2.5 feet wide in the shaft. The most intense radioactivity occurs along the footwall of the fracture as blebs and lenses of dense quartz containing scattered pyrite, chalcopyrite and galena. Sooty

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1/ Mining Engineer, U. S. Bureau of Mines
2/ Geologist, U. S. Geological Survey

pitchblende (?) and kasolite coat fracture surfaces of the mineralized quartz. A sample chipped from the largest lense, 3 feet long by 2 inches wide, assayed 0.25 percent U_3O_8. Three channel samples across full widths of the radioactive zone assayed 0.004, 0.012 and 0.018 percent U_3O_8.

The deposit contains no measureable reserves of radioactive rock. Indicated reserves are estimated at 250 tons containing 0.011 percent U_3O_8. Probably 3 tons of the indicated reserves may contain as much as 0.25 percent U_3O_8. Inferred reserves are estimated at 20 tons per foot of depth, containing 0.011 percent U_3O_8.

The potential of the property as a source of uranium is not significant because the uranium content of the bulk of indicated reserves is well below the acceptable grade, and the amount of material of possible ore grade is inconsequential. Furthermore, there is no reason to believe that either the degree or extent of mineralization will increase with depth. Therefore, it is recommended that the requested assistance be denied.

MANUEL ORELCON'S

LEMA No. 1 CLAIM (URANIUM)

PIMA COUNTY, ARIZONA

DLMA 3280

GEOLOGY

By

John H. Faick

Geologist, U. S. Geological Survey

MANUEL OBREGON'S

LINA No. 1 CLAIM (URANIUM)

PIMA COUNTY, ARIZONA

DIRA 3280

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ILLUSTRATIONS

FIGURE 1 - Location Map See Engineering Report

FIGURE 2 - Geologic Sketch Map Following Page 2

INTRODUCTION

The Lena No. 1 claim was examined March 12, 1954 as a result of an application which was submitted to the Defense Minerals Exploration Administration by Manuel Obregon, owner of the claim. The applicant requested assistance on an exploration program to cost $13,325, and which consisted of sinking a shaft to a depth of 100 feet, and drifting 100 feet from the bottom of the shaft.

The claim, which is situated on the west side of the Sierrita Mountains, about 20 air-miles southwest of Tucson, Arizona, has been prospected intermittently for uranium since 1949. The claim previously had been examined by R. Wright, in 1951, for the Atomic Energy Commission, B. P. Webb and K. C. Coryell in 1952 for the Atomic Energy Commission, and H. C. Granger and J. W. Adams in 1951 for the U. S. Geological Survey.

GEOLOGY

On the Lena No. 1 claim a narrow fissure vein containing radioactive material is developed by a 17-foot prospect shaft. This was sunk in a light gray granite in which there are a few widely scattered dark-colored, fine-grained, dikes. Two sets of prominent joints are developed in the granite. One set of joints strikes N. 45° - 65° W. and dips from 60° to 70° West, and the other set strikes about N. 50° E., and dips from 50° to 70° S.E. The northwesterly-trending fractures, along which there is a small amount of gouge, breccia and other evidence of movement, contain most of the radioactive minerals, but there also appears to be a slight concentration of the radioactive minerals near the intersections of joints and fractures.

The fracture zone explored by the prospect shaft (see figure 2) trends about N. 50° W. and dips about 70° S.W., and ranges from 2 to 4 feet wide. The strike length of the zone is unknown, for it cannot be traced on the surface more than 25 feet with reasonable assurance. Radioactivity, which was measured with a W. M. Welch Scientific Co. No. 2610 Geiger counter, occurs along the northwesterly-trending fracture and is greatest in the lower half of the shaft. Background radioactivity ranging from .01 to .02 mr. per hr. was measured in the vicinity of the prospect, but along the fracture at the surface and at most places in the shaft radioactivity was 2 to 3 times the background. The highest radioactivity detected over the full width of the radioactive zone was 4 to 8 times the background. This was measured near the bottom of the shaft, where a 2.5-foot sample width assayed 0.018 percent U_3O_8. A chip sample of some of the highest grade quartz-sulfide vein material assayed 0.25 percent U_3O_8 and radioactivity of this material ranged from 6 to 20 times background.

The most intensely mineralized portion of the zone is in the lower part of the north wall of the shaft. Here a lenticular quartz vein about 2 inches wide is exposed over a vertical distance of about 3 feet. The quartz contains visible amounts of pyrite, chalcopyrite and galena. Sooty pitchblende and kasolite (?) coat fracture surfaces along the footwall side of the quartz vein.

The granite in the fracture zone is slightly altered by chloritization and silicification, which is most intense within a few inches of the quartz vein. Hydrous iron oxides stain the rock and green copper minerals are sparingly present.

SAMPLES, ORE RESERVES AND GRADE

Several analyses of samples from the Lena vein are available. It is reported that one sample taken by the owner contained over 2.0 percent uranium. Samples taken by Granger and Adams[1/] are as follows:

No.	Type	Percent U_3O_8	Description
HG-15-51		0.019	Grab sample of vein
HG-16-51	3-ft.channel	0.004	Vein and Wall rock
HG-17-51	2-ft.channel	0.012	Vein and Wall rock

Samples taken by DMEA examiners, and shown on Figure 2, are as follows:

No.	Type	Percent U_3O_8	Description
12773	2 inches wide vein	0.25	Quartz-sulfide vein
12774	$2\frac{1}{2}$-ft. channel	0.018	Mineralized fracture zone

The above samples are consistently low grade and prove that the ore, with the exception of selected specimens, is below the minimum acceptable grade. As the mineralized zone cannot be traced more than 25 feet on the surface and probably has only a short extension in depth, the reserves are inconsequential. Only a few hundred pounds of commercial grade ore are in evidence, and it is doubtful if more than a few tons of commercial ore could be obtained from the prospect.

1/ Granger, H. L. and Adams, J. W. Trace Elements Preliminary Report, PRR D 24, 3-6-1951.

CONCLUSIONS AND RECOMMENDATIONS

The small magnitude of the joint-like structure, the paucity of mineralization and alteration, and the low uranium content of the ore indicate that the Lena No. 1 claim will probably never produce more than a few tons of commercial grade uranium ore, There is no reason to believe the intensity of mineralization will increase with depth, or that richer ores will be found along the strike extensions of the vein.

The indicated reserves are small and exploration would in all probability not result in a significant discovery; therefore, it is recommended that the application be denied.

DMEA-3280, OBREGON'S LENA NO. 1 URANIUM CLAIM
PIMA COUNTY, ARIZONA

Engineering Report

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

MARCH 1954

Reviewed by
DMEA OPERATING COMMITTEE
5-12-54
(date)

DMEA-3280, OBREGON'S LENA NO. 1 URANIUM CLAIM
PIMA COUNTY, ARIZONA

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INTRODUCTION

Obregon's Lena No. 1 uranium claim, Pima County, Ariz., was examined by the Defense Minerals Exploration Administration in connection with an application for Governmental aid as authorized by the Defense Production Act of 1950, as amended. Manuel L. Obregon, Tucson, Ariz., submitted the application to Regional Headquarters of Region IV on March 3, 1954. The application was reviewed and docketed as DMEA-3280, and sent to the field for investigation. The property was examined on March 12, 1954.

