



CONTACT INFORMATION  
Mining Records Curator  
Arizona Geological Survey  
416 W. Congress St., Suite 100  
Tucson, Arizona 85701  
520-770-3500  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

The following file is part of the

Richard Mieritz Mining Collection

### **ACCESS STATEMENT**

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

### **CONSTRAINTS STATEMENT**

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

### **QUALITY STATEMENT**

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

CURSORY EXAMINATION  
REPORT  
of  
CERTAIN URANIUM PROPERTIES  
in  
EL CAPITAN and SIERRA ANCHA  
MINING DISTRICTS  
Gila County, Arizona

by

R. E. Mieritz  
Mining Consultant  
Phoenix, Arizona

May 17, 1958



## TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Conclusions	1
Properties and Location	2
Geology	3
Mineralization	3
Development	4
Desert Queen	5
Minarik	5
Recommended Exploration	6
Exploration Costs	6
Ore Reserves	7

## MAPS

Index Map-shows location of properties

Claim Maps-Desert Queen Claims and Minarik Claims.



## INTRODUCTION

At the request of Mr. C. Grin Swain, President of Desert Queen Uranium Company, Whittier, California, the writer has completed an examination and evaluation of certain uranium properties by a physical field examination of same, a study of available limited information and by application of the writers knowledge of the area which we are concerned with.

The field examination of the Desert Queen group of claims was completed on March 22, 1958 during a miserable day of rainstorms and wind which practically invalidated the use of any radioactivity instrument. Field examination of the Minarik claims was completed on May 12, 1958.

Acknowledgements must be made for the assistance of Messrs. Angius and Minarik whom were very helpful to the writer on the field trips and providing information.

## CONCLUSIONS

As a result of the field examinations personally completed by the writer and a review of the limited available information, the following conclusions are forwarded:

- (1)-Uranium mineralization is limited to a silicified shale member within the Dripping Springs quartzite formation,
- (2)-The grade of the mineralization thus far indicated is approximately .10%  $U_3O_8$ ,
- (3)-Existence of stronger uranium mineralization is a possibility as elongated zones controlled to a great extent by local dip changes and/or depressions created at time of deposition of the shale member,
- (4)-Exploration as surface geological mapping, geophysical in-



strumentation, outcrop sampling, core drilling and sampling must be completed to adequately develop the properties and evaluate same.

(5)-Some \$200,000 may be required to completely accomplish the recommended exploration program, and

(6)-If such funds are not available, the project should be forgotten since any expenditure less than \$50,000 on each property would be a waste of funds.

#### PROPERTIES and LOCATION

Both properties are under option to purchase by the Desert Queen Uranium Company and include the following: Desert Queen and Minarik groups of claims.

The Desert Queen group lies in Section 2 of T. 3 S., R. 15 E., Gila and Salt River Base and Meridian, Gila County, Arizona. The property is 18 miles southeast of Globe, Arizona in the El Capitan Mining District, El Capitan Mountain Range.

The Minarik claims lie two miles south of Copper Mountain approximately in Section 36, T. 7 N., R. 12 E., Gila and Salt River Base and Meridian, Gila County, Arizona. This property is approximately 50 air-line miles northwest of Globe in the Sierra Ancha Mining District, Sierra Ancha Mountain Range.

All properties are accessible by roads, the major portion of which is over paved State Highways: State highway 77 from Globe to the Desert Queen and the Beeline Highway from Phoenix to the Minarik. Pickup or Jeep travel is advisable off the main highways to the properties.

The Desert Queen property enhances 15 standard lode mining claims ( see claim map) whereas the Minarik has 25 claims to its credit, two



claims of which have been amended. The following tabulation lists the respective claims:

Desert Queen

Johnny # 1	Sally # 2	Sally # 7
Johnny # 2	Sally # 3	The Dome # 1
Johnny # 3	Sally # 4	The Dome # 2
Johnny # 4	Sally # 5	The Dome # 3
Sally # 1	Sally # 6	The Dome # 4

Minarik

Great Gain # 1	Outer Fringe # 1	Candy Can
Great Gain # 2	Latecomer # 1	Dyna Dyn # 1
Great Gain # 3	Latecomer # 2	Dyna Dyn # 2
Great Gain # 4	Latecomer # 3	Dyna Dyn # 3
Great Gain # 4 Amended	Latecomer # 3 Amended	Dyna Dyn # 4
Great Gain # 5	Latecomer # 4	Dyna Dyn # 5
Fringe # 1	Latecomer # 5	Dyna Dyn # 6
Fringe # 2	Candy Ann	Dyna Dyn # 7
Fringe # 3	Candy Ben	Dyna Dyn # 8

The writer has assumed the validity of these claims as to proper location notices, etc and he is amply sure that sufficient work has been completed on the claims to qualify them for annual assessment requirements.

GEOLOGY

Geology-wise, the properties, although miles apart, are situated in areas of similar, simple stratigraphical conditions, namely, sediments and in particular the wide spread, very thick Dripping Springs quartzite formation. To describe regional structural and geologic sequences would add little to this report since its interpretation would not influence to any great extent the analysis of the evaluation.

