DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 3361

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Exploration Assistance

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

Cys to USBM & USGS

Routing Slip

To:	500	Date	5/24/54
To:	Open Com	Date	6-4-54
To:	Open Com	Date	11-22-54
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DO NOT DETACH

CONTROLLED DOCUMENT

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/14/68		110
		220

Mr. Bernard Steinger
Steinger and Schaeffer
Attorneys and Coinselors
201 South Central
Clayton (St. Louis), Missouri 63105

JUN 14 1968

Re: DMEA-3361 (Copper-Lead-Zinc)
Arizona-Utah Mines Company
French Lily Mine
Yavapai County, Arizona

Dear Mr. Steinger:

This will acknowledge receipt of your check in the amount of $3.00 to cover the cost of duplicating and mailing material pertaining to the subject contract.

In response to your request, enclosed are copies of the application for aid in an exploration project of the Arizona-Utah Mines Company, accompanying map of the French Lily Mine, and geologic map of Levels 4 and 5, French Lily mine.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's Reading File
Economic Geology File
OME file
OME Reading File

FEJohnson/gla 6-14-68

OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY

TO: Budget and Finance

FROM: Office of Minerals Exploration

- ABSTRACT OF REMITTANCES -

Date	Amount	Bank, City and State	Name of Remitter	Docket & Contract Numbers	Purpose
5/27/68	$3.00	1st. Natl' Bank Clayton, Mo.	Steinger & Schaeffer	DMEA 3361	Duplicating

REMARKS: (List smelter or mill lot numbers covered by royalties)

5/29/68
Date Prepared

Catherine A Curtin
Person Preparing Abstract

Date Received

Person Receiving Remittance

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

21, 1968

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 29 1968

INITIALS	CODE
	110

Mr. [illegible]rd Steinger
Steinger and Schaeffer
Attorneys and Counselors
2[illegible] South [illegible]ral
(City [illegible] St. Louis), Missouri 63105

Re: DMCA-1561 (Copper [illegible])
Arizona-Utah Mines Company
[illegible] Mine
[illegible]

[illegible]

[illegible] May 16, 1968 [illegible]

[illegible]

[illegible] 1,100 [illegible]

Sincerely yours

[illegible]

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/24/68		110
		220
Return docket		110

MAY 24 1968

Mr. Bernard Steinger
Steinger and Schaeffer
Attorneys and Counselors
201 South Central
Clayton (St. Louis), Missouri 63105

Re: DMEA-3361 (Copper-Lead-Zinc)
Arizona-Utah Mines Company
French Lily Mine
Yavapai County, Arizona

Dear Mr. Steinger:

Your letter of May 16, 1968, to the Office of Minerals Exploration, Denver, Colorado, requesting on behalf of your client, Corporation Merger and Acquisitions, Inc. factual information on the subject application, and enclosing a copy of a quit claim deed as evidence of your client's ownership of the French Lily claims, has been referred to this office.

The only information on the application of the Arizona-Utah Mines Company we have available consists of the application, accompanying map of the French Lily Mine, and a Geologic map of Levels 4 and 5, French Lily Mine. Copies of this material are being reproduced and will be forwarded to you upon receipt of your check payable to the U. S. Geological Survey in the amount of $3.00 to cover the cost of reproduction and mailing..

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Economic Geology File
OME docket
OME Reading File

FEJohnson/gla 5-24-68

Office of Minerals Exploration
Building 53 Room 203

May 21, 1968

OFFICIAL COPY
O. M. E.
MAY 22 1968
INITIALS | CODE
gla | 120
| 110
| 222

Mr. Bernard Steinger
Steinger and Schaeffer
Attorneys and Counselors
201 S. Central
Clayton (St. Louis), Mo. 63105

Subject: DMEA - 3361

denied 11/22/54

Dear Mr. Steinger:

Your letter of May 16, 1968 and deed relative to the above-stated subject have been received and are being forwarded to the Washington Office of Minerals Exploration for reply.

Your attention is invited to our complete mailing address:

Mr. J. William Hasler, Field Officer, Region III
Office of Minerals Exploration-U. S. Geological Survey
Denver Federal Center-Building 53 - Room 203
Denver, Colorado 80225

Our telephone number is Area Code 303- 233-3611, extensions 8598, 8731 or 8546.

Sincerely yours,

J. William Hasler
mc

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

cc: Chief, Office of Minerals Exploration
OME chron

Steinger and Schaeffer
Attorneys and Counselors

BERNARD STEINGER
MILTON W. SCHAEFFER
HERBERT D. SCHAEFFER

Cable:
Berstass = St. Louis

Telephone, *314=726=2131*
314=727=6860

201 S. Central
Clayton (St. Louis) Mo. 63105

OME Region III
RECEIVED
MAY 20 1968
Denver, Colorado

May 16, 1968

Office of Minerals Exploration
United States Department of Interior
Denver, Colorado

Re: DMEA - 3361

Gentlemen:

This is to advise you that I represent Corporation Merger and Acquisitions Inc., a Missouri Corporation, in care of the undersigned at my above address, who has recently purchased The French Lily Mining claims, recorded as French Lily No. 1, French Lily No. 2, French Lily No. 3 in book No. 478, Page No. 432, and I am enclosing a copy of the deed which is evidence of my client's ownership of said mine.

My client has instructed me to obtain from you all factual information in the application for aid in the exploration project on this mine which was made by the Arizona-Utah Mines Company and in your records according to United States Department of Interior, geological survey, Arthur A. Baker, Acting Director.

Will you kindly send this information and bill accordingly?

Very truly yours,

Bernard Steinger

Bernard Steinger

BS:jw

STATE OF ARIZONA, County of Yavapai—ss.

I do hereby certify that the within instrument was filed and recorded at the request of Sidney E. Parter on May 3 A.D., 1968 at 11:00 o'clock a M. Book 491 Official Records Page 382, Records of Yavapai County, Arizona.

WITNESS my hand and official seal the day and year first above written.

FRANK C. BAUER, County Recorder.

By Evelyn D. Zaro, Deputy

INDEXED PAGED PHOTOSTATED

THE GRANTOR James W. Hines

of the City of Mt. Vernon County of Jefferson State of Illinois

for the consideration of Ten DOLLARS, and other valuable consideration in hand paid,

CONVEY and QUIT CLAIM to Corporation Merger and Acquisitions, Inc.

of the City of ~~St. Louis~~ Clayton County of St. Louis State of Missouri ~~not in Tenancy in Common, but in JOINT TENANCY~~, all interest in the following described Real Estate situated in the County of Yavapia in the State of Arizona to wit:

The French Lily Mining claims, recorded as French Lily No. 1, French Lily No. 2, French Lily No. 3 in book No. 478, Page No. 432.

hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of the State of Arizona TO HAVE AND TO HOLD said premises ~~not in tenancy in common, but in joint tenancy~~ forever.

DATED this 29 day of March 1968

(Seal) James W. Hines (Seal)

PLEASE PRINT OR TYPE NAME(S) BELOW SIGNATURE(S)

JAMES W. HINES

(Seal) (Seal)

State of Illinois, County of Cook ss., I, the undersigned, a Notary Public in and for said County, in the State aforesaid, DO HEREBY CERTIFY that

PAULINE SCHULTZ NOTARY PUBLIC SEAL HERE COOK COUNTY ILL.

personally known to me to be the same person whose name James W. Hines subscribed to the foregoing instrument appeared before me this day in person, and acknowledged that he signed, sealed and delivered the said instrument as free and voluntary act, for the uses and purposes therein set forth, including the release and waiver of the right of homestead.

Given under my hand and official seal, this 29th day of March 1968

Commission expires July 14 1968 Pauline Schultz NOTARY PUBLIC

AFFIX "RIDERS" OR REVENUE STAMPS HERE

ADDRESS OF PROPERTY:

Pine Grove Mining District
Yavapai County, Arizona

THE ABOVE ADDRESS IS FOR STATISTICAL PURPOSES ONLY AND IS NOT A PART OF THIS DEED.

SEND SUBSEQUENT TAX BILLS TO:

Same as Mailing (NAME)

Address (ADDRESS)

MAIL TO: NAME Corporation Merger and Acquistions, Inc. c/o B. Steinger, Reg. Agent
ADDRESS Suite 111-201 S. Central
CITY AND STATE Clayton, Mo. 63105

OR RECORDER'S OFFICE BOX NO. BOOK 491 PAGE 382

DOCUMENT NUMBER

OME Surface copy

FEB 6 - 1968 2/5/68 110

2/6 Kilbourne 220

2/6 Kepp

Hon. Paul Fannin
United States Senate
Washington, D. C. 20510

Dear Senator Fannin:

Your memorandum of January 23 to the Director, Bureau of Mines, Department of the Interior, enclosing an undated letter to you from Mr. Lee Tabler, of Mayer, Arizona, concerning release of information to owners of properties involved in the program of the former Defense Minerals Exploration Administration (DMEA), has been referred to the Geological Survey.

The Geological Survey's Office of Minerals Exploration as successor to the DMEA has certain files on applications for aid in an exploration project received and processed by that agency. Available factual information on a property in these files may be released upon written authorization from the applicant, or in the event that the applicant has abandoned the property and no longer has an interest in it, available factual information may be released upon written authorization from the owners of the property.

With respect to the French Lilly mine mentioned in Mr. Tabler's letter, an application for aid in an exploration project on this mine was made by the Arizona-Utah Mines Company (DMEA-3361). Upon receipt of written authorization from this applicant, the factual information in this application may be released to Mr. Tabler. Upon receipt of evidence that this applicant has abandoned all interest in the property and receipt of written authorization from the owners of the property, such information may be released to Mr. Tabler. A charge is made to cover the cost of reproduction of material and the cost of mailing.

Mr. Tabler's letter is returned as requested.

Sincerely yours,

Arthur A. Baker

Acting Director

Enclosure

cc: Director's Chron
General File
Division File
Economic Geology File

OME docket
OME Reading F
OME Region

FEJohnson/gla

United States Senate

MEMORANDUM

The Director
Bureau of Mines
Department of the Interior
Washington, D. C.

Jan. 23, 1968
(date)

Re:
Lee Tabler
P.O.Box 254
Mayer, Arioona 86333

Sir:

The attached is respectfully referred to you for consideration and for a report thereon, in duplicate, together with the return of the enclosure.

Thank you for your courtesy in this matter.

Sincerely yours,

PAUL FANNIN

U.S.S.

~~P.S. It will be appreciated if no mention is made in your report of the fact that the constituent's correspondence has been sent to you.~~

Arizona Mines (Mineral) Co.
Phoenix - 332 (Wilson)

17031

JAN 15 1966

Lee Tobler
P.O. Box 254
Mayer, Ariz.
86333

Honorable
Paul Fannin:
Sir:

3361

On regard to the old DMEA records held by the Bureau of Mines at Tucson. French Lilly Mines

If only this one mine was involved we would not go to this extent. We would get new records made and forget it.

However we are contemplating mills to do custom work and financial help for owners who need it. Most of whom may not be able to afford the

GS

cost of new maps and geo. reports. Thus they could not prove feasability of operation. Which must be proven before our Engineers go in to drill and test.

We advocate the release of these old records only to the owners who have deeds or recorded location notices!

Both the RFC and DMEA are out of operation. No longer any need for secrecy.

This policy, as we see it is a block to Arizona progress. And could result in a loss of jobs and new revenue to the State.