The applicant requested assistance on an exploratory program designed to determine the extent and degree of uranium mineralization exposed at a shallow shaft. The proposed program consisted of sinking the shaft to a depth of 100 feet, and by 100 feet of drifting from the bottom of the shaft. The total cost of the program had been estimated at $13,325.00.

LOCATION, ACCESSIBILITY AND PHYSICAL FEATURES

The Lena mining claims are approximately 20 air-miles southwest of Tucson, Ariz. (figure 1). They may be reached from Tucson by traveling 21.7 miles westerly from U. S. Highway 89 on paved State Highway 86, thence 11.2 miles southwesterly on the county-maintained dirt road that leads to Sasabe, Ariz. At this point, a well-graded road branching to the left is signed "Britten Ranch". Follow this road 7.3 miles to a junction with a road that forks to the right. Proceed 1.9 miles on the latter road to the Sunshine

mine, then turn left up Ash Creek and follow a jeep-trail 1.4 miles to the shaft which is located at the center of Lena No. 1 claim.

The claims are situated on the west flank of the Sierrita Mountains at an average altitude of about 4,300 feet. The topography of the claims is moderately rough. Maximum relief is in the order of 600 feet.

Vegetation is confined to forage grasses and a few scattered growths of scrubs and cacti. There are no permanent streams in the area. Drainage is westerly to Altar Wash.

HISTORY

The radioactive zone of Lena No. 1 claim was discovered by Manuel L. Obregon, the applicant, during 1949. Since then he has sunk a discovery shaft to a depth of 17 feet and has constructed 1.4 miles of road from the shaft to an existing road at the Sunshine mine. Both jobs have been done without the aid of machinery.

During 1950 and 1951, several samples and specimens of radioactive material from the property were analyzed by the U. S. Bureau of Mines, Tucson, Ariz. Some of the samples and specimens were submitted by Obregon and others were secured during an examination of the property by the U. S. Geological Survey.

PROPERTY AND OWNERSHIP

The property consists of a group of 11 unpatented lode mining claims, Lena Nos. 1 to 11, in Sec. 7., T. 18 S., R. 11 E., Pima County, Ariz. It is owned by Manuel L. Obregon, 515 South Park Avenue, Tucson, Ariz., Only claims Nos. 1 to 4 were included in the proposed prospect area.

GEOLOGY AND DEPOSIT

Rocks cropping out within several hundred feet of the discovery shaft are confined to pre-Cambrian granite and a few widely scattered dark-colored, fine-grained dikes. The granite is cut by fractures, most of which trend northeasterly and dip steeply to the southwest.

An anomalous radioactive zone was noted at one of the northeasterly trending fractures. The zone has been developed to the bottom of the 17-foot discovery shaft and is traceable on the surface for about 25 feet. The most intense radioactivity occurs along the fracture in the lower half of the shaft. It is centered at blebs and lenses of dense quartz containing scattered pyrite, chalcopyrite and galena. A microscopic examination of specimens of this rock disclosed minor amounts of sooty pitchblende(?) and kasolite. The largest lense, about 3 feet long and a maximum of 21 inches wide, occurs in the north wall of the shaft. The fissure tightens near surface and forms the hanging wall of a sheared and altered zone 2 to 3 feet wide. The zone contains scattered pyrite and copper oxides. It shows very little radioactivity.

Radioactivity of the mineralized zone was measured with a model 2610 Geiger counter manufactured by the W. M. Welch Scientific Co. At the surface and at most places in the shaft a count of 2 to 3 times the background was obtained over widths of 2 to 3 feet. The highest count over the full width of the radioactive zone was 4 to 5 times the background. This is present near the bottom of the shaft where

a 2.5-foot sample assayed 0.018 percent U_3O_8. A chip sample of the largest lense exposed in the shaft assayed 0.25 percent U_3O_8. Radioactivity at this place measured 6 to 20 times the background count.

The results of 3 samples taken by the U. S. Geological Survey and reported in Preliminary Reconnaissance Report D-24 are as follows:

Type	Percent U_3O_8 Radiometric	Chemical Assay	Location
Grab	0.019	0.019	Vein filling from Lena No. 1 pit
3 ft. channel	0.009	0.004	Vein and wall rock Lena No. 1 pit
2 ft. channel	0.013	0.012	Vein and wall rock Lena No. 1 pit

ORE RESERVES

The following ore reserve data is for radioactive material. Copper and lead are not considered because they occur in only trace amounts.

The deposit contains no measureable reserves.

Indicated reserves of radioactive rock are confined to a zone 25 feet long, 50 feet deep, and 2.5 feet wide. They are estimated at 250 tons containing 0.011 percent U_3O_8. Of the 250 tons, probably 3 tons may contain as much as 0.25 percent U_3O_8.

The inferred reserves of the zone, based on a possible strike length of 100 feet, are estimated at 20 tons of 0.011 percent U_3O_8 per foot of depth.

The minimum acceptable grade for uranium ore is 0.10 percent U_3O_8. The average uranium content of the bulk of reserves is well below acceptable grade and the amount of acceptable grade material is inconsequential. Consequently, the potential of the property as a source of uranium can be considered as insignificant.

CONCLUSIONS AND RECOMMENDATIONS

Uranium minerals are sparsely distributed in a small and weakly fractured zone in granite. The indicated reserves of radioactive material are not significant and there is no reason to believe that either the degree or extent of mineralization will increase with depth. Therefore, it is recommended that the requested assistance be denied.

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

RECEIVED
MAY 8 - 1954

224 New Customhouse
Denver 2, Colorado

April 30, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3280 (Uranium), Manuel L. Obregon, Lena Claims, Pima County, Arizona.

Enclosed are four copies of the report of examination on the subject docket, a copy of the letter of denial, and two copies of Form 3b.

W. H. King

W. H. King

E. H. Koschmann

A. H. Koschmann

Enclosures

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ltr denial
to H. B 5-7

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

224 New Customhouse
Denver 2, Colorado

April 30, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
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From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3280 (Uranium), Manuel L. Obregon, Lena Claims, Pima County, Arizona.

Enclosed are four copies of the report of examination on the subject docket, a copy of the letter of denial, and two copies of Form 3b.

W. H. King
W. H. King

E. N. Hoschmann
for A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

April 30, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination - DMEA Docket 3280 (Uranium), Manuel L. Obregon, Lena Claims, Pima County, Arizona.

Enclosed are the original and ten copies of the engineering report of examination on the subject property.

The applicant requested $13,325.00 to explore the Lena #1 by sinking the shaft 100 feet and drifting 100 feet from the bottom of the shaft.

The examining engineer found no reason to believe that the sparse mineralization showing in the present workings will improve in depth and he recommends that the application be denied. We concur in this recommendation.

W. H. King

W. H. King

Enclosures

March 31, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Report on Docket DMEA-3290, Manuel L. Obregon's Lena No. 1 Uranium Claim, Sierrita Mountains, Pima County, Ariz.

Enclosed are original and 10 copies of the section on Summary, Conclusions and Recommendations by T. A. Rosale of the Bureau of Mines and J. N. Faick of the Geological Survey, and the section on Engineering by Rosale for the above report. A separate section on Geology will be submitted by the Geological Survey.