MINERALIZATION

Occurance of uranium mineralization on these properties can be simply stated as being confined to the same two to four foot thick silicified



shale member within the Hripping Springs quartzite formation. Where recent erosion has cut deep canyons, exposures of the shale member are in evidence and in many instances increased radioactivity is observed. Some of the increased radiation is due to the rock change, however, the balance of the increased count represents the presence of radioactive minerals.

The uranium minerals observed at the properties are uranophane, autunite and torbernite, all being common secondary minerals, the former two containing calcium and the latter containing copper. The colors of these minerals are yellow to apple green.

These uranium minerals are found along the thin bedding planes or parting layers of the shale member rather than as disseminations throughout the mass. This fact indicates deposition of the uranium minerals was simultaneous with that of the shale member, the minerals being carried in solution until deposition occurred.

Recent studies by the writer of some drill hole probings indicates that a stronger concentration of uranium occurs near the middle of the shale member rather than being evenly distributed throughout. Moreover, there is strong indications that secondary enrichment has also occurred since there is a distinct abrupt increase at the top of mineralization with a gradual diminishing value when passing through the zone or member. Although feeble, the probing results also indicate the intersection or top of the shale member.

Clues to stronger mineralization may possibly be identified with changes in bed dips or strike depressions. Therefore, detailed geologic mapping is a definite requirement as a guide to future exploration.

#### DEVELOPMENT

To date a meager amount of unplanned or haphazard development has



been completed as trenches, cuts and diamond drilling. There is little record of the results obtained by samples taken from outcrops, cuts and trenches, geologic logs of drill cores or their samples and maps showing locations of drill holes, all of which is pertinent information paid for but is not now available for a reliable evaluation basis.

#### Desert Queen

Development of this property consists of two short diamond drill holes and a few cuts or trenches. This work, although meager, does indicate the existence of a uranium bearing shale member within the quartzite formation.

Unfortunately there is no information as probing results of the two drill holes. Mr. Aggius reports that high probe values were obtained at depths equivalent to projection of the local dip of the mineralized shale member, however, no uranium content can be assigned to the intersection. It would be the writers guess that a value of from .10 to .30% could be applied to these intersections.

#### Minarik

Development on this property is limited to a few cuts and trenches, two very short adits and presumably some drilling completed by the U. S. G. S. but the writer has not been able to confirm this to any extent.

All in all, development of the two properties is extremely limited and presents many evaluation difficulties except in a geological light. Much exploration is needed to provide ample information for proper records and evaluation.

A visit to the local A. E. C. office here in Phoenix proved futile even though I exhibited the necessary documents to prove Mr. Swain was the current person purchasing the property. Their office was very uncooperative.



### RECOMMENDED EXPLORATION

For reasons stressed in paragraphs under "Mineralization", the following exploration steps must be considered:

(1)-A complete surface geological mapping of the properties together with topographical features such as drainage, surface contours, is required.

(2)-A radiometric grided survey in those areas under which the mineralized silicified shale member is known to exist. This to possibly isolate zones of stronger mineralization.

(3)-Initiate an adequate sampling program designed to test the strength of mineralization of all exposed outcrops. (attempt if possible to correlate the stronger areas indicated by sampling with those of the stronger areas indicated by item 2-geophysical survey.)

(4)-Initiate a program designed to test the indicated areas by core drilling.

(5)-Initiate a rigid drill core and sludge sampling program such that samples can be assayed chemically and the correct results may be properly evaluated through geologic logging, preparation of adequate sections, maps, etc.

(6)-This exploration work must be completed under the rigid supervision of a professional man who is experienced in geology, drilling, handling of samples and their procedures, etc.

### EXPLORATION COSTS

A program such as outlined above is not tangible or materially fixed since advancement from one phase to the next is completely dependent on the negative or positive results of the preceeding phase or phases. Thusly, the program may require all five phases and on the other hand it could



easily be limited to the first three phases.

Assuming the recommended exploration were carried to completion, an expenditure of approximately \$100,000 must be considered to obtain the minimum amount of information and were the results encouraging, an additional like sum might be necessary. On the other hand, were only the first three phases necessary and the program limited to this point because of poor results, the cost would not necessarily exceed \$10,000 for the required professional fees involved and cost of sampling, assaying, etc.

If sufficient fore-sight to project the financing of this project to the ultimate figure of \$200,000 is not possible or available, it would be wise to forget the matter entirely since there is little to be gained by spending a few dollars here and a few dollars there. Past experience as to exploration on these properties is ample proof.

#### ONE RESERVE

The writer would not only be kidding himself, but would be attempting to fool others if an ore reserve estimate was forwarded. All that can be said using the available limited information and the knowledge gained from the examination is that an undeterminable large tonnage of low grade uranium mineralized rock is indicated. A projected grade of this material is indicated to be about .10%  $U_3O_8$ , a material which economically can not be considered "ore" since mining, trucking and milling costs would exceed the value of the contained mineral.