Respectfully
Lee Tabler

F. E. Johnson
Pmb. 4460

DME A-3361
Arizona - Mot. Mines, G

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 9 1968
INITIALS CODE
7/9 1/10

February 6, 1968

Hon. Sam Steiger
House of Representatives
Washington, D.C. 20515

Dear Mr. Steiger:

In response to your request of January 30, 1968, for consideration of Mr. Lee Tabler's need to obtain copies of reports on file in the Tucson office of the Bureau of Mines, we have investigated the materials in that office pertaining to the French Lily mine in Yavapai County which we believe is the property involved. We find that there is a claim map of the property which can be made available to Mr. Tabler if he will write to Mr. John H. Soulé, U. S. Bureau of Mines, 8 West Paseo Redondo, Tucson, Arizona 85705, stating that he is the owner of the mine and requesting a copy of the map.

Mr. Tabler's reference to the RFC and DMEA indicates that he may also wish to obtain any reports that may have been made with respect to applications for a loan or exploration assistance from these agencies. The Office of Minerals Exploration of the U. S. Geological Survey is the successor agency to the DMEA and may have information it can make available to the owners of properties within their program. Mr. Tabler may wish to write to the Office of Minerals Exploration for whatever information they may have available.

Sincerely yours,

Director

FDLamb:hva
cc:
Director's Reading File
AD/MRD Reading File
MRD Reading File
F. D. Lamb
W. O. Files
F. E. Johnson, Office of Minerals Exploration
J. H. Soule, Tucson, Arizona

See Phx Hdlr

Lee Tabler
P.O. Box 254
Mayer, Ariz
86333

Congressman
Sam Steiger
Sir:

As you know, it is hard to get new money into Arizona to mill and mine.

We have a group that will invest in mills and mines, However the mine owners will need the records and maps, now in custody of the Bureau of Mines, (Mr. John Soule) in Tucson. To aid our engineers in determaning feasibility.

Mr. Soule refuses to release the data to anyone.

We feel that a proven owner should have access to these records for his, the state and county, benifit.

We are not at war? (as such) The B.F.C. and DMEA are both defunct about 20 years now. Why not help the owners?

The state needs the taxes. The county needs the taxes. The owners need the money. And I and my associates need the maps, and reports.

We are sure that such a formidable force as, yourself, Mr. Hayden and Mr. Udall can get these records released.

Respectfully, Lee Tabler

File Copy
Surname
Griswold

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

DEC 31 1954

Honorable Sidney R. Yates
House of Representatives
Washington, D. C.

Re: Docket No. DMEA-3361 (Copper-Lead-Zinc)
Arizona-Utah Mines Co.
French Lily Mine
Yavapai County, Arizona

My dear Mr. Yates:

I have your letter of December 29, inquiring as to the status of the above application.

The report in question was received soon after my letter to you of October 14. This report was thoroughly reviewed by the Commodity members of the U. S. Bureau of Mines and U. S. Geological Survey, as well as by the Base Metals Division of this Administration. Under date of November 22 we wrote to the Applicant company that a careful study of all our information, although noting a small amount of mineralization on their property, indicated to us that the probability of disclosing minable ore reserves by the proposed exploration program was not sufficiently promising to warrant Government participation.

I trust that you will feel free to call upon me at any time when I might be of service to you.

Sincerely yours,

E. O. Mittendorf

Administrator

WRGriswold/er 12/30/54
Copy to: Docket
Region IV (2)
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.L.G.

SIDNEY R. YATES
9TH DIST., ILLINOIS

COMMITTEES:
APPROPRIATIONS
SELECT COMMITTEE ON
SMALL BUSINESS

Congress of the United States
House of Representatives
Washington, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 30 1954

December 29, 1954

DMEA 3361
Arizona-Utah Mines Co.

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

Dear Mr. Mittendorf:

Please refer to your letter to me of October 14, 1954 concerning the information on Docket DMEA 3361, Arizona-Utah Mines Company, in which you advised that a report was expected within a week or ten days.

I would appreciate your advising me if this report is now available in order that I may reply to my constituent.

Sincerely yours,

Sidney R. Yates

SIDNEY R. YATES
Member of Congress

SRY:cr

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

224 New Customhouse
Denver 2, Colorado

November 23, 1954

Memorandum

To: Chairman, Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3361 (Copper-Lead-Zinc), Arizona-Utah Mines Company, Yavapai County, Arizona

Enclosed is a copy of a letter from the applicant's attorney requesting disposition of the subject application, and a copy of our reply.

W H King
W. H. King

Enclosures

Letter of denial crossed in mail - no reply necessary per W.P.S.

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

224 New Customhouse
Denver 2, Colorado

November 23, 1954

Memorandum

To: Chairman, Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3361 (Copper-Lead-Zinc), Arizona-Utah Mines Company, Yavapai County, Arizona

Enclosed is a copy of a letter from the applicant's attorney requesting disposition of the subject application, and a copy of our reply.

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

November 23, 1954

Mr. Joseph H. Morgan
Luhrs Building
Phoenix, Arizona

Re: Docket No. DMEA 3361
Arizona-Utah Mines Company

Dear Mr. Morgan:

This will acknowledge receipt of your letter dated November 22, 1954, requesting the disposition of your application for DMEA aid on the Arizona-Utah Mines Company.

The report of examination on the French Lily Mine has been forwarded to our Washington office for appropriate action and they will advise you of the disposition of your application.

Yours very truly,

W H King

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

HMC:dm
cc: Chm., Oper. Comm.
Subject
Chron

LAW OFFICES
JOSEPH H. MORGAN
LUHRS BUILDING
PHOENIX, ARIZONA

ASSOCIATE
DONALD J. MORGAN

November 22, 1954

Mineral Resources
Date Rec'd.
NOV 24 1954
Denver, Colorado

VIA AIR MAIL

Mr. W. H. King
Executive Officer
DMEA
224 New Customhouse
Denver, Colorado

RE: Arizona Utah Mines Co.
Application for Development Loan

Dear Mr. King:

The last letter I had from you was to the effect that the reports were not in on the above application. I am wondering if you could bring us up to date and let us know whether or not the application is still under consideration.

We would like particularly to be advised of the earliest possible date whether the application is to be allowed or denied.

Very truly yours,

Joseph H. Morgan

JHM:ejd

File Copy
Surname
Griswold
T. Kilsgaard
Hedges
Selfridge
Robinson
Mittendorf

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

NOV 22 1954

Mr. William J. Robinson, President
Arizona-Utah Mines Company
33 North La Salle Street
Chicago, Illinois

Re: Docket No. DMEA-3361 (Lead-Zinc-Copper)
Arizona-Utah Mines Company
French Lily
Yavapai County, Arizona

Dear Mr. Robinson:

The application of your company for aid for an exploration project and other reports available to us in Washington concerning the subject 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 a small amount of copper-lead-zinc mineralization on your property, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

WRGrisweld/er 11/19/54

Copy to: Docket
Admr R, File
Op. Committee
Base Metals
Region IV (2)
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.C.G.

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

November 19, 1954

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-3361, Arizona-Utah Mines Company, French Lily Mine, Yavapai County, Arizona

The subject mine has had an insignificant production (about 4,000 tons) of zinky ore, carrying a little copper, lead, silver and gold. It has been developed to a depth of 456 feet by means of a shaft and five levels, with a total of some 3500 feet of drifting.

The ore bearing structure is a shear zone which, in the lower workings, ranges from a few inches to three feet in width. Essentially this small shear is filled with gouge and quartz, with some of the quartz being mineralized with zinc and copper sulphides. The best of such mineralized quartz shoots were around a foot and a half thick and a "few tens of feet" in length, and have already been mined out.

Various other small, patchy quartz veins (less than a foot wide) have been exposed by trenching.

In all likelihood any program which might be authorized would, if successful, only show very insignificant tonnages, in small pods.

We concur with recommendations for denial.

W. R. Griswold

WRG/er 11/19/54

Copy to: Docket
Base Metals
Chron.

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

Department of the Interior
Defense Minerals Administration
RECEIVED
NOV 16 1954

November 15, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM, Reviewed by Walter E. Lewis

Subject: Docket No. DMEA-3361 (copper-lead-zinc), $157,000, Arizona-Utah Mines, Inc., French Lily Mine, Yavapai County, Arizona. Field team report of examination.

We have reviewed the subject report and attached correspondence, and concur with the recommendations of the field team that the application be denied.

The French Lily mine is about 60 air miles west of north from Phoenix, Arizona. The mine has had a somewhat intermittent history of operation. The first known active operation was during 1922-25. The mine was reopened in 1934, and with a Reconstruction Finance Corporation loan stayed in operation until 1937. The last and probably most active period was in 1945-53, when Ceda-Talisman Consolidated Mining extended the existing mine workings to their present limits and re-equipped the mine and mill. Approximately 4,000 tons of ore was milled during this period. Very little work has been done by Arizona-Utah since they purchased the property in January 1954.

Accessible mine workings are a 2-compartment inclined shaft and 5 east-west drifts driven at roughly 100-foot intervals measured along the incline of the shaft. The commercial ore has been stoped from all levels above the 550 level.

The mine has been developed on a shear zone in the Yavapai schist that strikes N. 45° W. and dips 45° northeast. In the lower workings, the shear zone ranges from 0.1 to 3 feet thick. It is filled with gouge, fractured schist and quartz stringers and lenses.

Evidence of mineralization is persistent along both strike and dip of the vein. Eleven samples taken by the field team in the extensively mineralized portions of the quartz lenses contained an

average of about 4.9 percent zinc, 0.7 percent copper, 0.6 percent lead, 1.1 ounces silver, and 0.3 ounce gold per ton. Inferred reserves below the 550-foot level would probably be about the same grade. This ore was submarginal because of its limited thickness. All of the wider mineralized portions have been extracted above the 550-foot level.

The applicant proposes a 2-stage project. Stage I is to consist of 100 feet of shaft sinking to the 650-foot level, 600 feet of drifting on the 550-foot level and 1,200 feet of drifting on the 650-foot level. If the results of Stage I are encouraging, Stage II would deepen the shaft 350 feet to the 1,000-foot level and provide 2,400 feet of drifting and 350 feet of raising on that level.

From the extensive development of the ground between the 3 lower levels, the mine produced about 15 tons of ore per foot of depth in a total combined level strike length of 1,500 feet. This amounts to 1 ton of ore per foot of depth for each 100 feet of drifting. Approximately the same amount of submarginal ore might be expected along the strike of the vein or at greater depths. There is no geological data in evidence that indicate there would be a material increase in the degree or extent of mineralization. Because of the unfavorable geological conditions, we concur with the field team that the application be denied.

The applicant also proposes some exploration drilling on 3 quartz veins, 3,000 feet southeast of the French-Lily mine. The veins at their outcrop are each about 0.7 feet thick and traceable on the surface for 40 or 50 feet. The grade and amount of ore per foot of depth is estimated to be less than at the French-Lily mine. The veins are of little significance and are too small to justify additional exploration.

O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Edward L. Newcomb, Room 5227
O. M. Bishop
Files

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
NOV 4 - 1954

November 3, 1954

Re: DMEA-3361
Arizona-Utah Mines, Inc.
(French Lily Mine)
$271,000
Copper-Lead-Zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of field examination report.

The applicant requested a two-stage project for Government assistance. Stage I was to consist of 100 feet of shaft sinking from the 550 to 650 levels and 1200 feet of drifting on the 650 level. Stage II would deepen the shaft to the 1,000 foot level, and 2400 feet of raising would be carried out from new intermediate levels.