As it seems that the proposed exploration work would not discover a significant amount of uranium ore, the DMEA examiners have recommended that the application for an exploration lease be denied. I concur with their recommendation.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. H. King (10)
A. F. Shride
DMEA-3290
DF

WRStorms:frj

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

April 27, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3280, Manual Obregon's Lone No. 1 Claim (uranium), Pima County, Arizona

Enclosed are 11 copies of the geologic report by John M. Faick of the U. S. Geological Survey covering the above docket.

It has been recommended that the application be denied.

E. N. Harshman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 - University Station
Tucson, Arizona

April 21, 1954

Memorandum

To: Mr. A. H. Koschmann, Denver, Colorado

From: John W. Faick, Geologist, Tucson, Arizona

Subject: Manuel Obregon's Lena No. 1 Claim (Uranium)
Pima County, Arizona
DME 3280.

Enclosed are the original and ten copies of a report on the field examination of the above property.

The report recommends denial of the application for Government aid in exploration.

John W. Faick
Geologist

cc - 10 Koschmann

RECEIVED
APR 1954
U.S. Geological Survey
Mineral Deposits Branch
Denver

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-3290, Ohrogan's Lena No. 1 Uranium Claim

Pima County, Arizona

Y. M. Rosaale, Mining Engineer
U. S. Bureau of Mines

John N. Faick, Geologist
U. S. Geological Survey

April 1954

[illegible], CONCLUSIONS AND RECOMMENDATIONS

by T. [illegible] Kouale[1] and John [illegible] Zaick[2]

In March 1954, Manuel L. Obregon applied to the Defense Minerals Exploration Administration under the Defense Production Act of 1950, as amended, for Governmental participation in an exploratory project at the Lena No. 1 uranium claim, Pima County, Ariz. The application was docketed as DMEA-3280. The proposed project was designed to further explore a uranium prospect at an estimated cost of $13,325.00.

The applicant discovered an anomalous radioactive zone on the Lena No. 1 claim in 1949, and during the following years explored the zone by sinking a shaft to a depth of 17 feet. In 1951, the mineralized zone was examined by the U. S. Geological Survey. No ore has been produced from the property.

Rocks, cropping out within a several hundred feet of the shaft, are confined to pre-Cambrian granite and a few widely scattered, dark-colored dikes. The granite is cut by weak fractures, most of which trend northeasterly and dip steeply to the southwest. Anomalous radioactivity occurs in granite along one of the fractures. The radioactive zone has been exposed to the bottom of the shaft and is traceable for about 25 feet on the surface. It averages about 2.5 feet wide in the shaft. The most intense radioactivity occurs along the footwall of the fracture as sheets and lenses of dense quartz containing scattered pyrite, chalcopyrite and galena. Sooty

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1/ Mining Engineer, U. S. Bureau of Mines
2/ Geologist, U. S. Geological Survey

pitchblende (?) and kasolite coat fracture surfaces of the mineralized quartz. A sample chipped from the largest lense, 3 feet long by 2 inches wide, assayed 0.25 percent U_3O_8. Three channel samples across full width of the radioactive zone assayed 0.004, 0.012 and 0.018 percent U_3O_8.

The deposit contains no measurable reserves of radioactive rock. Indicated reserves are estimated at 250 tons containing 0.011 percent U_3O_8. Probably 3 tons of the indicated reserves may contain as much as 0.25 percent U_3O_8. Inferred reserves are estimated at 20 tons per foot of depth, containing 0.011 percent U_3O_8.

The potential of the property as a source of uranium is not significant because the uranium content of the bulk of indicated reserves is well below the acceptable grade, and the amount of material of possible ore grade is inconsequential. Furthermore, there is no reason to believe that either the degree or extent of mineralization will increase with depth. Therefore, it is recommended that the requested assistance be denied.

MANUEL GERECHE'S

LENA No. 1 CLAIM (URANIUM)

PIMA COUNTY, ARIZONA

DMEA 3280

GEOLOGY

By

John M. Faick

Geologist, U. S. Geological Survey

MANUEL OBREGON'S

LENA No. 1 CLAIM (URANIUM)

PIMA COUNTY, ARIZONA

DMRA 3280

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ILLUSTRATIONS

FIGURE 1 - Location Map See Engineering Report

FIGURE 2 - Geologic Sketch Map Following Page 2

INTRODUCTION

The Lena No. 1 claim was examined March 12, 1954 as a result of an application which was submitted to the Defense Minerals Exploration Administration by Manuel Obregon, owner of the claim. The applicant requested assistance on an exploration program to cost $13,325, and which consisted of sinking a shaft to a depth of 100 feet, and drifting 100 feet from the bottom of the shaft.

The claim, which is situated on the west side of the Sierrita Mountains, about 20 air-miles southwest of Tucson, Arizona, has been prospected intermittently for uranium since 1949. The claim previously had been examined by R. Wright, in 1951, for the Atomic Energy Commission, B. F. Webb and K. C. Coryell in 1952 for the Atomic Energy Commission, and H. C. Granger and J. W. Adams in 1951 for the U. S. Geological Survey.

GEOLOGY

On the Lena No. 1 claim a narrow fissure vein containing radioactive material is developed by a 17-foot prospect shaft. This was sunk in a light gray granite in which there are a few widely scattered dark-colored, fine-grained, dikes. Two sets of prominent joints are developed in the granite. One set of joints strikes N. 45° - 65° W. and dips from 60° to 70° west, and the other set strikes about N. 50° E., and dips from 50° to 70° S.E. The northwesterly-trending fractures, along which there is a small amount of gouge, breccia and other evidence of movement, contain most of the radioactive minerals, but there also appears to be a slight concentration of the radioactive minerals near the intersections of joints and fractures.

The fracture zone explored by the prospect shaft (see figure 2) trends about N. 50° W. and dips about 70° S.W., and ranges from 2 to 4 feet wide. The strike length of the zone is unknown, for it cannot be traced on the surface more than 25 feet with reasonable assurance. Radioactivity, which was measured with a W. M. Welch Scientific Co. No. 2610 Geiger counter, occurs along the northwesterly-trending fracture and is greatest in the lower half of the shaft. Background radioactivity ranging from .01 to .02 mr. per hr. was measured in the vicinity of the prospect, but along the fracture at the surface and at most places in the shaft radioactivity was 2 to 3 times the background. The highest radioactivity detected over the full width of the radioactive zone was 4 to 8 times the background. This was measured near the bottom of the shaft, where a 2.5-foot sample width assayed 0.018 percent U_3O_8. A chip sample of some of the highest grade quartz-sulfide vein material assayed 0.25 percent U_3O_8 and radioactivity of this material ranged from 5 to 20 times background.

The most intensely mineralized portion of the zone is in the north wall of the shaft. Here a lenticular quartz vein about 2 inches wide is exposed over a vertical distance of about 3 feet. The quartz contains visible amounts of pyrite, chalcopyrite and galena. Sooty pitchblende and kasolite (?) coat fracture surfaces along the footwall side of the quartz vein.

The granite in the fracture zone is slightly altered by chloritization and silicification, which is most intense within a few inches of the quartz vein. Hydrous iron oxides stain the rock and green copper minerals are sparingly present.