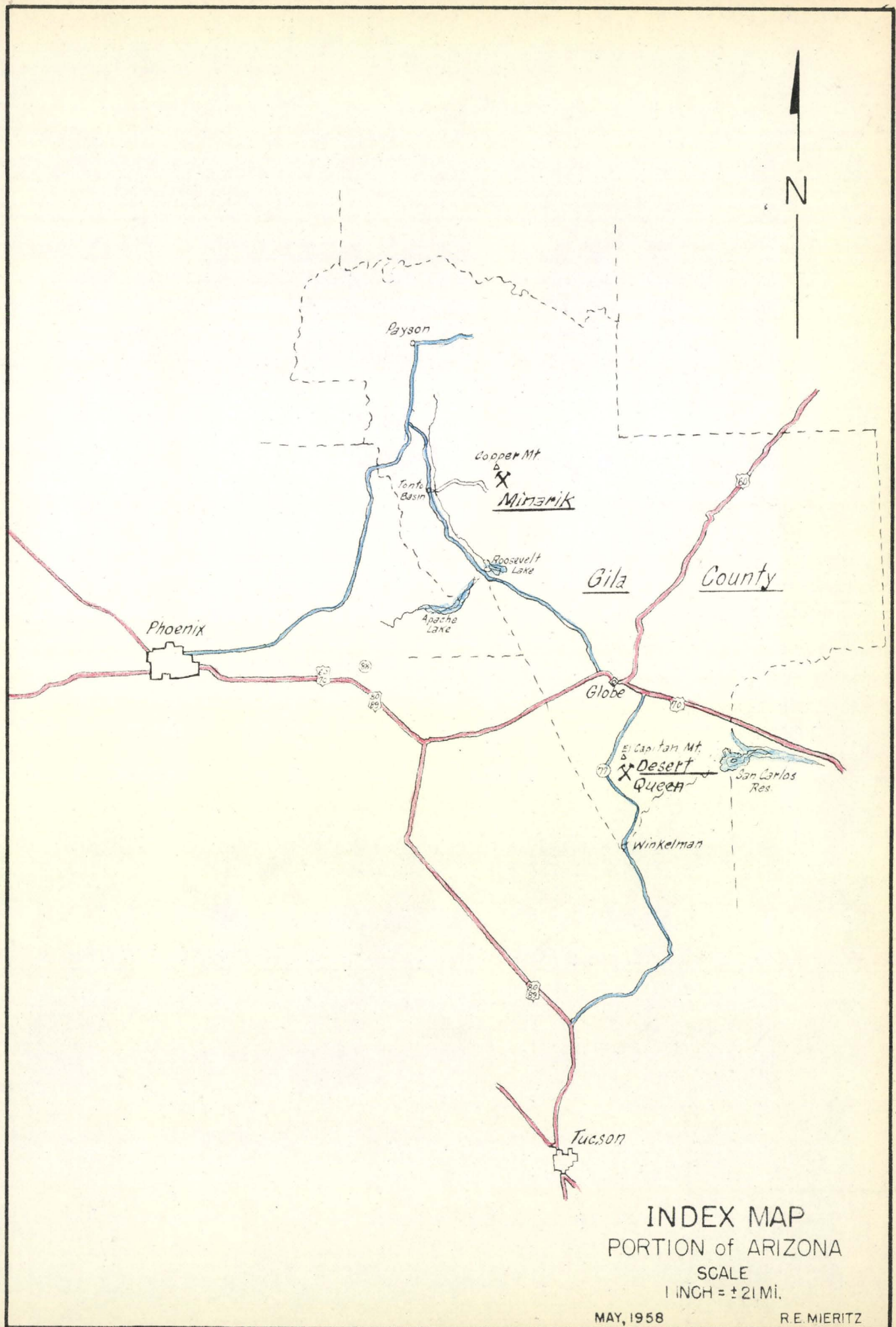
It is therefore pertinent that future exploration be directed towards a search for stronger mineralization within the known mineralized shale bed.