The Field Team has recommended this application be denied.

The French Lily mine has been developed in a mineralized shear zone in the Yavapai schist to a depth of 456 feet. The shear zone ranges in width from a few inches to 3 feet. Sphalerite, chalcopyrite and gold in a quartz gangue occur in lenses up to about 40 feet in length. Most of the mineralized quartz lenses have been mined out.

Total production has been estimated to have been about 4,000 rock tons of unknown grade. An additional 4,000 tons of ore rock can be inferred to exist below present mine workings.

The results of 12 samples taken on and above the 550 level indicate quartz lenses in the shear zone range from 12 to 28 inches in width and average 4.9% zinc, 0.7% copper, 0.6% lead and 1.1 oz./ton silver and 0.30 oz./ton gold.

Sufficient work has been done in French Lily shear zone to indicate the nature of the ore deposits in this mine. Mineralization is limited to small, narrow lenses which in aggregate contain insignificant total amounts of copper, lead and zinc. Further exploration at depth is unlikely to find substantial amounts of ore. The grade, width and continuity of mineralization cannot be expected to improve below the present 550 level.

The Field Team's conclusions are well founded, and I recommend the application be denied.

E. L. Newcomb

E. L. Newcomb

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

224 New Customhouse
Denver 2, Colorado

Ocotber 15, 1954

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: Report of Examination, DMEA Docket 3361 (Copper-Lead-Zinc) Arizona-Utah Mines Co., French Lily Mine, Yavapai County, Arizona.

Enclosed are the original and three copies of the report pertaining to the above application.

There is no geologic evidence to indicate that exploration will lead to the discovery of significant ore bodies either at greater depths or laterally along the fault.

We recommend that the application for exploration assistance be denied.

W. H. King

W. H. King

for E. M. Hardman

A. H. Koschmann

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

October 15, 1954

Memorandum

To: DMEA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination, DMEA Docket 3361 (Copper-Lead-Zinc), Arizona-Utah Mines Company, French Lily Mine, Yavapai County, Arizona.

Enclosed are nine copies of the engineering report of examination on the subject docket.

The applicant company requested $271,000.00 to explore the property by sinking the shaft 100 feet and drifting a total of 1800 feet.

The engineer examiner believes that the probability of encountering significant amounts of copper-lead-zinc ore are unfavorable. He recommends that the application be denied. We concur in this recommendation.

W H King
W. H. King

Enclosures

August 23, 1954

Memorandum

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

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

Subject : Final Report, Docket DMEA-3361, Arizona-Utah Mines Co., French Lily Copper-Lead-Zinc Mine, Yavapai County, Ariz.

Enclosed are original and 8 copies of subject report by T. M. Romalo of the Bureau of Mines. A separate report on the geology will be submitted by the Geological Survey.

The report recommends denial of requested Governmental aid because exploration of the deposit cannot reasonably be expected to indicate the presence of other than an insignificant amount of sub-marginal copper-lead-zinc ore.

Storms did not have an opportunity to review the report because it was completed after he left on vacation.

Brochure is enclosed.

T. M. Romalo

T. M. Romalo, Mining Engineer
for Walter E. Storms, Chief
Mining Methods Branch
Mining Division, Region IV

CC W. H. King 8
J. N. Faick 1
DMEA-3361
DF

TMRomalo:frj

IN REPLY REFER TO:

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

October 12, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3361, Arizona Utah Mines Company, French Lily Mine (copper-lead-zinc), Yavapai County, Arizona

Enclosed are 9 copies of a geologic report by John N. Falck of the U. S. Geological Survey covering the above docket.

Low grade deposits containing lead zinc and copper sulfides occur in lenticular quartz bodies along a strong fault zone in the pre-Cambrian Yavapai schist. Although the French-Lily fault is a strong persistent structure, ore shoots along it have been small and of poor grade. Falck concludes that there is no geologic evidence to indicate that exploration will lead to the discovery of significant ore bodies either at greater depths or laterally along the fault. He recommends denial of the application for exploration assistance.

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

Enclosures (9)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

October 8, 1954

Memorandum

To: A. H. Koschmann

From: J. N. Faick

Subject: Arizona Utah Mines Company, French Lily Mine (Copper-Lead-Zinc), Yavapai County, Arizona, DMEA 3361

Enclosed are original and 8 copies of a report on the above subject. The report recommends denial of the application because unfavorable geological conditions indicate that significant amounts of ore will not be discovered by the project.

J. N. Faick

JNF:ms

Encls. 8 cc Koschmann
cc Storms

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-3361, Arizona-Utah Mines Company

French Lily Copper-lead-Zinc Mine

Yavapai County, Arizona

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

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

August 1954

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

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

The French Lily mine in Yavapai County, Ariz. was examined by the Defense Minerals Exploration Administration in connection with an application for Governmental aid by the Arizona-Utah Mines Co. The application, docketed as DMEA-3361, contained a proposed project designed to explore for ores of copper, lead and zinc mainly below existing mine workings. The total cost of the proposed project, set up in 2 stages, was $271,000.00.

The French Lily mine was worked mainly for gold prior to 1934. During 1934 to 1937 the mine was deepened, some drifting was done, and a flotation mill was installed. The mill was operated about 2 months before operations were terminated and equipment was sold. Little work was done from 1937 to 1945 when the property was acquired by the Cedar-Talisman Consolidated Mining Company. The company re-equipped the mine and mill, did additional development work, and mined and milled about 4,000 tons of ore. Operations were terminated late in 1953. In January 1954, the property was acquired by the Arizona-Utah Mines Company. Operations by the company have been confined to a few rounds of drifting, repair work and pumping operations. Total production from the mine probably does not exceed several carloads of gold ore and a few tens of tons of zinc and copper concentrates.

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

The principal mine workings consist of an inclined shaft from which about 3,500 feet of drifting has been done on 5 levels. The lowest level is at 456 feet from the collar of the shaft. The workings follow a shear zone in Yavapai schist that has an average strike of about N. 45° W. and a dip of approximately 45° to the northeast.

In the lower mine workings, the shear zone ranges from a few inches to about 3 feet wide. It is filled with gouge, fractured schist, and quartz stringers and lenses. Ore mineralization, mainly sphalerite, chacopyrite and gold, is associated with some of the quartz. The most extensively mineralized portions of the zone consist of several quartz lenses up to 1.3 feet thick and a few tens of feet in length.

The mineralized quartz lenses have been essentially mined out. Production from lenses between the third and bottom level of the mine yielded 4,000 tons of mill rock of unknown grade. Of the 4,000 tons, probably less than 2,000 tons was vein material and the remainder was barren wall-rock that was mined in order to meet a milling schedule.

In the area of proposed diamond drilling, 3 quartz veins, each about 0.7 feet wide, have been exposed by a shallow trench. The veins are traceable for about 40 feet. Two of the veins are composed of manganese-stained, white quartz. The quartz of the other vein is brecciated and iron-stained. Many small cavities in the quartz appear to be relicts of sulfides, probably pyrite.

Estimates indicate the mined zone contained about 1.5 tons of vein material, per foot of depth, assaying about 4.9 percent zinc, 0.7 percent copper, 0.6 percent lead, and 1.1 ounces, silver and 0.30 ounce gold per ton. Vein material of a similar tonnage and grade is assigned to the indicated and inferred reserves below existing mine workings. These reserves are based on the probable depth extension of the mineralized zone with little or no expectable increase in the degree and/or extent of mineralization. For the area of proposed diamond drilling, the inferred reserves of similar grade material has been estimated at 2 tons per foot of depth.

Denial of the requested Governmental assistance is recommended because exploration of the mineralized zones cannot expect to indicate the presence of other than insignificant amounts of sub-marginal copper-lead-zinc ore.

ARIZONA UTAH MINES COMPANY

FRENCH LILY MINE
(Copper-Lead-Zinc)

YAVAPAI COUNTY, ARIZONA

DMEA 3361

GEOLOGY

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

ARIZONA UTAH MINES COMPANY

FRENCH LILY MINE
(Copper-Lead-Zinc)

YAVAPAI COUNTY, ARIZONA

DMEA 3361

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INTRODUCTION

On behalf of the Defense Minerals Exploration Administration, the French-Lily Mine, near Mayer, in Yavapai County, Arizona, was examined August 10 to 12, 1954 by T. M. Romslo, U.S.Bureau of Mines, and J. N. Faick, U. S. Geological Survey. The examination was made in response to an application for Government aid in exploration for copper-lead-zinc ore which the operators thought might exist below the old mine workings.

The French-Lily mine was worked for relatively shallow gold ores on several occasions prior to 1945 and between 1945 and 1953 the mine supplied about 4,000 tons of mixed ore and waste to the French-Lily mill. The mine is developed by a good usable inclined shaft nearly 500 feet deep and about 3500 feet of drifts on the 85, 162, 251, 349 and 456-foot levels, as measured along the incline from the collar. An old inclined shaft, which lies about 650 feet west of the present shaft, formerly had developed the vein to the No. 2 level but is now inaccessible.

GEOLOGY

The French-Lily mine, which lies about midway between the communities of Cordes and Crown King, Arizona, is situated on the eastern foothills of the Bradshaw Mountains at an altitude of about 3200 feet. The area in which the mine is situated is underlain by a group of rocks which are members of the Yavapai schist series, of the older pre-Cambrian. The dominant rock type, which forms the host rock at the mine, is very dark greenish or nearly black, fine-grained, dense, crystalline material which in places is gradational into coarser-grained, lighter-colored varieties of the same material. The rocks are massive, or gneissoid and are schistose in a few places. The rocks have the appearance of being metamorphosed basalt, diorite, or gabbro, but metamorphosed sediments do not appear to be present in the area. A large biotite-monzonite dike is present near the eastern

edge of the property and undoubtedly other dikes exist but they do not appear to be noteworthy features on the property.

The French-Lily mine is developed on a vein-like deposit of quartz which contains relatively small amounts of metal. The vein is localized along a fault which strikes about N45°E and dips about 45° NE, and is nearly conformable to the obscure banding of the host rock.

On levels 4 and 5 (see Fig. 4) the fault zone ranges in thickness from 0.1 to three feet. Within this zone quartz forms elongate-tabular lens-like masses which are not continuous, but in many places are separated by short zones of barren gouge. Relatively small amounts of pyrite, sphalerite, chalcopyrite and galena are associated with the quartz veins. The individual bodies of quartz vary considerably in thickness but are relatively persistent along the strike; in a few cases obtaining a length of 200 or 300 feet. A few small ore shoots form in the thickest parts of the vein, and in a few places these contain greater than average concentration of sulfide minerals. These ore shoots range from about 0.5 feet to 1.3 feet thick and have a strike length of a few tens of feet. The largest and richest of these ore shoots have been essentially mined out.

Evidence of mineralization has been traced along the French-Lily fault for many hundreds of feet but large, rich or profitable concentrations of ore have not been found at any place along it. About 3000 feet southeast of the French-Lily mine, in an area where the applicants proposed some exploration drilling, a crosscut trench has exposed 3 quartz

veins, each about .7 feet thick. Two of these veins are composed of white quartz strongly stained with manganese oxides. The other vein is thoroughly iron-stained and pitted with leached cavities which indicate the former presence of sulfides. These veins are traceable on the surface for only 40 or 50 feet and apparently are of little significance.