SAMPLES, ORE RESERVES AND GRADE

Several analyses of samples from the Lena vein are available. It is reported that one sample taken by the owner contained over 2.0 percent uranium. Samples taken by Granger and Adams[1/] are as follows:

No.	Type	Percent U_3O_8	Description
HG-15-51		0.019	Grab sample of vein
HG-16-51	3-ft.channel	0.004	Vein and Wall rock
HG-17-51	2-ft.channel	0.012	Vein and Wall rock

Samples taken by DMEA examiners, and shown on Figure 2, are as follows:

No.	Type	Percent U_3O_8	Description
12773	2 inches wide vein	0.25	Quartz-sulfide vein
12774	2½-ft. channel	0.018	Mineralized fracture zone

The above samples are consistently low grade and prove that the ore, with the exception of selected specimens, is below the minimum acceptable grade. As the mineralized zone cannot be traced more than 25 feet on the surface and probably has only a short extension in depth, the reserves are inconsequential. Only a few hundred pounds of commercial grade ore are in evidence, and it is doubtful if more than a few tons of commercial ore could be obtained from the prospect.

1/ Granger, H. L. and Adams, J. W. Trace Elements Preliminary Report, PRR D 24, 3-6-1951.

CONCLUSIONS AND RECOMMENDATIONS

The small magnitude of the joint-like structure, the paucity of mineralization and alteration, and the low uranium content of the ore indicate that the Lena No. 1 claim will probably never produce more than a few tons of commercial grade uranium ore. There is no reason to believe the intensity of mineralization will increase with depth, or that richer ores will be found along the strike extensions of the vein.

The indicated reserves are small and exploration would in all probability not result in a significant discovery; therefore, it is recommended that the application be denied.

DMEA-3280, OREGON'S LEPA NO. 1 URANIUM CLAIM
PIMA COUNTY, ARIZONA

Engineering Report

By T. M. Romalo
Mining Engineer
U. S. Bureau of Mines

March 1954

DMEA-3380, GORDON'S LENA NO. 1 URANIUM CLAIM
PIMA COUNTY, ARIZONA

CONTENTS

Engineering report — Page

Introduction ---------- 1
Location, accessibility and physical features ---------- 1
History ---------- 2
Property and ownership ---------- 2
Geology and deposit ---------- 3
Ore reserves ---------- 4
Conclusions and recommendations ---------- 5

ILLUSTRATIONS

Figure — Following page

1 Location map ---------- 1
2 Geologic sketch map (see Geological report)

INTRODUCTION

Obregon's Lena No. 1 uranium claim, Pima County, Ariz., was examined by the Defense Minerals Exploration Administration in connection with an application for Governmental aid as authorized by the Defense Production Act of 1950, as amended. Manuel L. Obregon, Tucson, Ariz., submitted the application to Regional Headquarters of Region IV on March 3, 1954. The application was reviewed and docketed as DMEA-3280, and sent to the field for investigation. The property was examined on March 12, 1954.

The applicant requested assistance on an exploratory program designed to determine the extent and degree of uranium mineralization exposed at a shallow shaft. The proposed program consisted of sinking the shaft to a depth of 100 feet, and by 100 feet of drifting from the bottom of the shaft. The total cost of the program had been estimated at $13,325.00.

LOCATION, ACCESSIBILITY AND PHYSICAL FEATURES

The Lena mining claims are approximately 20 air-miles southwest of Tucson, Ariz. (figure 1). They may be reached from Tucson by traveling 21.7 miles westerly from U. S. Highway 80 on paved State Highway 86, thence 11.2 miles southwesterly on the county-maintained dirt road that leads to Sasabe, Ariz. At this point, a well-graded road branching to the left is signed "Britten Ranch". Follow this road 7.3 miles to a junction with a road that forks to the right. Proceed 1.9 miles on the latter road to the Sunshine

mine, then turn left up Ash Creek and follow a jeep-trail 1.4 miles to the shaft which is located at the center of Lena No. 1 claim.

The claims are situated on the west flank of the Sierrita Mountains at an average altitude of about 4,300 feet. The topography of the claims is moderately rough. Maximum relief is in the order of 400 feet.

Vegetation is confined to forage grasses and a few scattered growths of scrubs and cacti. There are no permanent streams in the area. Drainage is westerly to Altar Wash.

HISTORY

The radioactive zone of Lena No. 1 claim was discovered by Manuel L. Obregon, the applicant, during 1949. Since then he has sunk a discovery shaft to a depth of 17 feet and has constructed 1.4 miles of road from the shaft to an existing road at the Sunshine mine. Both jobs have been done without the aid of machinery.

During 1950 and 1951, several samples and specimens of radioactive material from the property were analyzed by the U. S. Bureau of Mines, Tucson, Ariz. Some of the samples and specimens were submitted by Obregon and others were secured during an examination of the property by the U. S. Geological Survey.

PROPERTY AND OWNERSHIP

The property consists of a group of 11 unpatented lode mining claims, Lena Nos. 1 to 11, in Sec. 7., T. 18 S., R. 11 E., Pima County, Ariz. It is owned by Manuel L. Obregon, 515 South Park Avenue, Tucson, Ariz., Only claims Nos. 1 to 4 were included in the proposed prospect area.

GEOLOGY AND DEPOSIT

Rocks cropping out within several hundred feet of the discovery shaft are confined to pre-Cambrian granite and a few widely scattered dark-colored, fine-grained dikes. The granite is cut by fractures, most of which trend northeasterly and dip steeply to the southwest.

An anomalous radioactive zone was noted at one of the northeasterly trending fractures. The zone has been developed to the bottom of the 17-foot discovery shaft and is traceable on the surface for about 25 feet. The most intense radioactivity occurs along the fracture in the lower half of the shaft. It is centered at blebs and lenses of dense quartz containing scattered pyrite, chalcopyrite and galena. A microscopic examination of specimens of this rock disclosed minor amounts of sooty pitchblende(?) and kasolite. The largest lense, about 3 feet long and a maximum of 21 inches wide, occurs in the north wall of the shaft. The fissure tightens near surface and forms the hanging wall of a sheared and altered zone 2 to 3 feet wide. The zone contains scattered pyrite and copper oxides. It shows very little radioactivity.

Radioactivity of the mineralized zone was measured with a model 2610 Geiger counter manufactured by the W. H. Welch Scientific Co. At the surface and at most places in the shaft a count of 2 to 3 times the background was obtained over widths of 2 to 3 feet. The highest count over the full width of the radioactive zone was 4 to 5 times the background. This is present near the bottom of the shaft where

a 2.5-foot sample assayed 0.018 percent U_3O_8. A chip sample of the largest lense exposed in the shaft assayed 0.25 percent U_3O_8. Radioactivity at this place measured 6 to 30 times the background count.

The results of 3 samples taken by the U. S. Geological Survey and reported in Preliminary Reconnaissance Report D-24 are as follows:

Type	Percent U_3O_8 Radiometric	Percent U_3O_8 Chemical Assay	Location
Grab	0.019	0.019	Vein filling from Lens No. 1 pit
3 ft. channel	0.009	0.004	Vein and wall rock Lens No. 1 pit
2 ft. channel	0.013	0.012	Vein and wall rock Lens No. 1 pit

ORE RESERVES

The following ore reserve data is for radioactive material. Copper and lead are not considered because they occur in only trace amounts.