Respectfully submitted,

Richard E. Mieritz  
Mining Consultant  
Phoenix, Arizona  
May 17, 1950



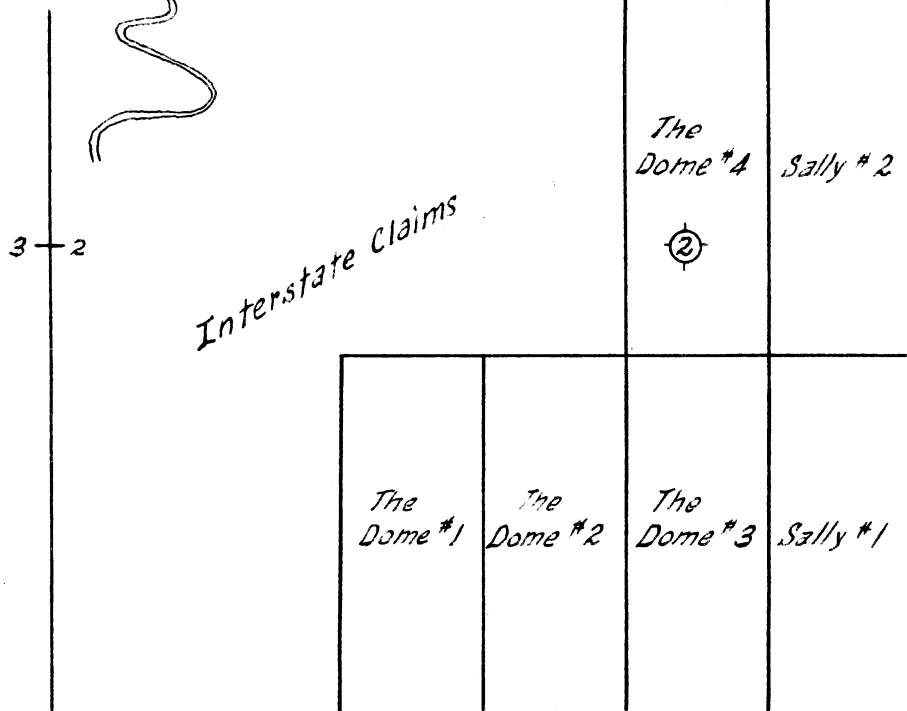


R. 15 E.

T.

$\frac{34}{3} \frac{35}{2}$ Sally # 7	$\frac{35}{2}$ Sally # 6	Sally # 5
Johnny # 2	Johnny # 3	Sally # 4
Johnny # 1 Drill Holes	Johnny # 4	Sally # 3

$\frac{2}{3}$   
S.

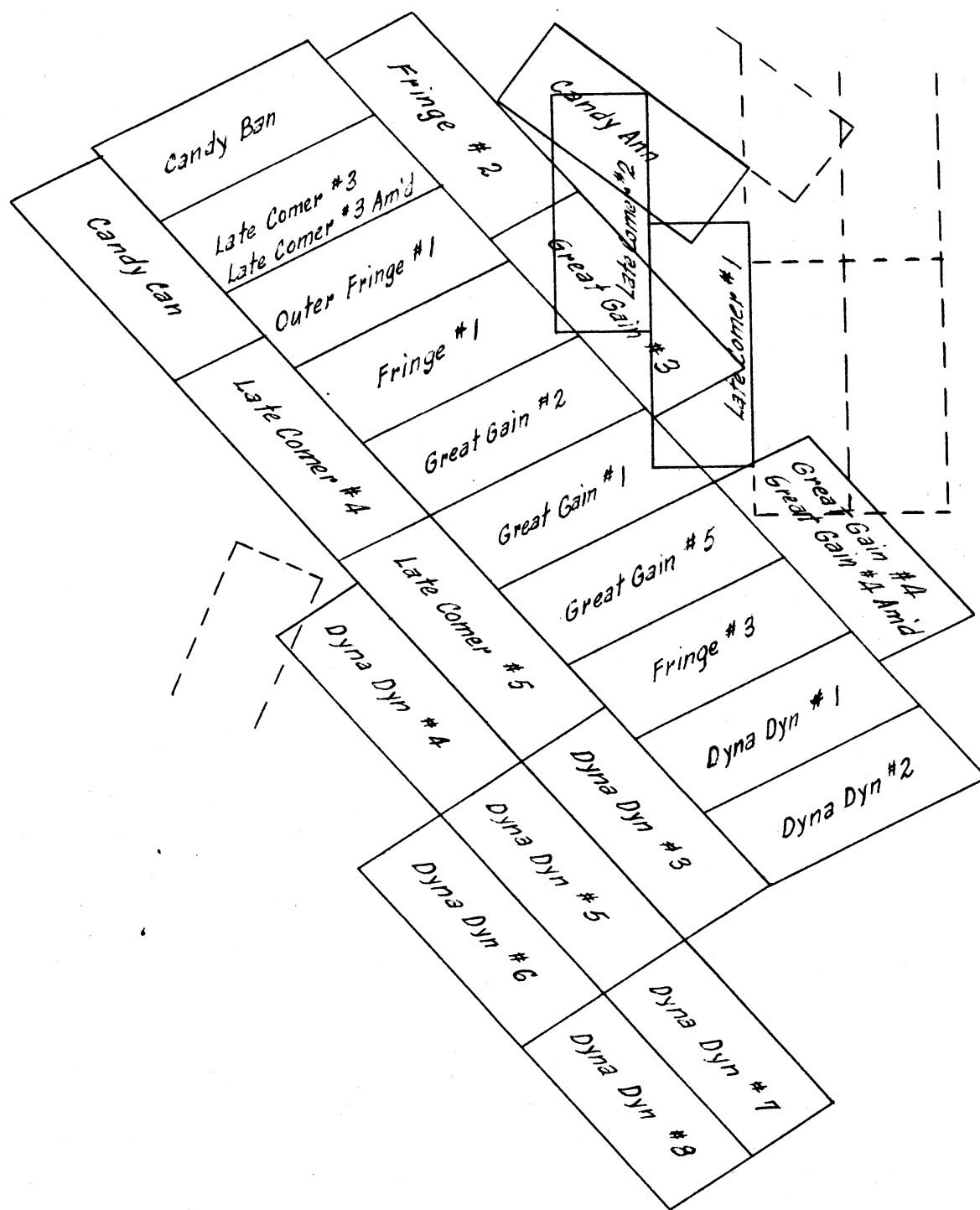


CLAIM MAP  
DESERT QUEEN GROUP  
EL CAPITAN MINING DISTRICT  
GILA COUNTY, ARIZONA  
PAGE SIZE SCALE  
1" = 800 FT.