PRODUCTION AND ORE RESERVES

It is believed all of the largest and richest concentrations of ore in the French-Lily deposit have been mined out (see Stopes on Fig. 3 and Fig. 4), and the remaining ore bodies in the developed part of the mine are too small and too low grade to justify mining. An unknown, but probably small amount of oxidized gold ore was produced from the upper workings and about 4,000 tons of low grade material, about half of which was quartz-sulfide vein material, was produced from the lower workings. According to one of the miners who worked in the stopes, the vein material was diluted with as much as 3 feet of barren wall rock in an effort to get sufficient material to run the mill at capacity.

The French-Lily vein is very persistent along both strike and dip, and the mineralogy, texture and structure suggest that it may persist for considerable distances beyond the present mine workings. There is, however, no geological reason to believe the vein at any place is larger or richer than where exposed in the present mine workings.

About 2000 tons of vein material and an equal amount of waste rock were mined from the stopes between 3 and 5 levels (see Fig.4). An unmined pillar containing about 100 tons of ore is present in the floor of No. 4 level. Using production estimates as a basis, it is estimated that the vein contained about 15 tons of ore per foot of depth, and that inferred reserves below level No. 5 are about of this same

order of magnitude. The vein is a type that might reasonably be expected to continue a few hundred feet below level No. 5; therefore, 7 or 8 thousand tons of inferred ore reserves of submarginal grade may be present.

Sampling by the DMEA examiners (see Fig. 4) indicates the mineralized portion of the mined zones contained an average of about 4.9 percent zinc, 0.7 percent copper, 0.6 percent lead and 1.1 ounces of silver and 0.3 ounces of gold per ton. The inferred reserves are probably about the same grade. Samples taken by the DMEA examiners are shown on Fig. 4, and the approximate locations of samples taken by C. H. Dunning, Mining Engineer, who represents the applicant, are shown on Fig. 3.

In the area of the applicant's proposed diamond drilling, about 3,000 feet south of the French-Lily mine, 3 narrow veins are exposed in a shallow trench. The examiners estimate that these veins probably contain about 2 tons of ore per foot of depth, and the grade of ore is probably lower than at the mine. These narrow, discontinuous veins appear to be too small to justify additional exploration.

CONCLUSIONS

Extensive exploration and development of a relatively persistent quartz-sulfide vein at the French-Lily mine resulted in the discovery and mining of minor concentrations of submarginal zinc-copper-lead ore. Undoubtedly small amounts of similar ore would be found by additional exploration but there is no geological reason to expect an increase in the degree or extent of mineralization along the strike of the vein or at greater depths. It is unlikely that this mine will ever be productive, a conclusion with which Mr. Dunning, representing the applicant, seems to be fully in agreement.

RECOMMENDATION

It is recommended that this application for Government aid in exploration be denied because the unfavorable geological conditions indicate that significant amounts of ore will not be discovered by the project.

DMEA-3361, ARIZONA-UTAH MINES COMPANY
FRENCH LILY COPPER-LEAD-ZINC MINE
YAVAPAI COUNTY, ARIZONA

Engineering Report

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

August 1954

DMEA-3361, ARIZONA-UTAH MINES COMPANY
FRENCH LILY COPPER-LEAD-ZINC MINE
YAVAPAI COUNTY, ARIZONA

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INTRODUCTION

The French Lily mine in Yavapai County, Ariz. was examined by the Defense Minerals Exploration Administration in response to an application for Governmental aid in an exploration project, pursuant to DMEA Order 1, under the Defense Production Act of 1950, as amended. The application, made by the Arizona-Utah Copper Mines Company, was docketed as DMEA-3361. It proposed an exploration project designed to develop reserves of copper-lead-zinc ore principally below existing mine workings. The estimated total cost of the project, set up in 2 stages, was $271,000.00.

The examination, made to determine if the requested aid would be justified, was carried out August 10, to 12, 1954 by T. M. Romslo, U. S. Bureau of Mines and J. N. Faick, U. S. Geological Survey.

LOCATION, ACCESSIBILITY AND PHYSICAL FEATURES

The French Lily mine is about 60 air miles west of north from Phoenix, Ariz. (figure 1). It may be reached from Phoenix by traveling 62 miles north on State Highway 69 to Cordes, thence 7.5 miles westerly on the winding, graded Crown King road to Cleator, and thence 1.5 miles south on a graded road to the mine. The nearest railroad shipping point is at the Blue Bell siding of the Atchison, Topeka, and Santa Fe Railway. The siding is adjacent to State Highway 69 at about 7 miles north of Cordes.

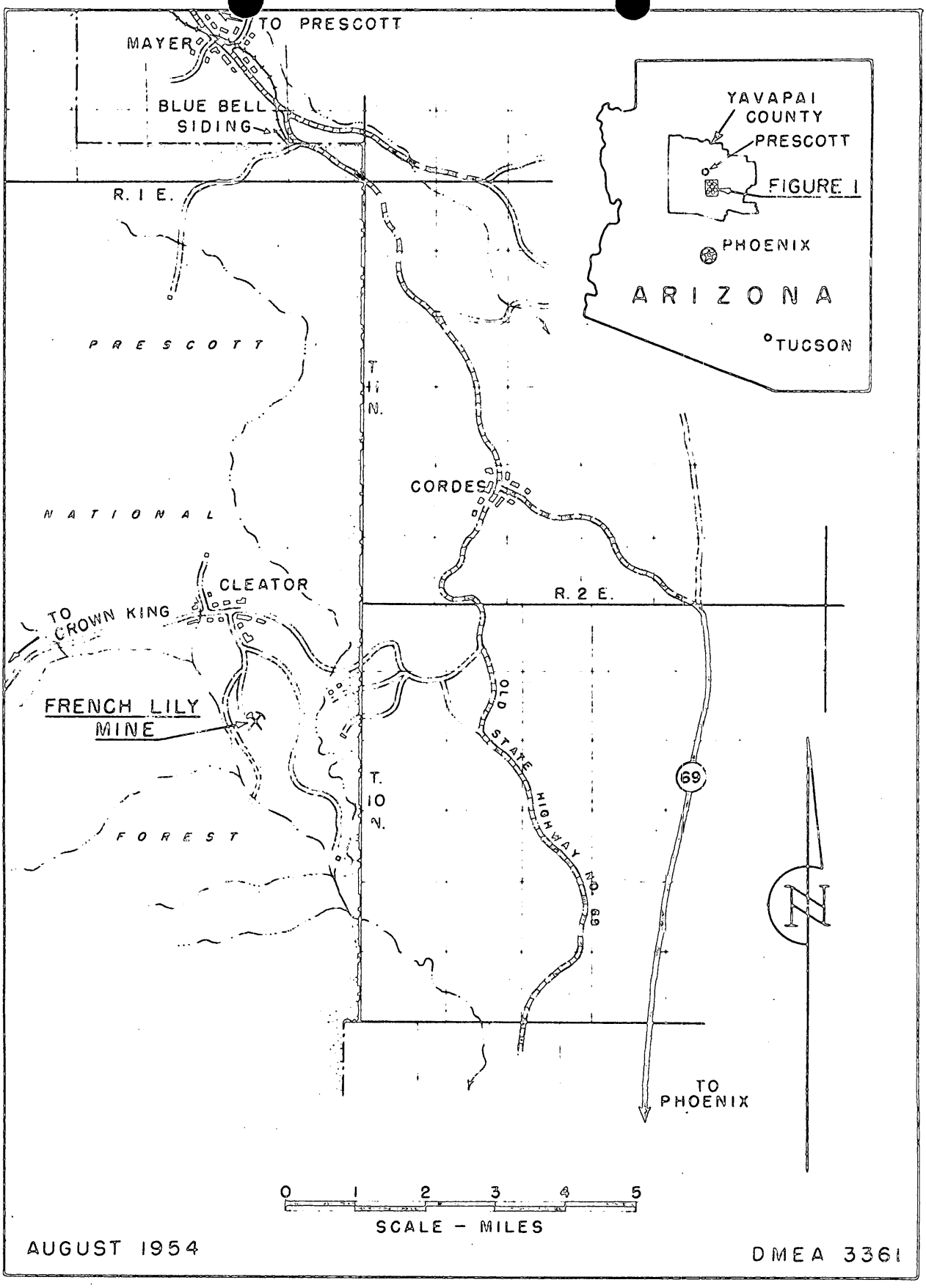


FIGURE 1. - LOCATION MAP - FRENCH LILY MINE
ARIZONA-UTAH MINES COMPANY YAVAPAI COUNTY, ARIZONA

The French Lily mine is situated on the eastern foothills of the Bradshaw Mountains at an altitude of about 3,200 feet. The topography of the mine area is moderately rugged. Vegetation is confined to forage grasses and a light growth of shrubs and cacti. A branch of Boland Creek, an intermittent stream that flows southwesterly, traverses the mine area.

Summers are hot and winters are mild. Precipitation of about 20 inches annually occurs mainly as heavy thunder showers during the summer.

HISTORY AND PRODUCTION

There is no readily available information on the French Lily mine prior to 1922 when the area was visited by Lindgren.[1/] At that time the mine was owned by Grove Brothers, of nearby Mayer. The mine had been developed by an incline 190 feet long, with 250 feet of drifts on the second level. It was being worked for gold. One carload of ore had been shipped and some ore was produced in 1923. The mine probably was shut down before 1925.

During 1934 to 1937, Pat Moran operated the mine on a loan from the Reconstruction Finance Corporation. The old shaft was extended to the second level and a new shaft, started by the previous operator, was deepened from the second to the third level. Some drifting was done on both of these levels. A flotation mill was built and operated probably 2 months before all operations were terminated and all major equipment was sold.

1/ Lindgren, Waldemar, Ore Deposits of the Jerome and Bradshaw Mountains quadrangles, Arizona, U.S.G.S. Bul. 782, p. 159.

Late in 1937, Sam Cochran, relocated the property and did a little exploratory work before selling out to John Nezik. Mr. Nezik produced 2 or 3 carloads of gold ore before 1945 when the property was purchased by the Cedar-Talisman Consolidated Mining Company. The company re-equipped the mine and mill, deepened the new shaft to the fourth level and run several hundred feet of drifts. Approximately 4,000 tons of ore was milled. Zinc and copper concentrates yielded a net smelter return of about $50,000.00, according to the applicant. Operations were discontinued late in 1953.

The applicant, the Arizona-Utah Mines Company, purchased the property in January 1954. Since then, operations have been confined to a few rounds of drifting, repair work, and pumping operations.

PROPERTY AND OWNERSHIP

The French Lily mine is located on a property comprising a group of 11 unpatented lode mining claims, probably in secs. 11 and 12, of unsurveyed T. 10 N., R. 1 E., Yavapai County, Ariz. (fig. 3) The property is owned by the Arizona-Utah Mines Company, an Arizona corporation, 33 North LaSalle Street, Chicago, Ill. It is encumbered by a $100,000.00 first mortgage.