The deposit contains no measureable reserves.

Indicated reserves of radioactive rock are confined to a zone 25 feet long, 50 feet deep, and 2.5 feet wide. They are estimated at 250 tons containing 0.011 percent U_3O_8. Of the 250 tons, probably 3 tons may contain as much as 0.25 percent U_3O_8.

The inferred reserves of the zone, based on a possible strike length of 100 feet, are estimated at 20 tons of 0.011 percent U_3O_8 per foot of depth.

The minimum acceptable grade for uranium ore is 0.10 percent U_3O_8. The average uranium content of the bulk of reserves is well below acceptable grade and the amount of acceptable grade material is inconsequential. Consequently, the potential of the property as a source of uranium can be considered as insignificant.

CONCLUSIONS AND RECOMMENDATIONS

Uranium minerals are sparsely distributed in a small and weakly fractured zone in granite. The indicated reserves of radioactive material are not significant and there is no reason to believe that either the degree or extent of mineralization will increase with depth. Therefore, it is recommended that the requested assistance be denied.

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

DEPARTMENT OF THE INTERIOR
Minerals Administration
RECEIVED
1954

224 New Customhouse
Denver 2, Colorado

April 29, 1954.

Mr. Manuel L. Obregon
515 South Park Avenue
Tucson, Arizona

Re: Docket DMEA-3260

Dear Mr. Obregon:

Reference is made to your application for Government aid on the Lena claims.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of Uranium is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W H King
W. H. King
Field Team, Region IV

E. H. Koschmann
for A. H. Koschmann
Field Team, Region IV

HMC:cwm

cc: Administrator, DMEA
AFShride
AHKoschmann
WRStorms
EEThurlow
Docket
Chron.

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

224 New Customhouse
Denver 2, Colorado

March 12, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration, Attention: 200

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMEA Form 3a (Revised) and MF-103 and supporting data pertaining to the following applications for Government assistance in exploration work:

Intermountain Mining Inc. — Uranium
P. O. Box 635
Chico, California

Manuel L. Obregon DMEA-3280 — Uranium
515 South Park Avenue
Tucson, Arizona

W. H. King

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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

Not to be filled in by applicant

Docket No. 3280
Metal or Mineral Uranium
Date Received
Estimated Cost $13,525
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: Manuel L. Obregon
515 South Park Avenue
Tucson, 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 Lena S.E. ¼, N.W. ¼, S.W. ¼, N.E. ¼, Sec. 7-T-17-S-R-11-E
Lena #1 Book 241 p. 352
" #2 " " p. 353
" #3 " " p. 354 and Lena #4 Book 241 p. 355

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

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

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

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. 5-241-p.356 7-245-p.580 9-245-p.582 11-245-p.584
6-245-p.359 8-245-p.581 10-245-p.583

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. (See accompanying papers)

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

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

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

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

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

(*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 ..... days and be completed within ..... 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.). (See accompanying papers)

(*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?

☐ 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 February 27, 1954

Manuel L. Obregon
(Applicant)

By .....

.....

.....

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

Manuel L. Obregon
515 South Park Avenue
Tucson, Arizona

February 27, 1954

4. Physical description

(a) I have dug a shaft 15 feet deep following the mineral vein from the surface of the ground. My interest in this operation is to continue following the vein, as it is getting wider. Accessibility for examination purposes is very good because the vein is running straight down, so far. I have built a road to the place.

(b) None

(c) On the Lena Claim, granite is found which is filled by clay gouge and red iron oxides. Minor pyrite and galena are found within the gouge and within the granite two inches on either side of the fracture. Pitchblende has been identified in samples submitted to the Atomic Energy Commission laboratory; and kalsolite has been identified by the U. S. Bureau of Mines, University of Arizona, laboratory.

I filled an application with the R. F. C. for a loan and with it I sent to them all my assay reports that I had from the U. S. Bureau of Mines, University of Arizona, and from the A. E. C. at New York. I still have not gotten them back.

(d) The mine is located 50 miles southwest of Tucson, Arizona. It is reached by a paved road from Tucson to 3 points on the Ajo road, thence south on the Sasabe about 12 miles on C grade road thence last about 13 miles over a good wagon road. Tucson is the railroad shipping, supply and residence point.

(e) Manpower, materials, supplies, equipment are readily available. Sufficient water is available at or near the mine. Electric power is not available.

5. The exploration project

(a) Uranium

(b) The proposed work will consist on extending the present discovery shaft 100 feet down following the vein, thence drift on the vein 50 feet to the north and 50 feet to the south from the bottom of the new shaft.

Manuel L. Obregon
515 South Park Avenue
Tucson, Arizona

February 27, 1954

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

(d) The applicant has had more than ten years in prospecting and small mine operation. He will employ an experienced working foreman to handle the mining work.

6. Estimate of costs

(a) Independent contracts--none

(b) Labor, supervision, consultants--Three miners at about $15 per day each. Supervision by applicant.

(c) Operating materials and supplies--Windlass, and 5/16" cable 75 feet, Blacksmith forge, and necessary tools for three men.

(d) Operating equipment--Two Geiger counters, 1951 Four wheel drive Willys pick-up truck, 1½" centrifugal water pump-all this equipment owned. Hoist, compressor, drills, hose and miscellaneous equipment to be rented. Small prefabricated house for living quarters to be purchased.

(e) Rehabilitation and repairs--None

(f) New buildings, improvements, installations--Living quarters for men. Cost about $500.

(g)&(h) Miscellaneous--Contingencies--About $1,000.

Application of Manuel L. Carrejon
(Trustee) Lulu Glass, Ella
Gourley, Applicants.

Date of Application
February 27,1954

Tucson, Arizona
March 10,1954

MF-103

6(b).	Labor.- 400 man days-Total Cost	$6,000.00
	Supervision- 7 months at $100/mo.	700.00
	Consultants-	500.00
		$ - - - -
6(c)	Materials and Supplies:	
	Lumber	1,500.00
	Gasoline and Oil	500.00
	Powder,caps and fuses . . .	700.00
	Drill Steel,Danger rods & Bolts	400.00
	Total Cost	2,900.00
		- - - - - -
6(d).	Rental of Compress,drill machine, hoses and Hoist $200/mo. for 7 mos.	1,400.00
	Rental use of pick-up truck at $50.00 per month for 7 months	350.00
	Total cost	1,750.00
		- - - - -

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1 5 1954

COST OF PROJECT

Shaft- 100 ft. by compartment-timbered . . . . at $75.00 per foot	$7,500.00
Drift- 100 ft. at $35.00 per foot	3,500.00
Living quarters for men	500.00
Analytical work, accounting, liability insurance, payroll taxes	1,325.00
Contingency	500.00
Total cost of project	$13,325.00

MLO.

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

224 New Customhouse
Denver 2, Colorado

March 4, 1954.

DMEA - 3280.

Mr. Manuel L. Obregon
515 South Park Avenue
Tucson, Arizona

Re: Application of Manuel L. Obregon (Uranium), Lena Claims, Pima County, Arizona.

Dear Mr. Obregon:

This will acknowledge receipt of your uncompleted application dated February 27, 1954.