MAY, 1958

REMERITZ





Approximately Sec. 36-T.7N-R.12E.  
Gila County, Ariz.

CLAIM MAP  
MINARIK GROUP  
SIERRA ANCHA MINING DISTRICT  
GILA COUNTY, ARIZONA  
PAGE SIZE SCALE  
1" = 1,000FT

MAY, 1958

R. E. MIERITZ

CURSORY EXAMINATION  
REPORT  
of the  
INTERSTATE URANIUM PROPERTY  
in  
EL CAPITAN MINING DISTRICT  
Gila County, Arizona

by

R. E. Mieritz  
Mining Consultant  
Phoenix, Arizona

May 17, 1958



COLLIER CONVEYANCE

RECEIVED

FEB 2 1973

TABLE of CONTENTS

	<u>Page</u>
Introduction.....	1
Conclusions.....	1
Property and Location.....	2
Geology.....	2
Mineralization.....	3
Development.....	4
Recommended Exploration.....	5
Exploration Costs.....	6
Ore Reserves.....	7

APPENDIX

Tabulation of drill hole probings.

MAPS

Index Map

Claim Map

## INTRODUCTION

At the request of Mr. C. Orin Swain, President of the Desert Queen Uranium Company of Whittier, California, the writer has completed an examination and evaluation of the Interstate uranium property by a physical field visit to same, a study of available limited information and by application of the writers knowledge of the area which we are concerned with.

The field examination of the Interstate group of claims was completed on March 22, 1958 during a miserable day of rainstorms and wind.

Acknowledgement must be made for the assistance of Mr. Angius whom was very helpful to the writer on the field trip and providing information.

## CONCLUSIONS

As a result of the field examination personally completed by the writer and a review of the limited available information, the following conclusions are forwarded:

- (1)-Uranium mineralization is limited to a silicified shale member within the Dripping Springs quartzite formation,
- (2)-The grade of the mineralization thus far indicated is approximately .10%  $U_3O_8$ ,
- (3)-Existence of stronger uranium mineralization is a possibility as elongated zones controlled to a great extent by local dip changes and/or depressions created at time of deposition of the shale,
- (4)-Exploration as surface geologic mapping, geophysical instrumentation, outcrop sampling, core drilling and sampling must be completed to adequately develop the property and evaluate same,



(5)-Some \$100,000 may be required to completely accomplish the recommended exploration program.

(6)-If such funds are not available, the project should be forgotten since any expenditure less than \$50,000 on this property would be a waste of funds.

#### PROPERTY and LOCATION

The Interstate claims are contiguous and lie in Sections 2 and 3 of T. 3 S., R. 15 E., Gila and Salt River Base and Meridian, Gila County, Arizona. The property is 18 miles southeast of Globe, Arizona in the El Capitan Mining District, El Capitan Mountain Range.

Another property, the Desert Queen claims adjoin the Interstate claims on the north and east.

Interstate claims are accessible over State Highway 77 from Globe. A short Jeep road connects the property with route 77.

Fifteen contiguous standard lode mining claims make up the Interstate property, the claims of which are tabulated below:

#### Interstate

Zora # 1	Sky # 1	Fran #1
Zora # 2	Sky # 2	Fran # 2
Zora # 3	Sky # 3	Fran # 3
Zora # 4	Sky # 4	Fran # 4
Peanuts	Sky # 5	Fran # 5

The writer has assumed the validity of these claims as to proper location notices, etc and he is amply sure sufficient work has been completed on the claims to qualify them for annual assessment requirements.

#### GEOLOGY

Geology-wise, the property is situated in an area of simple stratigraphical rock history, namely sediments, and in particular the wide



spread, very thick Dripping Springs quartzite formation. To describe regional structural and geologic sequences would add little to this report since its interpretation would not influence to an great extent the analysis of the evaluation.

#### MINERALIZATION

Occurance of uranium mineralization on this property can be simply stated as being confined to a two to four foot thick silicified shale member within the Dripping Springs quartzite formation. Where recent erosion has cut deep canyons, exposures of the shale member are in evidence and in many instances increased radioactivity is observed. Some of the increased radiation is due to the rock change, however, the balance of the increased count represents the presence of radioactive minerals.

The uranium minerals observed at the property are uranophane, autunite and torbernite, all being secondary minerals, the former two containing calcium and the latter containing copper. The color of these minerals are light green to apple green, earthy and resinous in character. These uranium minerals are found along the thin bedding planes or parting layers of the shale member rather than as disseminations throughout the mass. This fact indicates deposition of the uranium minerals were simultaneous with that of the shale member, the minerals being carried in solution until deposition occurred.

A study of the drill hole probings indicates that a stronger concentration of uranium occurs near the middle of the shale member rather than being evenly distributed throughout. Moreover, there is strong indications that secondary enrichment has also occurred since there is a distinct abrupt increase at the top of mineralization with a gradual diminishing value when passing through the zone or member. Although feeble,



the probing results also indicate the intersection or top of the shale member. ( see drill hole probing results in appendix)

Clues to stronger mineralization may possibly be identified with changes in bed dips or strike depressions. Therefore, detailed geologic mapping is a definite requirement as a guide to future exploration.