PRESENT STATUS

Mine Workings and Equipment

The mine is developed by 2 inclined shafts, approximately 3,500 feet of drifting on 5 levels and several raises and stopes (figure 3). The old shaft and some of the workings from it are inaccessible. The

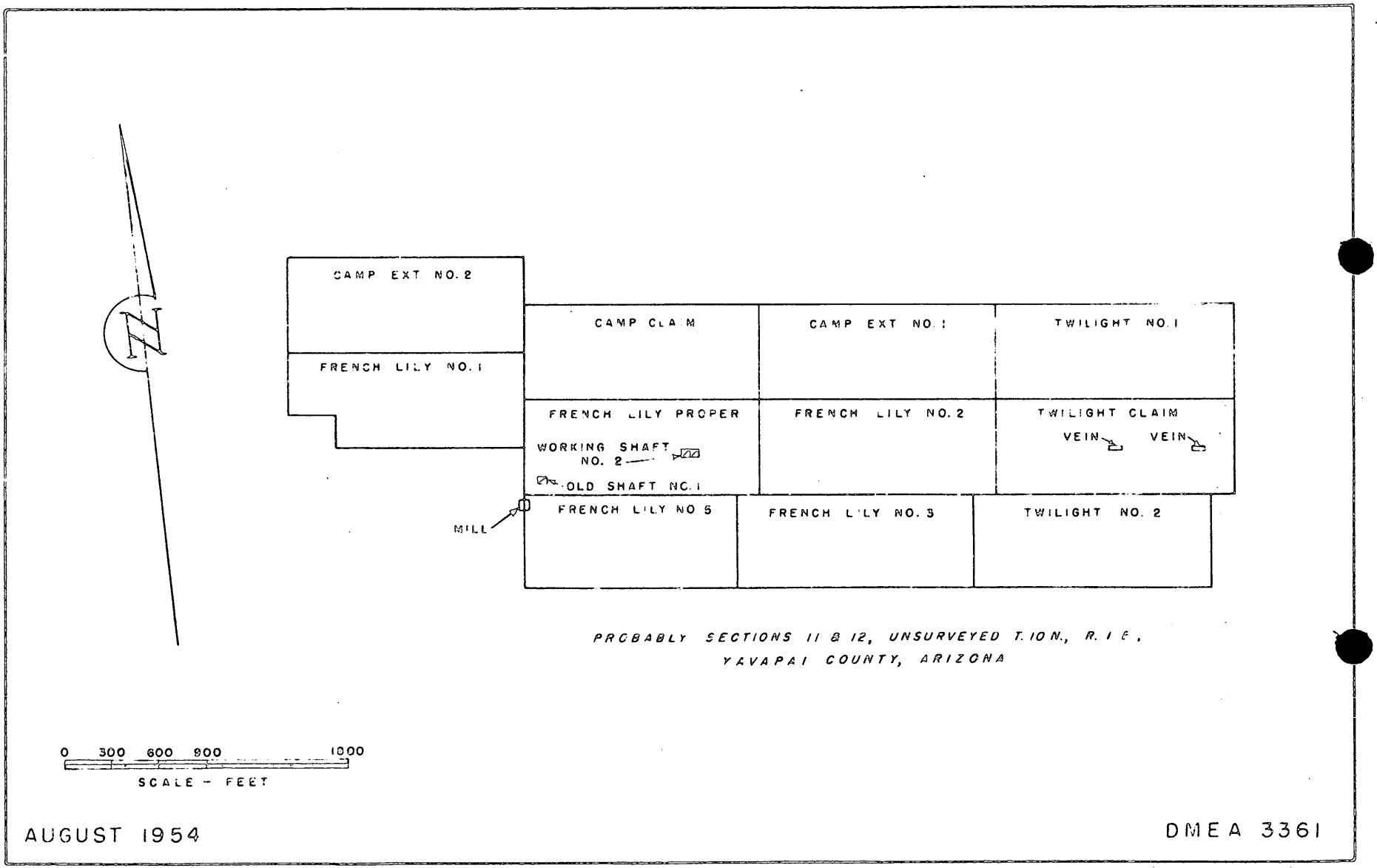
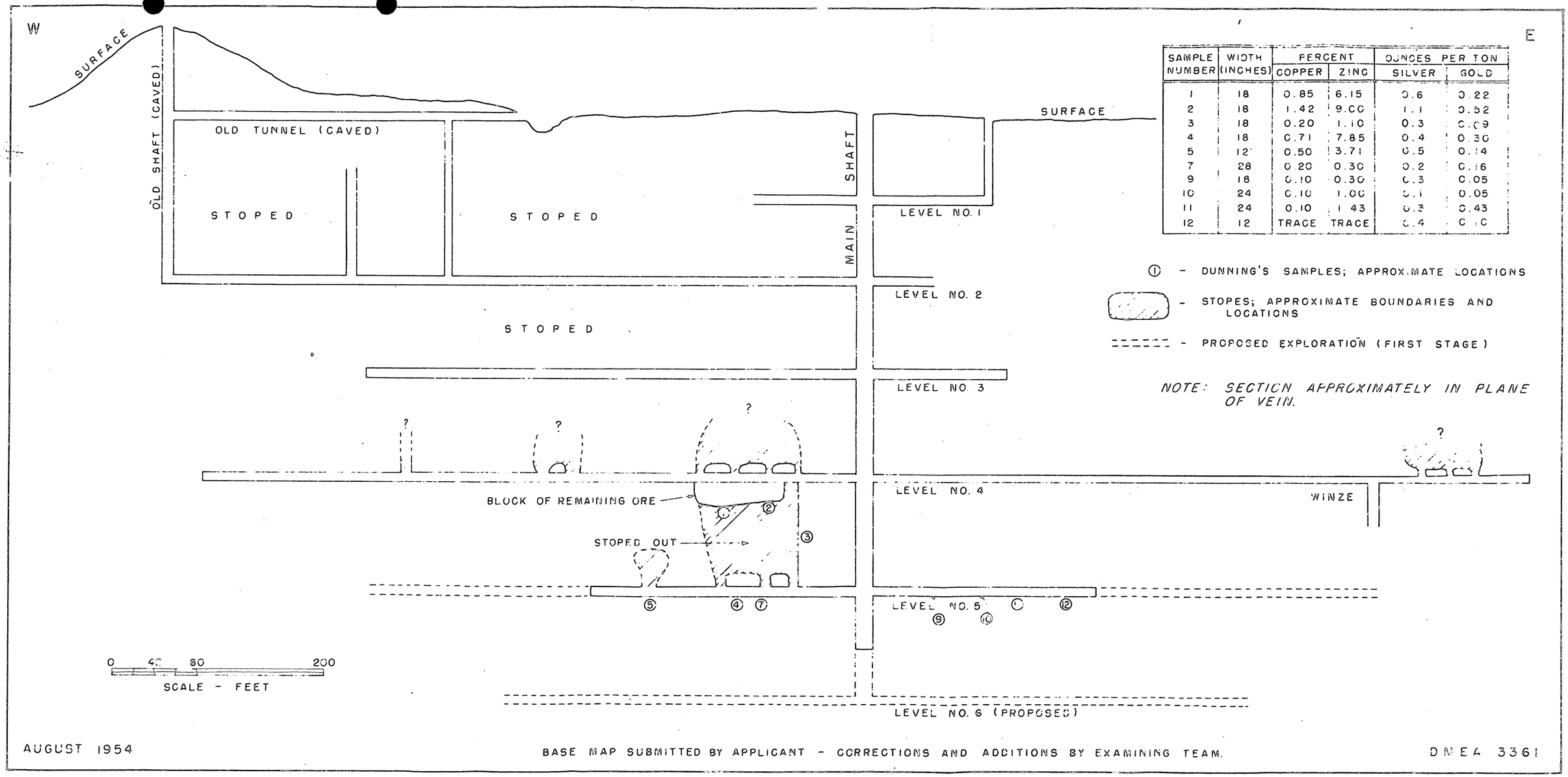


FIGURE 2. - CLAIM MAP - FRENCH LILY MINE

ARIZONA-UTAH MINES COMPANY YAVAPAI COUNTY, ARIZONA



SAMPLE NUMBER	WIDTH (INCHES)	PERCENT		OUNCES PER TON	
		COPPER	ZINC	SILVER	GOLD
1	18	0.85	6.15	0.6	0.22
2	18	1.42	9.00	1.1	0.52
3	18	0.20	1.10	0.3	0.09
4	18	0.71	7.85	0.4	0.30
5	12	0.50	3.71	0.5	0.14
7	28	0.20	0.30	0.2	0.16
9	18	0.10	0.30	0.3	0.05
10	24	0.10	1.00	0.1	0.05
11	24	0.10	1.43	0.3	0.43
12	12	TRACE	TRACE	0.4	0.10

FIGURE 3. — LONGITUDINAL SECTION OF MINE WORKINGS — FRENCH LILY MINE
ARIZONA-UTAH MINES COMPANY YAVAPAI COUNTY, ARIZONA

new shaft is timbered to 2 compartments with an overall measurement of 6 feet by 9 feet in the clear. It is bottomed at about 50 feet below the lowest level that was designated as the 550 level on the applicant's map. The examining team found the lowest level to be 456 feet from the collar of the shaft. Water enters the mine, mainly from the surface, at an average rate of about 20 gallons per minute. The water level is being maintained below the bottom level by pumping one shift daily. The stopes between levels 3, 4, and 5, are open but were not examined because of unsafe conditions caused by rotting of timber stulls that support the back. The largest stope appears to be about 60 feet long, 80 feet high and about 3 feet wide. The maximum thickness of the vein zone, in this and other stopes mined to widths up to 4 feet, was probably about 2 feet. According to one of the miners of the Cedar-Talisman operation, vein material was diluted with up to 3 feet of barren footwall rock in an attempt to maintain a 3-shift milling schedule.

Surface Plant and Equipment

Structures at the mine consist of a headframe, a 125-ton ore bin, hoist and compressor house, a change room and office. The principal equipment comprises a single drum hoist, powered by a 440-volt motor, and a 435-cubic foot electric-powered compressor. Electricity for power and lighting is furnished by the Arizona Public Service.

The milling plant consists of three 18,000-gallon water storage tanks, the mill building, and 2 small buildings housing a laboratory and office. The mill building, including a 50-ton crude ore bin and a 250-ton fine-ore bin, contains the following installed equipment:

1 Jaw crusher, 24 in. by 36 in., Allis Chalmers;
1 Bucket elevator to fine ore bin;
1 Belt conveyor to a 4 ft. by 6 ft., Allis Chalmers ball mill in closed circuit with a 1.5 ft. by 12 ft. Akins classifier;
14 Denver Equipment Co. flotation cells;
2 Thickeners;
2 Filters.

PROPOSED PROJECT

The proposed work with estimated costs were as follows:

First Stage:

550 level - 600 ft. of drifting @ $30 per foot	$18,000.00	
Sinking shaft from 550 to 650-foot level, 100 ft. @ $150.00 per ft.	15,000.00	
650 level - 1,200 ft. of drifting @ $30.00 per ft.	36,000.00	
Station, ore pockets and pumps	10,000.00	
Escape raise	5,000.00	
Housing for 6 men, office and warehouse	15,000.00	
General exploratory drilling	15,000.00	
Total for 1st stage		$114,000.00

Second stage, to be carried out if results of first stage are favorable:

Deepen shaft from 650 to 1,000 ft., 350 ft. @ $150.00 per ft.	$52,500.00	
Stations on 2 levels	15,000.00	
Drifting, 2,400 ft.	72,000.00	
Raising, 350 ft.	17,500.00	
Total for 2nd stage		$157,000.00
Estimated total cost of project		$271,000.00

GEOLOGY OF THE DEPOSIT

The French Lily deposit occurs in Yavapai Schist that forms extensive outcrops over much of the property. Other outcropping rocks appear to be confined to a few small zones, probably dikes, of biotite-monzonite near the eastern portion of the property.