Enclosed is a copy of Form MF-103 for your guidance. Please refer to Item 6 - Estimate of Costs - and complete the following:

6(b). Labor - How many man days? Total cost?
Supervision - Total months? Total cost?
Consultants - Total cost?

6(c). Furnish an itemized list of materials and supplies you will need to complete your proposed work. Total cost?

6(d). Your suggested use allowance of your geiger counters, pick-up truck and pump. Also an itemized list of equipment you propose to rent and the total rental price. Total cost?

What is your total estimated cost of the entire project?

When four copies of the information requested above are received by this office we will combine them with your application. Your application will be held in this office pending receipt of the above data.

Very truly yours,

W H King

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

Enclosure

HMC:cwm

cc: Subject
Administrator, DMEA
Chron.; HMConnors

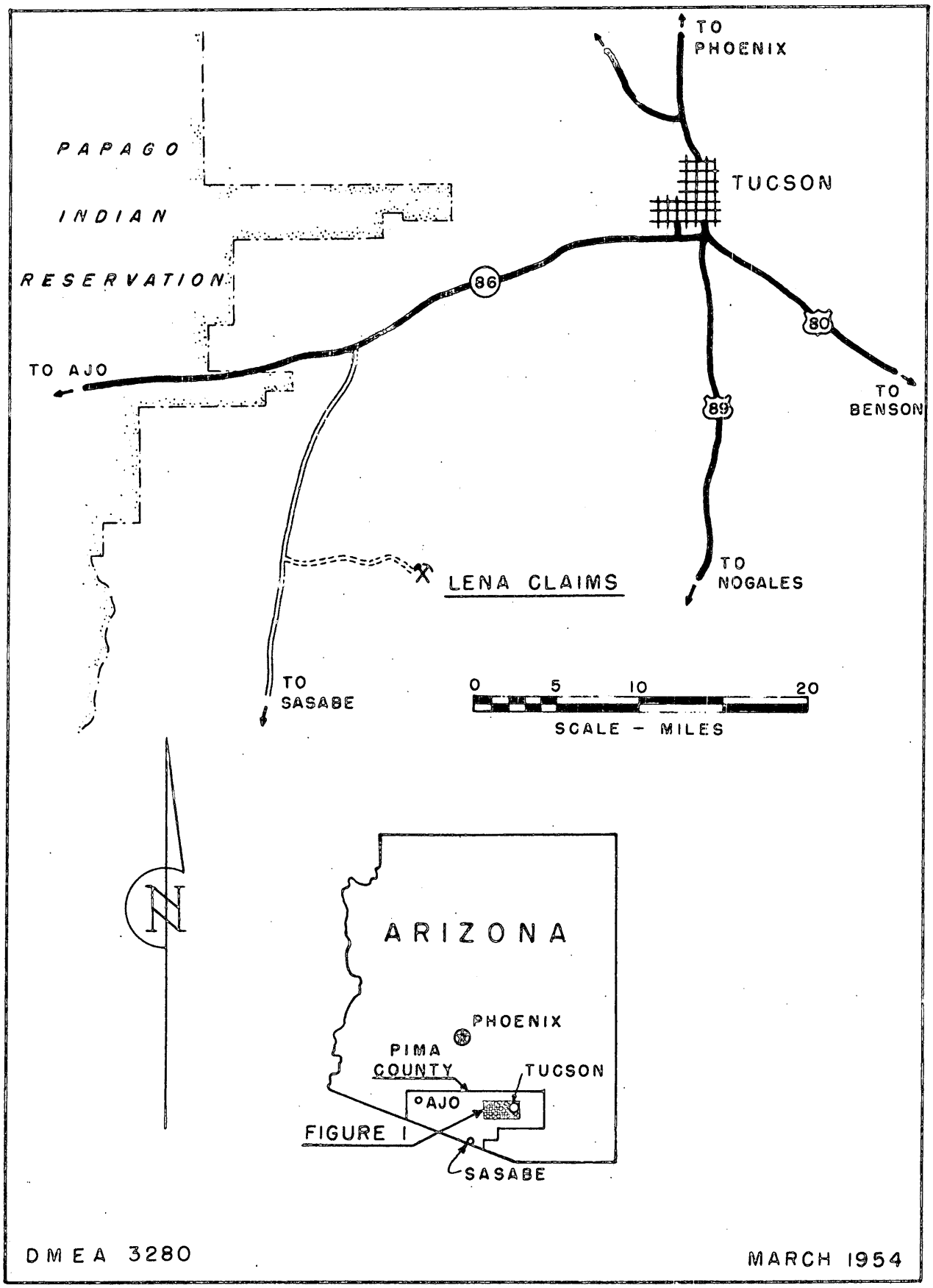


FIGURE 1. - LOCATION MAP

OBREGON'S LENA NO. 1 CLAIM (URANIUM) - PIMA COUNTY, ARIZONA

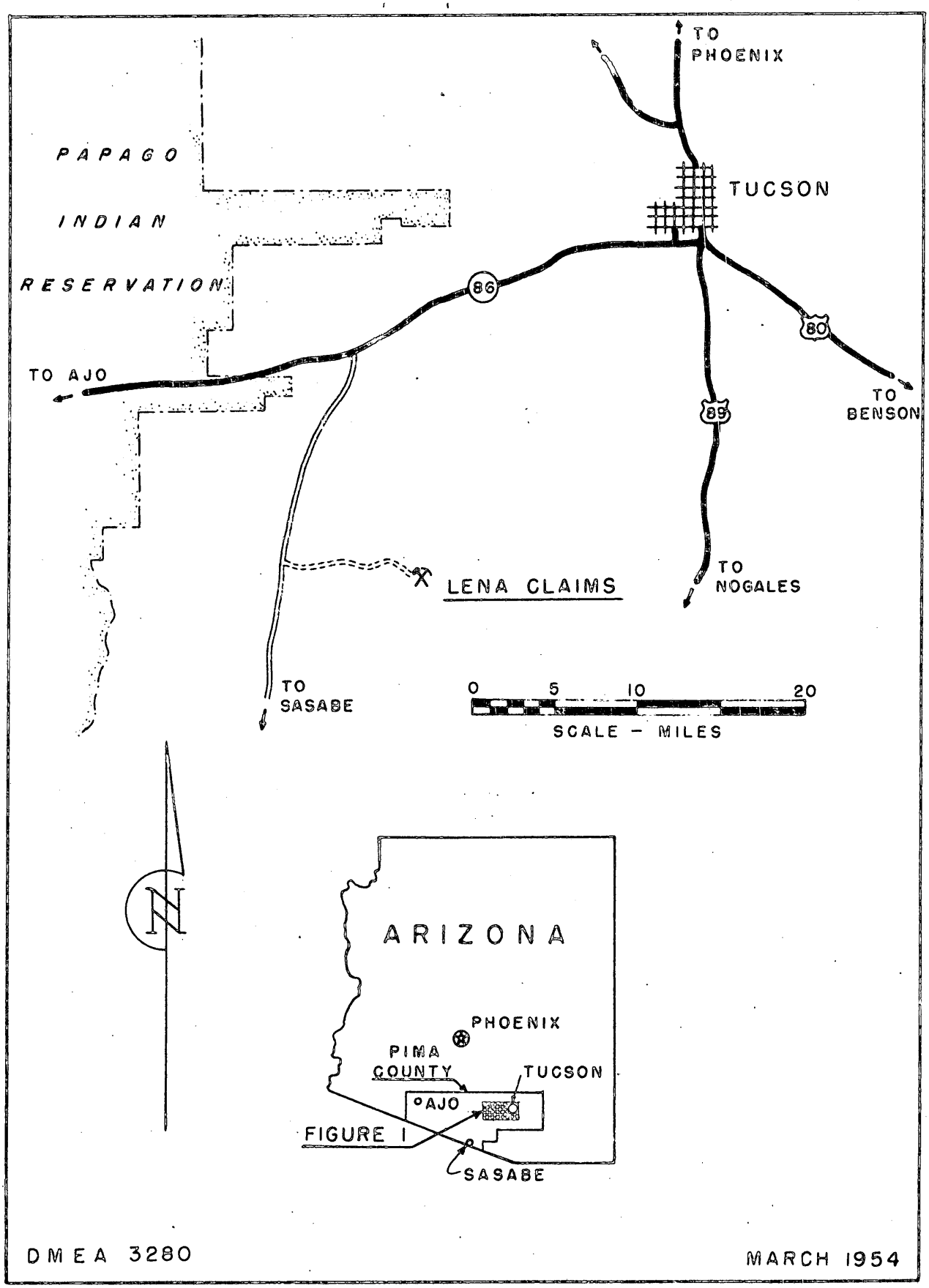
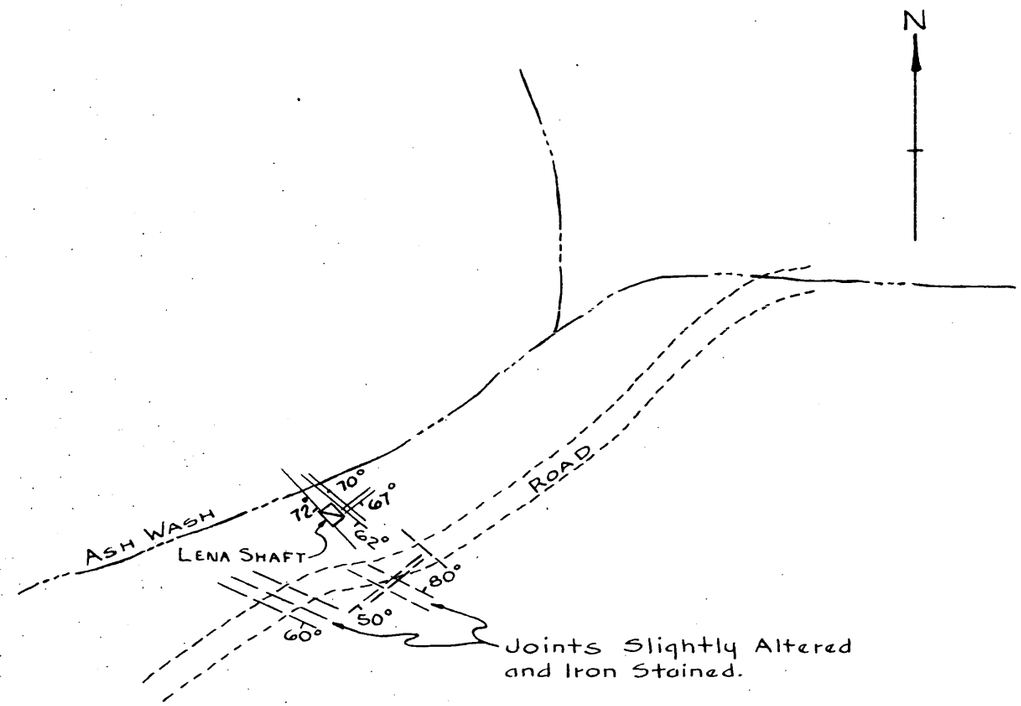
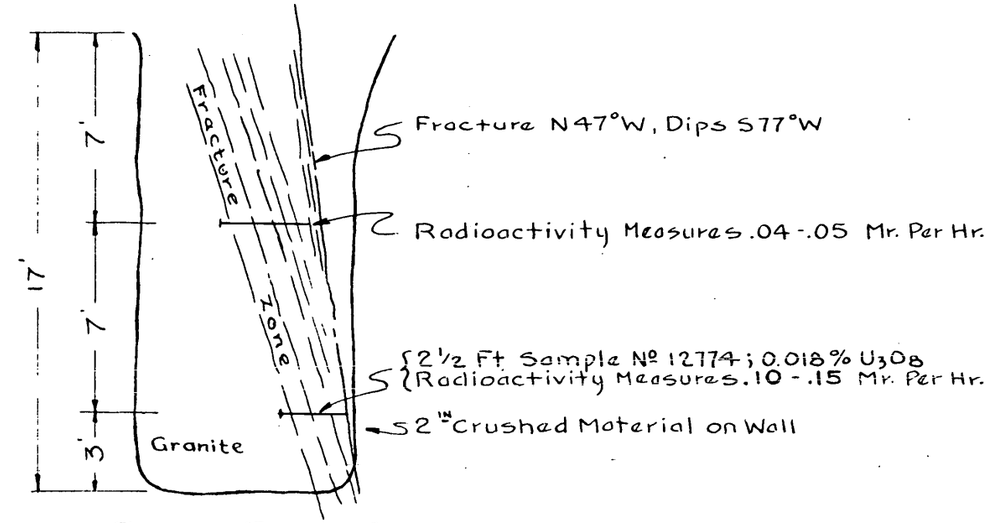


FIGURE 1. - LOCATION MAP

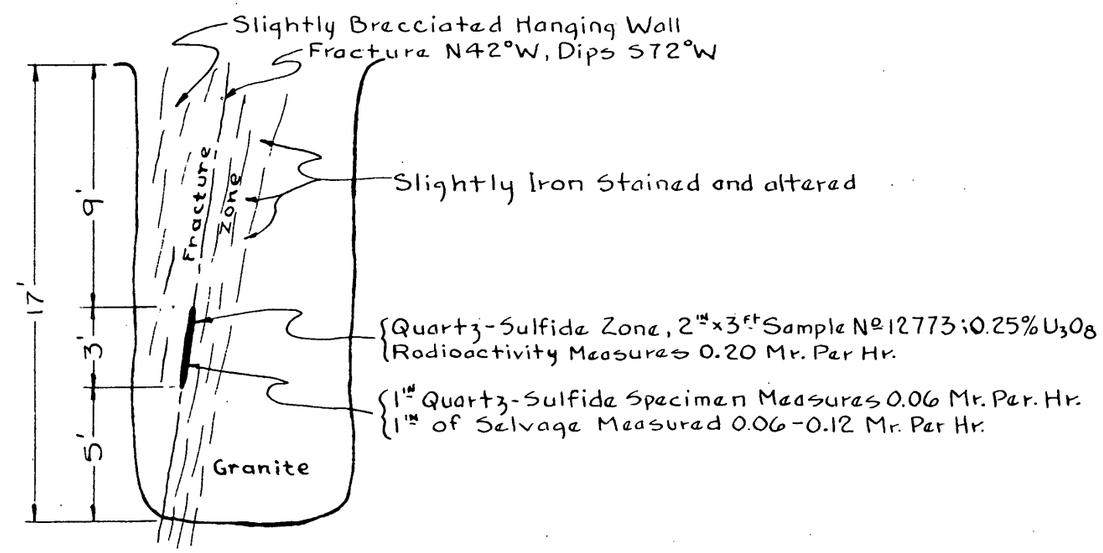
OBREGON'S LENA NO. 1 CLAIM (URANIUM) - PIMA COUNTY, ARIZONA



Scale: 1IN = 100 Ft.