#### DEVELOPMENT

To date a meager amount of unplanned or haphazard development has been completed as trenches, cuts and diamond drilling. There is little record of the results obtained by samples taken from outcrops, cuts and trenches, geologic drill core logs and samples and maps showing geology and locations of drill holes, all of which is pertinent information paid for but is not now available for a reliable evaluation basis.

The Interstate Group has been developed with trenches, cuts and drill holes. Some 924 feet of diamond drilling was completed in seven holes. These holes are intermittently spaced over an area 700 feet by 400 feet. The total sum of information obtained from this drilling was to indicate the presence of the thin silicified shale member, host to the uranium mineralization within the quartzite and to indicate to some extent, by probing, the strength of uranium content. Without a chemical analysis for comparison, the radiation count obtained is to a great degree meaningless.

In addition to the above development, many six foot jack-hammer holes were drilled paralleling the strike of the shale member which outcrops in a canyon wall traversing the property. Apparently no samples were taken of the cuttings to determine the uranium content.

Of the seven holes diamond drilled on this property, in particular on the Sky # 5 claim ( see map), the writer has probing information on but five, holes 1 thru 5. The probing results of each hole are tabulated as an appendix. Holes 1, 4 and 5 show an increase in radiometric readings as



follows:

Hole	Depth in feet		Probe Reading	Equiv. U <sub>3</sub> O <sub>8</sub>
	From	To		
1	172	174	.60	.10
4	43	45	.50	.09
5	34	35.5	.80	.11

Mr. Angius advised that high readings were obtained in holes 2, 3, 6 and 7 but since the writer has no definite records, the information can not be used in his evaluation except in a general way.

The above results indicate mineralized shale was intersected at depths equivalent to projection of the local dip and uniform thickness. From the results also, one might suggest the existence of a stronger mineralized zone somewhere near holes 1, 4, and 5, however, more field and exploration work would be required to substantiate this thought.

All in all, development of this property is very meager and presents many evaluation difficulties except in a geologic light. Much exploration is needed to provide ample information for proper records and evaluation.

A visit to the local A. E. C. office here in Phoenix proved futile. Their office was very uncooperative.

#### RECOMMENDED EXPLORATION

For reasons stressed in paragraphs under "Mineralization", the following exploration steps must be considered:

- (1)-A complete surface geological mapping of the property together with topographical features such as drainage, surface contours, etc is required.
- (2)-A radiometric grided survey in those areas where the mineralized shale member is known to exist. This to possibly isolate zones of stronger mineralization.



- (3)-Initiate an adequate sampling program designed to test the strength of mineralization of all exposed outcrops. (attempt if possible to correlate stronger areas indicated by sampling with that of stronger areas indicated by item 2-geophysical survey).
- (4)-Initiate a program designed to test by core drilling the possible indicated strong areas.
- (5)-Initiate a rigid drill core and sludge sampling program such that samples can be assayed chemically and the correct results may be properly evaluated through geological correlation and preparation of adequate sections, maps, etc.
- (6)-This exploration work must be completed under the rigid supervision of a professional man who is experienced in geology, drilling, handling of samples, etc.

#### EXPLORATION COSTS

A program such as outlined above is not tangible or materially fixed since advancement from one phase to the succeeding phase is completely dependent on the negative or positive results of the preceeding phase. Thusly, the program may require all five phases and on the other hand it could easily be limited to the first three phases.

Assuming the recommended exploration were carried to completion, an expenditure of approximately \$50,000 must be considered to obtain a minimum amount of information and were results encouraging, an additional like sum might be necessary. On the other hand, were only the first three phases necessary and the program limited to this point because of poor or negative results, the cost would not necessarily exceed \$7,000 for the required professional fees involved and cost of sampling, assaying etc.

If sufficient fore-sight to project the financing of this project to the



ultimate figure of \$100,000 is not possible or available, it would be wise to forget the matter entirely since there is little to be gained by spending a few dollars here and a few dollars there. Past experience as to exploration on this property is ample proof.

#### ORE RESERVES

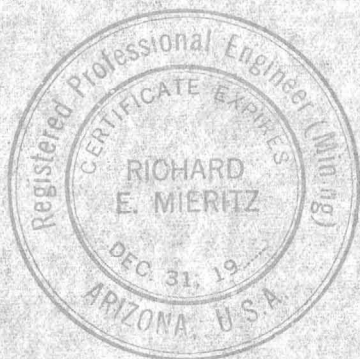
The writer would not only be kidding himself, but would be attempting to fool others if an ore reserve estimate was forwarded. All that can be said using the available information and the knowledge gained from the examination is that an undeterminable large tonnage of lowgrade uranium mineralized rock is indicated. A projected grade of this material is indicated to be slightly over .10% contained uranium, a material which economically can not be considered "ore" since mining, trucking and milling costs would exceed the value of the contained mineral.