Ore mineralization is confined to discontinuous stringers and lenses of quartz associated with fractured schist and gouge that fills a shear zone which is approximately parallel to foliation of the schist. At the mine, the shear zone strikes an average of about N. 45° W. and dips about 45° to the north east. A few widely scattered, small iron stained zones on the surface indicated the shear zone may extend southeastward to the area of proposed diamond drilling. In this area, about 3,000 feet from the French Lily mine, 3 quartz veins each about 0.7 feet thick, have been crosscut by a shallow trench about 10 feet long. Two of the veins are composed of white quartz strongly stained with manganese oxides. The quartz of the other vein, at the footwall of the zone, is brecciated and thoroughly iron-stained. Many small vugs in the quartz indicate removal of sulfides, probably pyrite, by leaching. The veins are traceable for about 15 feet to the north and 25 feet to the south of the trench.

At the mine, on levels 4 and 5, the shear zone ranges in thickness from about 1 inch to approximately 3 feet. Portions of the zone are composed wholly of gouge. At other places the gouge is associated with fractured schist and barren or mineralized quartz veins.

The most extensively mineralized portions of the zone are lens-like deposits containing quartz-sulfide veins up to 6 inches thick. These deposits, up to 1.3 feet thick and a few tens of feet in length, have been essentially mined out.

Sampling indicates the mineralized portion of the mined zones contained an average of about 4.9 percent zinc, 0.7 percent copper, 0.6 percent lead, and 1.1 ounces of silver and 0.3 ounce of gold per ton.

Assays of samples taken by C. H. Dunning, mining engineer, who recently examined the property for the applicant are shown on figure 3. The assays of samples obtained by the examining team are shown on figure 4.

ORE RESERVES

Essentially all of the most significant concentrations of vein material have been mined-out. Consequently, potential reserves in the mine area are confined to vein material that may occur below existing workings. As little or no increase in the degree or extent of mineralization can be expected, the potential reserves should be similar to the vein material produced from between levels 3 and 5. Here, total production was 4,000 tons of which not over 2,000 tons was vein material containing an estimated 4.9 percent zinc, 0.7 percent copper, 0.6 percent lead, and a silver and gold content of

1.1 ounces and 0.3 ounce per ton, respectively. On this basis, the potential reserves of similar grade vein material is estimated at 15 tons per foot of depth. These reserves do not constitute ore because development costs alone would exceed their value.

In the area of proposed diamond drilling, the potential reserves have been estimated at 2 tons per foot of depth. There is no reason to believe the degree of ore mineralization would be greater than the estimated grade of reserves at the mine.

CONCLUSIONS

The French Lily deposit has been extensively explored and developed with the result that only minor concentrations of sub-marginal zinc-copper-lead ore have been encountered and essentially mined out. Geological conditions indicate the deposit will persist with depth with no material increase in the degree and/or extent of ore mineralization.

RECOMMENDATION

Denial of the requested assistance on proposed exploratory work at the French Lily mine is recommended because the possibility of encountering significant amounts of copper-lead-zinc ore are unfavorable.

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

224 New Customhouse
Denver 2, Colorado

October 19, 1954

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, DMEA Field Team, Reg. IV

Subject: Your letter to Hon. Sidney R. Yates dated October 14, 1954

On October 6, we sent you a copy of a letter from Congressman Sidney R. Yates regarding Docket DMEA 3361, Arizona-Utah Mines Company. Attached was a suggested reply.

We note that the reply was revised in your office, to which we have no objection, however, the report by the Bureau of Mines engineer was transmitted to this office on August 25, and the Geological report was transmitted on October 12, 1954. In your letter it would appear that the Bureau of Mines engineer was extremely slow in getting his report completed and forwarded to this office. Our proposed letter stated "one engineer member of the examining team" so that attention would not point specifically to either the Bureau of Mines or U. S. Geological Survey. This information is merely for the record.

W. H. King

File Copy
Surname

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

OCT 14 1954

Honorable Sidney R. Yates
House of Representatives
Washington 25, D. C.

My dear Mr. Yates:

Your letter of October 2, 1954 directed to W. H. King, Executive Officer, DMEA Field Team, 224 New Custom House, Denver, Colorado, requesting information on Docket DMEA 3361, Arizona-Utah Mines Company, has been referred to me for reply.

I am advised by the Denver office that an examining engineer has been on leave, resulting in some delay, but that they expect his report within a week or ten days. When received, this report will be consolidated with that of the examining geologist and forwarded to us.

You may be sure that when we have this material from the Field we shall give it our prompt attention.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

WRGriswold/er 10/13/54

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Kiilsgaard, USGS
Mr. Bishop, USGS
Region IV(2)
Chron.

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

OCT - 8 1954

224 New Customhouse
Denver 2, Colorado

October 6, 1954

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, DMEA Field Team, Reg. IV

Subject: Letter from Congressman Sidney R. Yates

Enclosed is a copy of a letter from Congressman Sidney R. Yates, requesting information on Docket DMEA 3361, Arizona-Utah Mines Company.

We believe the reply to this letter should be signed by you. Enclosed is a letter which we have prepared for your approval and signature.

W H King
W. H. King

Enclosures

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

OCT - 8 1954

224 New Customhouse
Denver 2, Colorado

October 6, 1954

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, DMEA Field Team, Reg. IV

Subject: Letter from Congressman Sidney R. Yates

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We believe the reply to this letter should be signed by you. Enclosed is a letter which we have prepared for your approval and signature.

W. H. KING

W. H. King

Enclosures

...NOIS

COMMITTEES:
APPROPRIATIONS
SELECT COMMITTEE ON SMALL BUSINESS

Congress of the United States
House of Representatives
Washington, D. C.

Received
OCT 8 1954

October 2, 1954

RE: DMEA 3361
Arizona-Utah Mines Co.

W. H. King, Exec. Officer
DMEA Field Team
224 New Custom House
Denver, Colorado

Mining Division
Date Rec'd.
OCT 5 - 1954
BUREAU OF MINES
Denver, Colorado

Dear Mr. King:

I have been requested to call to your attention the pending report on the examination of the mine belonging to the above company. It is my information that the examination took place over five weeks ago.

Inasmuch as one of my constituents is interested in the company and has asked me when it is anticipated that the completed report will be forwarded to Washington, I would appreciate your advice in the matter in order that I may reply to him.

Sincerely yours,

Sidney R. Yates

SIDNEY R. YATES
Member of Congress

SRY:js5

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

224 New Customhouse
Denver 2, Colorado

July 1, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket No. 3361 (Copper-Lead-Zinc), Arizona-Utah Mines Company, French Lily Mine, Yanapai County, Arizona.

Enclosed is a photostatic copy of the $100,000 first mortgage and six copies of Subordination Agreement as requested by your letter dated June 7, 1954.

We have requested that a field examination of the property be made.

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

July 1, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket No. 3361 (Copper-Lead-Zinc), Arizona-Utah Mines Company, French Lily Mine, Yanapai County, Arizona.

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W. H. King

W. H. King

Enclosures

224 New Customhouse
Denver 2, Colorado

July 1, 1954

Memorandum

To: W. R. Storms
A. F. Shride

From: DMEA Field Team, Region IV

Subject: DMEA Docket 3361 (Copper-Lead-Zinc), Arizona-Utah Mines Company, French Lily mine, Yamapai County, Arizona.

Enclosed is a copy of an application complete with claim map and section showing the proposed exploration work to explore the property at an estimated cost of $157,000.00.

The property involved consists of the French Lily group of claims, comprising the French Lily Proper, French Lily No. 1, French Lily No. 2, Camp Claim, Twilight, Camp Extention No. 1, Camp Extention No. 2, Twilight Extention No. 1, Twilight Extention No. 2, French Lily No. 3, and French Lily No. 4 located in the Black Canyon Mining District, Yamapai County, Arizona.

A photostatic copy of the $100,000.00 first mortgage and six copies of a Subordination Agreement for this mortgage have been received from the applicant and were transmitted to the Washington Office.

A field examination and report is requested.

W H King
W. H. King

RDB:ma
Enclosures

cc: Docket 3361
AJMartin
Administrator, DMEA
AHKoschmann
Chron.

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

224 New Customhouse
Denver 2, Colorado

July 1, 1954

Mr. Joseph H. Morgan
Luhrs Building
Phoenix, Arizona

Re: DMEA Docket 3361 (Copper-Lead-Zinc)
Arizona-Utah Mines Co., French Lily mine
Yanapai County, Arizona

Dear Mr. Morgan:

We hereby acknowledge receipt of a photostat of the $100,000 first mortgage and six copies of Subordination Agreement requested by our letter of June 10, 1954.

Your application has been placed in line for a field examination. You will be notified prior to the date of the examination in order that your representative may be present at that time.

Yours very truly,

WH King

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

RDB:ma

cc: Docket 3361
Administrator DMEA
WRStorms
AFShride
AHKoschmann
Chron.

MF-201
(Revised February 1953)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*: Real and Chattel Mortgage, dated Feb. 23, 1954 from Arizona-Utah Mines Company, an Arizona Corporation, to Samuel R. Ballis, Trustee, recorded Book 28, Official Records P. 191 and as a chattel mortgage in Book 14 Chattel Mtgs., p.93 County Recorders Records, Yavapai County, Arizona

upon that certain parcel of ground described in a proposed Exploration Project Contract

between Arizona-Utah Mines Company, an Arizona Corporation

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 23rd day of June, 1954.

Samuel R. Ballis [SEAL]

Trustee [SEAL]

I, Milton Fields, certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Samuel R. Ballis who signed this agreement was then Member of the Board of Directors (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.

Milton Fields

[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

MF-201
(Revised February 1953)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
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between Arizona-Utah Mines Company, an Arizona Corporation

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The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

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upon that certain parcel of ground described in a proposed Exploration Project Contract between Arizona-Utah Mines Company, an Arizona Corporation

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

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SUBORDINATION AGREEMENT

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between Arizona-Utah Mines Company, an Arizona Corporation

and the United States of America;

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The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*: Real and Chattel Mortgage, dated Feb. 20, 1953, from Arizona-Utah Mines Company, an Arizona Corporation, to Samuel R. Ballis, Trustee, recorded Book 21, Official Records P. 191 and as a chattel mortgage in Book 14 Chattel Mtge., p.93 County Recorders Records, Navajo County, Arizona

upon that certain parcel of ground described in a proposed Exploration Project Contract between Arizona-Utah Mines Company, an Arizona Corporation

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 23rd day of June, 1954

Samuel R. Ballis [SEAL]

Trustee [SEAL]

I, Milton Fields, certify that I am the Secretary (Secretary, etc.) of the corporation named herein; that Samuel R. Ballis Member of the Board of Directors 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.

Milton Fields

[CORPORATE SEAL]

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*: Real and Chattel Mortgage, dated Feb. 2[illegible], 19[illegible] from Arizona-Utah Mines Company, an Arizona Corporation, to Samuel R. Ballis, Trustee, recorded Book 2[illegible] Official Records p. 191 and as a chattel mortgage in Book 14 Chattel Mtgs., p.93 County Recorders Records, Navajo County, Arizona

upon that certain parcel of ground described in a proposed Exploration Project Contract

between Arizona-Utah Mines Company, an Arizona Corporation

and the United States of America;

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The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 23rd day of June, 1954

Samuel R. Ballis [SEAL]
Trustee [SEAL]

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Milton Fields
[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

STATE OF ARIZONA, County of Yavapai; ss.