SOUTH FACE OF SHAFT

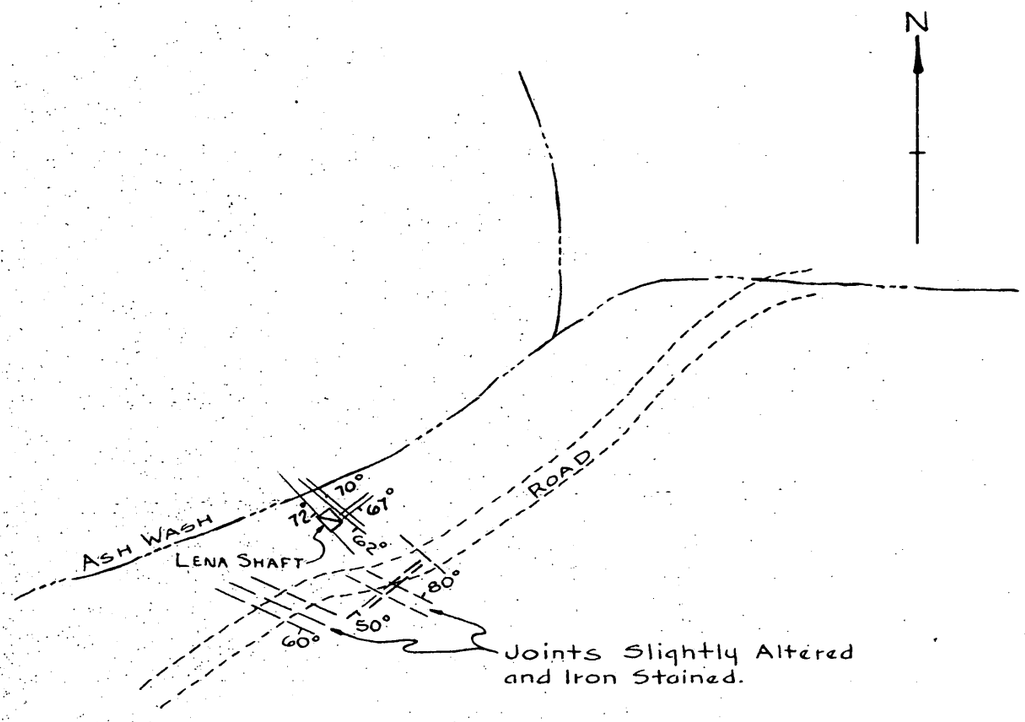


NORTH FACE OF SHAFT

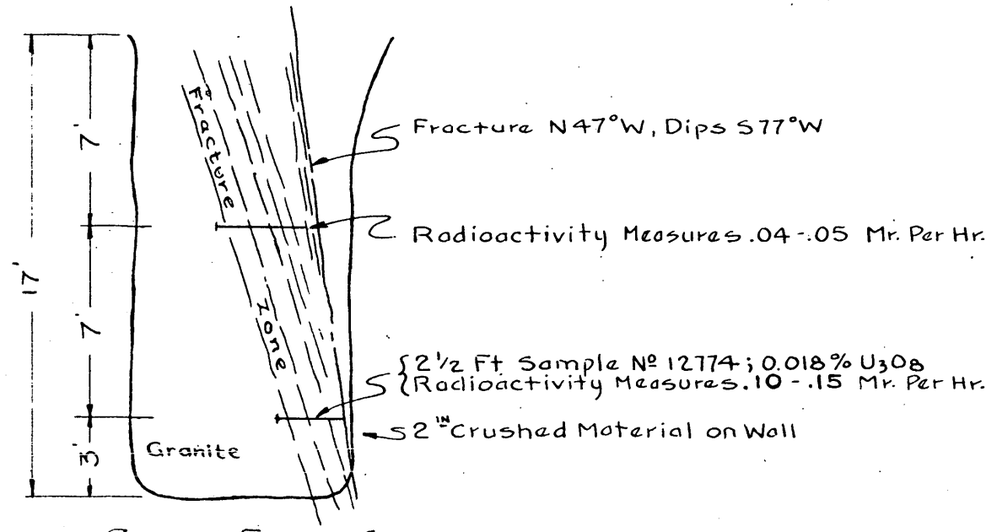
Approx. Scale: 1IN = 6Ft

FIGURE 2

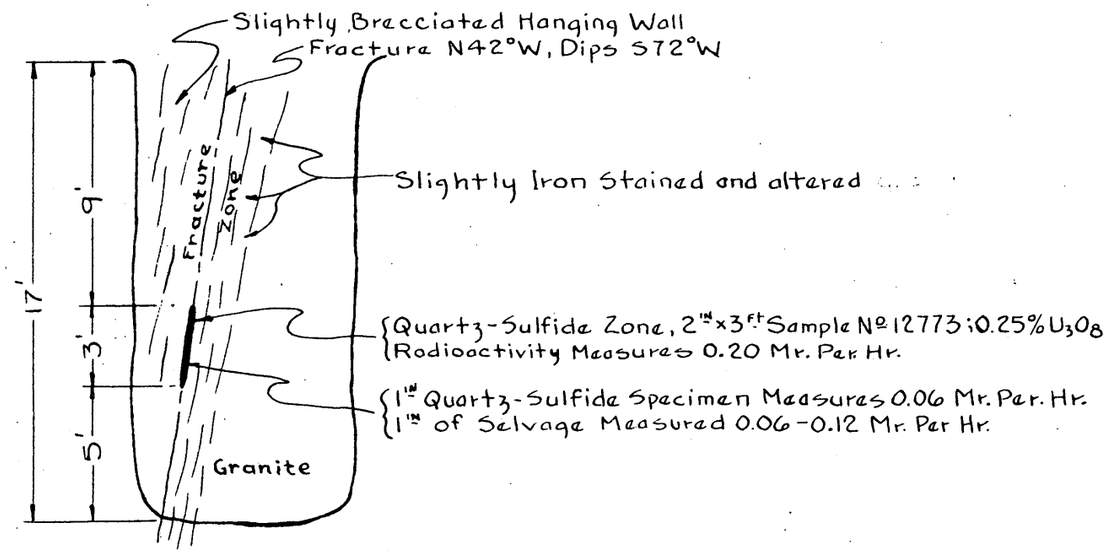
GEOLOGIC SKETCH MAP, OBREGON'S LENA № 1 CLAIM, PIMA COUNTY, ARIZONA.
DMEA-3280



Scale: 1" = 100 Ft.



SOUTH FACE OF SHAFT



NORTH FACE OF SHAFT

Approx. Scale: 1" = 6 Ft

FIGURE 2

GEOLOGIC SKETCH MAP, OBREGON'S LENA № 1 CLAIM, PIMA COUNTY, ARIZONA

DMEA - 3280