It is therefore pertinent that future exploration be directed towards a search for stronger mineralization within the known mineralized shale bed.

Respectfully submitted,

Richard E. Mieritz  
Mining Consultant  
Phoenix, Arizona

May 17, 1958





# APPENDIX

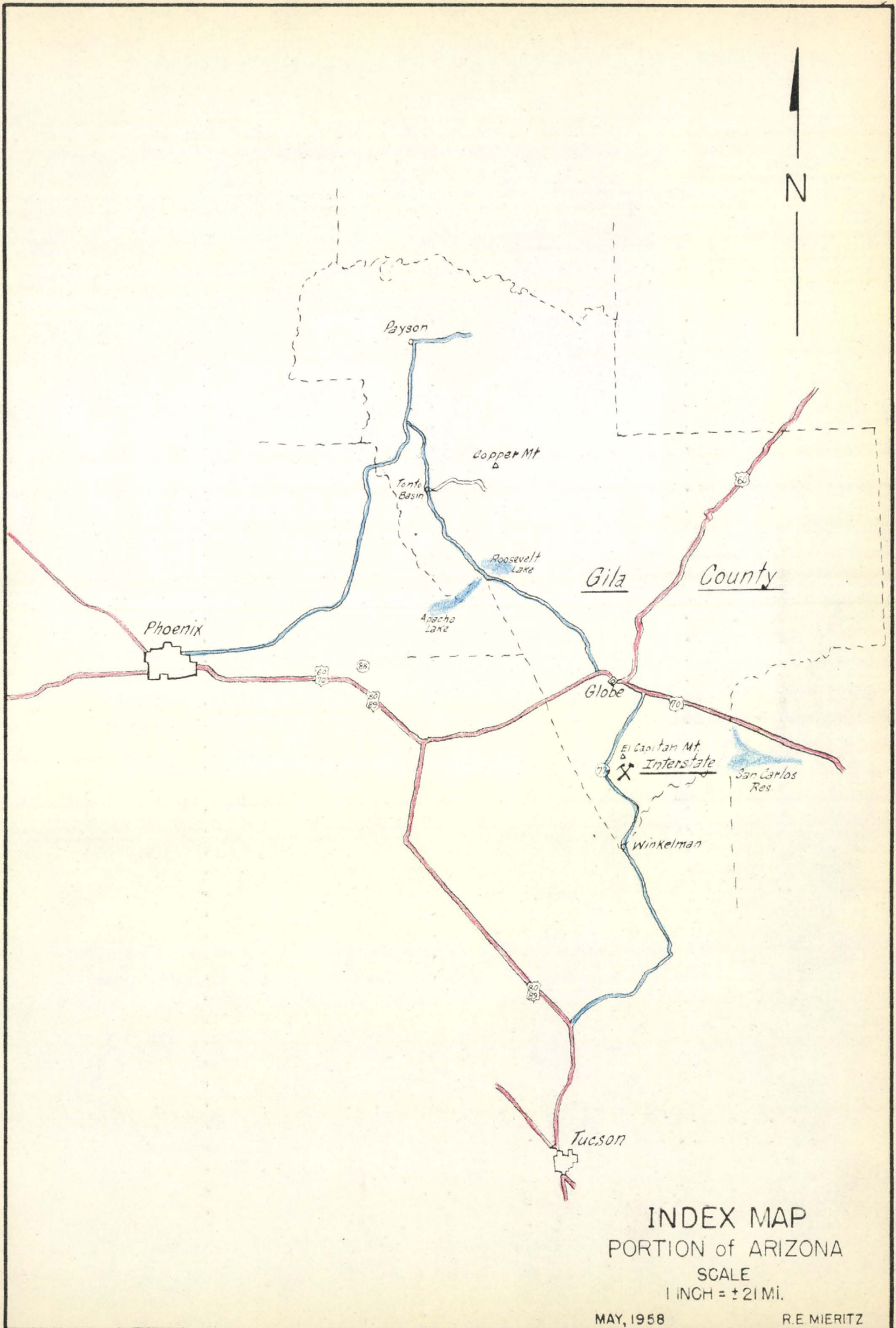
Tabulation of radio-metric probing of drill holes  
on the Sky #5 claim, Interstate Group, Gila County, Ariz.

Hole # 1		Hole # 2		Hole # 3	
Depth	Probe Read.	Depth	Probe Read.	Depth	Probe Read.
0 to 70 feet		5	.04	5	.05
.34 avg.		10	.06	10	.06
75	.05	15	.07	15	.06
80	.02	20	.10	20	.05
85	.03	21	.15 Shale	25	.04
105	.02	22	.17	30	.05
125	.03	23	.08	35	.06
145	.02	26	.06	40	.08 Shale
150	.05	27	.08	45	.07
155	.04 Shale	30	.06	46	.26
162	.07	48	.04		
165	.03 Shale	50	.03		
170	.08	52	.05		
172	.90	55	.07	Hole # 4	
173	.70	57	.05	5	.06
174	.40	60	.04	10	.05
175	.30	65	.08	15	.06
177	.09	67	.05	20	.05
180	.07	70	.04	25	.07
182	.08	77	out	30	.08 Shale
184	.12			35	.05
186	.08			40	.10
187	.10			43	.70
188	.07			45	.30
190	.06			47	.07
192	.08	Hole # 5		48	.07
194	.12	8	.05	50	.07
195	.10				
196	.06	33	.20		
200	.05	34	1.20 Shale		
201	.08	35 <sup>1</sup>	.40		
202	.10	36	.20		
205	.07				
206	.06				
210	.05				
220	.07				
229	.10				
233	.08				
235	.07				
237	.05				
240	.04				
245	.05				
252	.07				
255	-				