706

I do hereby certify that the within instrument was filed and recorded at request of J H Morgan

ON Mar 19 A.D. 1954 AT 9:00 o'clock A.M., Book 28 Official Records.

Page 191 - 201 (9 inch) Records of Yavapai County, Arizona.

WITNESS my hand and official seal the day and year first above written.

GRACE CHAPMAN, County Recorder.

By M. C. Dauer Deputy.

INDEXED

REAL AND CHATTEL MORTGAGE

THIS INDENTURE Made February 23, 1954, between ARIZONA-UTAH MINES COMPANY, a corporation organized under the laws of the State of Arizona and also qualified in the State of Utah, herein referred to as "Mortgagor", and SAMUEL R. BALLIS, of Chicago, Illinois, herein referred to as "Trustee";

W I T N E S S E T H:

THAT, WHEREAS, the Mortgagor is justly indebted to the legal holder or holders of the Principal Promissory Notes hereinafter described, said legal holder or holders being herein referred to as Holders of the Notes, in the principal sum of One Hundred Thousand ($100,000.00) Dollars, evidenced by one hundred twenty-five (125) principal notes of the Mortgagor of even date herewith, payable to the parties named therein and delivered to them, in and by which said principal notes the Mortgagor promises to pay the said principal sum of One Hundred Thousand ($100,000.00) Dollars on or before February 23, 1959, with no interest thereon, until maturity.

NOW, THEREFORE, the Mortgagor to secure the payment of said principal sum of money in accordance with the terms, provisions and limitations of this trust deed, and the performance of the covenants and agreements herein contained, by the Mortgagor to be performed, and also in consideration of the sum of One Dollar in hand paid, the receipt whereof is hereby acknowledged, does by these presents CONVEY AND WARRANT unto the Trustee, his successors and assigns, the following described real estate and personal property and all of its estate, right, title and interest therein, including all interest which may hereafter be acquired, situate, lying and being located in the Black Canyon Mining District, County of Yavapai and State of Arizona, to-wit:

1. The French Lily group of unpatented mining claims situate in Black Canyon Mining District, Yavapai County, Arizona, the names and books and pages of the notices of location of said claims in the County Recorder's Office of Yavapai County, being as follows:

Name	Book	Page
French Lily Proper Amended	131	4
French Lily No. 1 Amended	131	5
French Lily No. 2 Amended	131	6
Twilight Amended	131	7
Camp Claim Amended	131	1
Camp Extension 1 Amended	131	2
Camp Extension 2 Amended	131	3
Twilight Extension 1 Original	154	24
Twilight Extension 2 Original	154	25
French Lily No. 3 Original	154	26
French Lily No. 4 Original	154	27

2. All personal property and rights of every kind and character, situate upon or held in connection with said above described mine and mining claims, including mill, pipe line, water tanks, assay plant, hoist, machinery and equipment, tools and all buildings and structures.

including also those certain patented mining claims situate in the North Star Mining District, in the County of Beaver, State of Utah, and more particularly described as follows:

The TALISMAN LODE MINING CLAIM, U. S. Lot #49;
The STALWART LODE MINING CLAIM, U. S. Lot #50;
The CEDAR QUARTZ LODE MINING CLAIM, U. S. Lot #4842;
The INDEPENDENCE QUARTZ LODE MINING CLAIM, U. S. Lot #4843A;
The INDEPENDENCE QUARTZ MILL SITE, U. S. Lot #4843B;

Patents recorded in the County Recorder's Records of Beaver County, Utah in Book Z-11 Pages 170-174, inclusive.

TO HAVE AND TO HOLD the premises unto the said Trustee, his Successors and Assigns, forever, for the purposes, and upon the uses and trust herein set forth, and for the equal security of the said principal notes hereinafter described, without preference or priority of any one of said principal notes over any of the others by reason of priority of time of maturity or of the negotiation thereof or otherwise.

This conveyance is intended as a mortgage for the purpose of securing:

1. The performance of the promises and obligations of this mortgage and the payment of One Hundred Twenty-five (125) certain Promissory Notes of even date herewith, aggregating in total the sum of One Hundred Thousand ($100,000.00) Dollars, without interest, made and delivered by the Mortgagor to the legal holder or holders of the Principal Promissory Notes, hereinafter described, payable on or prior to the 23rd day of February, A. D. 1959, at Chicago, Illinois, said notes being numbered 1 to 125, both inclusive, as follows:

Numbers 1 to 18 in the amount of $2,500.00 each
Numbers 19 to 60 and Number 101 in the amount of $1,000.00 each
Numbers 61 to 70 in the amount of $500.00 each
Numbers 71 to 100 in the amount of $100.00 each
Numbers 102 to 115 in the amount of $250.00 each
Numbers 116 to 125 in the amount of $50.00 each

2. The Mortgagor agrees to pay all taxes and assessments that are, may be, or appear to be assessed against the property and on this mortgage, and the indebtedness hereby secured. To keep the buildings and personal property properly insured against loss by fire, lightning or windstorm in such insurance companies as shall be satisfactory to the Trustee, the policies to carry mortgage clause in favor of said Trustee and to be delivered to the Trustee.

3. In case said taxes, assessments, adverse claims or encumbrances be not so paid or removed, or said insurance be not so obtained by the Mortgagor, then the Trustee, being hereby made the sole judge of the legality thereof, may, without notice, pay such assessments, notes or encumbrances and obtain such insurance, and pay or settle such adverse claims, or cause them to be removed by suit, or otherwise, and all sums so expended by the Trustee shall be repaid to him by the Mortgagor, with interest at the rate of six (6%) percent per annum, upon demand. But nothing herein shall be construed as requiring the Trustee to make any of said expenditures, or as waiving the right of Trustee to foreclose this mortgage upon any default of the Mortgagor.

4. The mortgagor agrees to keep all of the said property in good condition and repair, at its own expense. The Trustee shall have the right to inspect said property and to repair and conserve the same, but without prejudice to his right to foreclose this mortgage.

5. In case of default therein, the Trustee may, but need not, make any payment or perform any act hereinbefore required of Mortgagor in any form and manner deemed expedient, and may, but need not, make full or partial payments of principal or interest on prior encumbrances, if any, and purchase, discharge, compromise or settle any tax lien or other prior lien or title or claim thereof, or redeem from any tax sale or forfeiture affecting said premises or contest any tax or assessment. All moneys paid for any of the purposes herein authorized and all expenses paid or incurred in connection therewith, including attorneys' fees, and any other moneys advanced by Trustee to protect the mortgaged premises and the lien hereof, plus reasonable compensation to Trustee for each matter concerning which action herein authorized may be taken, shall be so much additional indebtedness secured hereby and shall become immediately due and payable without notice and with interest thereon at the rate of six (6%) percent per annum. Inaction of Trustee shall never be considered as a waiver of any right accruing to him on account of any default hereunder on the part of Mortgagor.

6. The Trustee making any payment hereby authorized relating to taxes or assessments, may do so according to any bill, statement or estimate procured from the appropriate public office without inquiry into the accuracy of such bill, statement or estimate or into the validity of any tax, assessment, sale, forfeiture, tax lien or title or claim thereof.

7. When the indebtedness hereby secured shall become due whether by acceleration or otherwise and shall not have been paid, Trustee shall have the right to foreclose the lien hereof. In any suit to foreclose

the lien hereof, there shall be allowed and included as additional indebtedness in the decree for sale all expenditures and expenses which may be paid or incurred by or on behalf of Trustee for attorneys' fees, Trustee's fees, appraiser's fees, outlays for documentary and expert evidence, stenographers' charges, publication costs and costs (which may be estimated as to items to be expended after entry of the decree) of procuring all such abstracts of title, title searches and examinations, guarantee policies and similar data and assurances with respect to title as Trustee may deem to be reasonably necessary either to prosecute such suit or to evidence to bidders at any sale which may be had pursuant to such decree the true condition of the title to or the value of the premises. All expenditures and expenses of the nature in this paragraph mentioned shall become so much additional indebtedness secured hereby and immediately due and payable, with interest thereon at the rate of six (6%) percent per annum, when paid or incurred by the Trustee in connection with (a) any proceeding, including probate and bankruptcy proceedings, to which he shall be a party, either as plaintiff, claimant or defendant, by reason of this trust deed or any indebtedness hereby secured; or (b) preparations for the commencement of any suit for the foreclosure hereof after accrual of such right to foreclose whether or not actually commenced; or (c) preparations for the defense of any threatened suit or proceeding which might affect the premises or the security hereof, whether or not actually commenced.

8. The proceeds of any foreclosure sale of the premises shall be distributed and applied in the following order of priority: First, on account of all costs and expenses incident to the foreclosure proceedings, including all such items as are mentioned in the preceding paragraph hereof; second, all other items which under the terms hereof constitute secured indebtedness additional to that evidenced by the principal notes; third; all principal

remaining unpaid on the principal notes; fourth, any overplus to Mortgagor, its successors and assigns, as its right may appear.

9. Upon, or at any time after the filing of a bill to foreclose this trust deed, the court in which such bill is filed may appoint a receiver of said premises. Such appointment may be made either before or after sale, without notice, without regard to the solvency or insolvency of Mortgagor at the time of application for such receiver and without regard to the then value of the premises or whether the same shall be then occupied as a homestead or not and the Trustee hereunder may be appointed as such receiver. Such receiver shall have power to collect the rents, issues and profits of said premises during the pendency of such foreclosure suit and, in case of a sale and a deficiency, during the full statutory period of redemption, whether there be redemption or not, as well as during any further times when Mortgagor, except for the intervention of such receiver, would be entitled to collect such rents, issues and profits, and all other powers which may be necessary or are usual in such cases for the protection, possession, control, management and operation of the premises during the whole of said period. The Court from time to time may authorize the receiver to apply the net income in his hands in payment in whole or in part of: (1) the indebtedness secured hereby, or by any decree foreclosing this trust deed, or any tax, special assessment or other lien which may be or become superior to the lien hereof or of such decree, provided such application is made prior to foreclosure sale; (2) the deficiency in case of a sale and deficiency.

10. In case said mortgaged property shall be foreclosed under decree of foreclosure, it may be sold en masse or in several parcels at the option of the Trustee, and the Trustee, or his

agent, may become a purchaser at said sale.

11. The Mortgagor guarantees and affirms that the said property is now free from equities, trusts or encumbrances made or suffered by or known to the Mortgagor.

12. As long as the condition of this mortgage are fulfilled, the said Mortgagor may retain possession of said property and the rents, issues and profits thereof, and in consideration thereof, agrees to keep and maintain the same in good condition, and to that end give it all proper care and attention free from expense to the Trustee.

13. The Trustee herein is hereby given the right and privilege of subordinating the lien of the notes herein and the mortgage thereby secured, or any unpaid balance thereof, to any new first mortgage loan on the within property, upon the affirmative vote of at least two-thirds (2/3rds) of the Board of Directors of the undersigned corporation.

14. The Trustee named herein should also have the right to extend the payments or refinance the mortgage indebtedness, or any balance due thereon, on such terms and conditions as he may be authorized so to do by the affirmative vote of at least two-thirds (2/3rds) of the holders or owners of the notes herein described, in terms of dollars, pursuant to notice of a special meeting called pursuant to the by-laws of said corporation for such purpose.

15. No action for the enforcement of the lien or of any provision hereof shall be subject to any defense which would not be good and available to the party interposing same in an action at law upon the notes hereby secured.