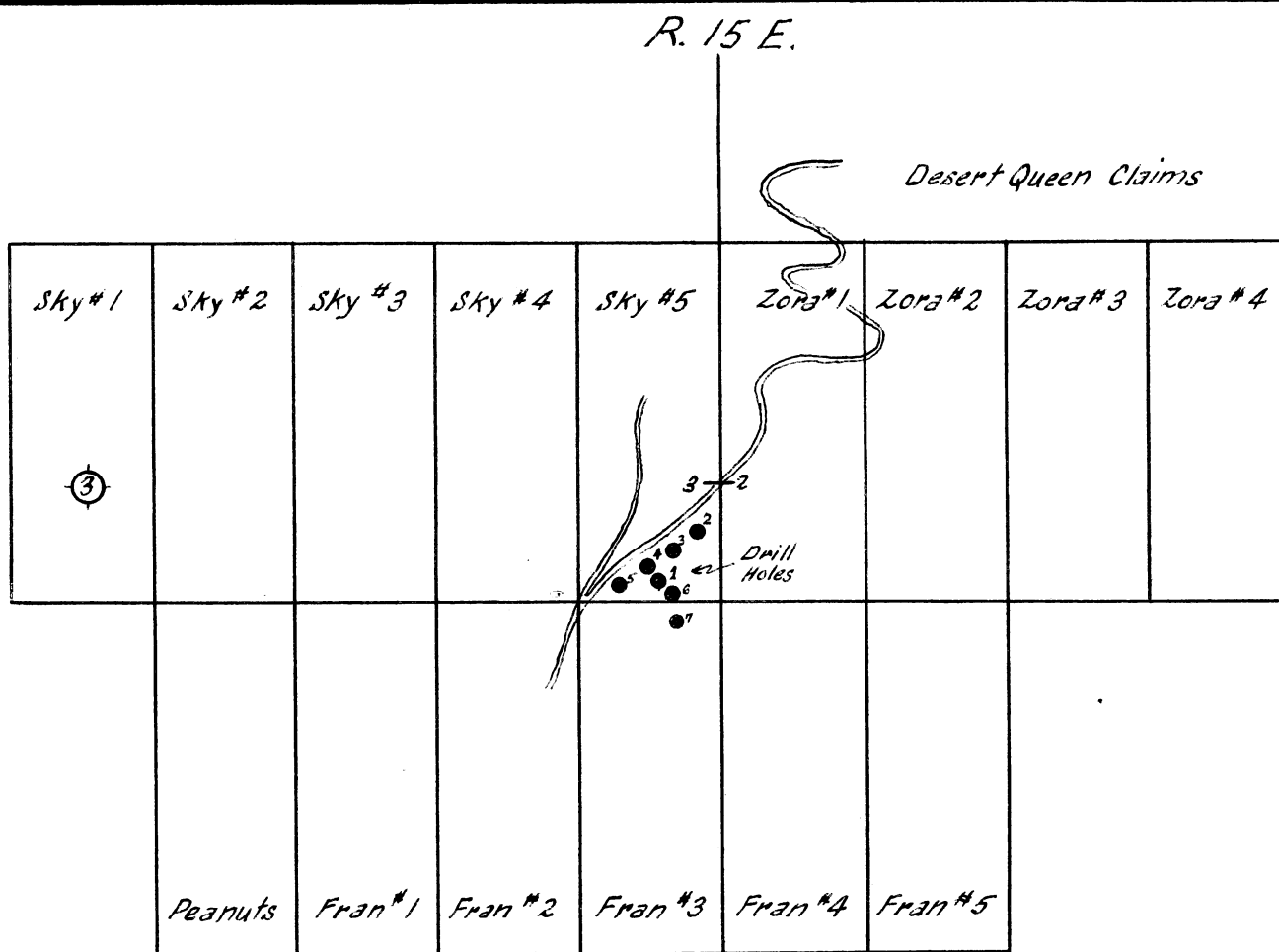
## NOTE

Holes 1 and 2 were probed on 4/27/55  
Calibration .10% U<sub>3</sub>O<sub>8</sub> -- .6 to .8  
.20% 1.2 to 1.5

Holes 3, 4 and 5 probed on 5/9/55  
Calibration .10% U<sub>3</sub>O<sub>8</sub> -- .65  
.20% -- 1.30







②

T.  
3  
S.



CLAIM MAP  
INTERSTATE GROUP  
EL CAPITAN MINING DISTRICT  
GILA COUNTY, ARIZONA  
PAGE SIZE SCALE  
1" = 800 FT.

MAY, 1958

R.E. MIERITZ