16. The Trustee shall have the right to inspect the premises at all reasonable times and access thereto shall be permitted for that purpose.

17. Trustee has no duty to examine the title, location, existence or condition of the premises, nor shall Trustee be obligated to record this trust deed or to exercise any power herein given unless expressly obligated by the terms hereof, nor be liable for any acts or omissions hereunder, except in case of his own gross negligence or misconduct or that of the agents or employees of trustee, and he may require indemnities satisfactory to him before exercising any power herein given.

18. Trustee shall release this trust deed and the lien thereof by proper instrument upon presentation of satisfactory evidence that all indebtedness secured by this trust deed has been fully paid; and trustee may execute and deliver a release hereof to and at the request of any person who shall, either before or after maturity thereof, produce and exhibit to Trustee the principal notes, representing that all indebtedness hereby secured has been paid, which representation Trustee may accept as true without inquiry. Where release is requested of a successor trustee, such successor trustee may accept as the genuine notes herein described any notes which bear a certificate of identification purporting to be executed by a prior trustee hereunder or which conform in substance with the description herein contained of the principal notes and which purport to be executed by the persons herein designated as the makers thereof; and where the release is requested of the original Trustee and he has never executed certificates on any instrument identifying same as the principal notes described herein, he may accept as the genuine principal notes herein described any notes which may be presented and which conform in substance with the description herein contained of the principal notes and which purport to be executed by the persons herein designated as makers thereof.

19. Trustee may resign by instrument in writing filed in

the Office of the Recorder or Registrar of Titles in which this instrument shall have been recorded or filed. In case of the resignation, inability or refusal of the Trustee to act, then the note holders name William Jay Robinson, as Successor Trustee, and any Successor Trustee hereunder shall have the identical title, powers and authority as are herein given to the Trustee, and any Trustee or Successor Trustee shall be entitled to reasonable compensation for all acts performed hereunder.

20. The Mortgagor hereby waives any and all rights of redemption from sale under any order or decree of foreclosure of this trust deed, on its own behalf and on behalf of each and every person, except decree or judgment creditors of the Mortgagor, acquiring any interest in or title to the premises subsequent to the date of this trust deed.

21. The word "Mortgagor" wherever used, includes the Mortgagor's successors and assigns, and the word "Trustee" wherever used, includes the Trustee's Successors and assigns.

22. The conditions and covenants hereof shall continue upon any extension or extensions hereof, and shall bind the parties hereto and their successors and assigns. The execution and delivery of the notes hereinabove mentioned and this mortgage has been duly authorized on the part of the Mortgagor by its Board of Directors at a meeting regularly called and held in the office of William Jay Robinson, 33 North LaSalle Street, Chicago, Illinois, on the 23rd day of February, A. D. 1954.

The said Board of Directors being duly authorized to take such action by vote of its stockholders at a meeting

duly and regularly called and held at the Covenant Club, 10 North Dearborn Street, Chicago, Illinois, on the 23rd day of February, A. D. 1954.

IN WITNESS WHEREOF said Mortgagor has caused its corporate seal to be hereunto affixed and these presents to be signed by its president and attested by its secretary on the day and year first above written.

ARIZONA - UTAH MINES COMPANY

BY William J. Robinson
President

ATTEST:
Milton Fields
Secretary

STATE OF ILLINOIS:
: SS.
COUNTY OF C O O K:

WILLIAM J. ROBINSON, President of ARIZONA-UTAH MINES COMPANY, Mortgagor within named, and SAMUEL R. BALLIS, Trustee within named, being first duly sworn, each for himself and not one for the other, deposes and says that the foregoing Mortgage is BONA FIDE and made without any design to defraud or delay creditors.

William J. Robinson
Samuel R. Ballis

Subscribed and sworn to before me this 23rd day of January, A. D. 1954.
Jack I. Gray
NOTARY PUBLIC

STATE OF ILLINOIS:
: SS.
COUNTY OF C O O K:

I, Jack I. Gray, a Notary Public, in and for said County, in the State aforesaid, DO HEREBY CERTIFY, that William J. Robinson, President of the ARIZONA-UTAH MINES COMPANY, and MILTON FIELDS, Secretary of said Company, personally known to me to be the same persons whose names are subscribed

BOOK 28 PAGE 200

to the foregoing instrument as such President and Secretary, respectively, appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act and as the free and voluntary act of said Company, for the uses and purposes therein set forth; and the said Secretary then and there acknowledged that he, as custodian of the corporate seal of said Company, did affix the corporate seal of said Company to said instrument as his own free and voluntary act and as the free and voluntary act of said Company, for the uses and purposes therein set forth.

GIVEN under my hand and notarial seal, this 23rd day of February, A. D. 1954.

Notary Public

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

Defense Minerals Administration
RECEIVED
JUN 14 1954

Graham
Betty

224 New Customhouse
Denver 2, Colorado

June 10, 1954.

Docket

Mr. Joseph H. Morgan
Luhrs Building
Phoenix, Arizona

Re: DMEA Docket No. 3361,
Application of Arizona-Utah
Mines Company, 33 North La
Salle Street, Chicago, Illinois

Dear Mr. Morgan:

As per our letter dated May 19, 1954, the subject application under DMEA Docket No. 3361 was transmitted to our Washington Office for further processing. They have instructed that we obtain a copy of the $100,000 first mortgage stated in your application to be on record.

Please send a copy (photostatic copy acceptable) of the above mortgage to this office.

In addition it will be necessary for the owners of this mortgage to subordinate their claims against the Arizona-Utah Mines Company property, to the claims of the Government in case a contract is entered into. Six copies of the required subordination agreement (forms enclosed) should be submitted at this time.

When all the above documents are received in this office your application will be placed in line for a field examination of your property.

Very truly yours,

WH King

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

Enclosures

cc: William J. Robinson
33 North La Salle Street
Chicago, Illinois

RDB:cwm

cc: Docket 3361; Administrator, DMEA; WRStorms; AHKoschmann; Chron,

File Copy
Surname
Selfridge
Griswold
Johnson

500

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

JUN - 7 1954

Mr. V. E. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3361 (Copper-Lead-Zinc)
Arizona-Utah Mines Company
French Lily Mine
Yavapai County, Arizona

Dear Mr. King:

This will acknowledge receipt of your letter of May 19, submitting the cited application.

While the information submitted is somewhat incomplete, yet probably the Applicant may have little more to add of a technical nature. However, before going to the expense of a field examination, it would be advisable to instruct the Applicant that it should first provide you with a copy of the $100,000 first mortgage which it states is on record. Also, you should be provided with a subordination agreement executed by the mortgagor.

With reference to the project costs as outlined by the Applicant, obviously, its items "h" (1) and (2) are out of order. Furthermore, its proposal of charging the project $2,000 monthly for equipment rental is completely out of line. For the equipment which the Applicant lists, it may safely be assumed that a sum in the vicinity of $400 would be a fair monthly rental. Regardless of what equipment is owned, rentals should always be based upon what might be properly considered as applicable and necessary for the work of the project.

If the Applicant is able to clarify the preliminary matters to your satisfaction, a field examination would then be in order.

We are enclosing memorandums by the commodity members of the Geological Survey, dated May 25, and the Bureau of Mines, dated May 28.

WRGriswold/bjl (rewrite 6/4/54)

Sincerely yours,
George C. Selfridge (JHB)
Chairman, Operating Committee

Enclosures 2

APPROVED:

J. H. Hedges JHB
Member, Bureau of Mines

D. M. Larrabee (JHB)
Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Ehron.
Mr. Gildersleeve

R.C.G.

File Copy
Surname

500

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

JUN - 7 1954

Mr. William J. Robinson, President
Arizona-Utah Mines Company
33 North La Salle Street
Chicago, Illinois

Re: Docket No. DMEA-3361 (Copper-Lead-Zinc)
French Lily Mine
Yavapai County, Arizona

Dear Mr. Robinson:

Your application for Government assistance to explore the property of the French Lily mine, Docket No. DMEA-3361, has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration, and has been referred for further information to:

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

The Regional Office will contact you at an early date if a field examination is to be made. Any assistance that you may give the members of the Field Team during an examination will be appreciated.

Sincerely yours,

C. O. Mittenderf

Administrator

WRGriswold/bjl (6/3/54)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. GilderSleeve
Mr. ~~xxx~~ C. H. Johnson
Region IV (2)
Chron.

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

May 28, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Base Metals Branch

Subject: Application for aid in exploration at French Lily Mine, Yavapai County, Arizona, Docket No. 3361

In reviewing the application it is noted that information not yet provided will be necessary for proper consideration of the applicant's request. Among such information is a copy of the mortgage, details of the vein exposed (measurements and assays), evidence of vein continuity, and data on past production including such detail as to grade and mineralogic composition as to permit judgment on amenability to milling.

It is recommended that the application be referred to the Region IV field team for their review and field examination.

O. M. Bishop

O. M. Bishop

IN REPLY REFER TO:

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

May 25, 1954

Memorandum

To: Mr. W. R. Griswold

From: E. L. Newcomb

Subject: Review of application

Re: DMEA-3361
French Lily Mine
Black Canyon District
Yavapai County, Arizona
$157,000
Copper, lead, zinc

The applicant requests assistance to explore for downdip ore shoot extensions on the 550 and 650 levels. The work will involve 100 feet of shaft sinking, 100 feet of raising and 1800 feet of drifting.

An adequate hoist and 50-70 ton mill are available on the property.

Accurate records of past production are not available. According to the applicant, about 6,000 tons of ore may have been milled which averaged 1-2% copper, 8% zinc and small amounts of gold, lead and silver.

The application lacks sufficient geological information to appraise the feasibility of the proposed work.

We do not have any available information on the French Lily mine.

Some further data could be requested from the applicant. However, it seems unlikely that sufficient information will be obtained without referring the application to the field team.

I recommend the application be referred to the field team for an examination.

E. L. Newcomb
E. L. Newcomb
Geologist

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

May 24, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

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 IV.

DMEA - 3361 Arizona-Utah Mines Co.

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

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

224 New Customhouse
Denver 2, Colorado

May 19, 1954.

Memorandum

To: Secretary of the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Application - Arizona-Utah Mines Company, Yavapai County, Arizona.

Enclosed are the original and two copies of an application with three copies of a map showing the proposed work.

The application is for assistance in exploring for lead, zinc and copper at an estimated cost of $84,000.00 with Government assistance at 50% or $42,000.00.

W H King
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. 3361
Metal or Mineral Copper-Lead-Zinc
Date Received
Estimated Cost $157,000
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-UTAH MINES COMPANY, 33 North La Salle Street, Chicago, Illinois.

(*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. Corporation (see attached sheet)

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

(*d*) If a partnership, add to the above statement the names and addresses of all partners. No

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

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

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

(*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 $100,000.00 first mortgage on record.

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

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. attached sheet

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

(*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. see attached sheet

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

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

16—66551-1

5. *The exploration project.*—(*a*) State the mineral or minerals for which you are to explore. Copper, Zinc, Lead and by-products of Gold

(*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. (See attached sheet)

(*c*) The work will start within 10 days and be completed within 18 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. (See attached sheet)

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. (See attached sheet)

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

(*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. (See attached sheet)

(*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. (See attached sheet)

(*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. (See attached sheet)

(*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)?

(*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. (See attached sheet)

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 April, 195__

ARIZONA-STATE LEASING COMPANY
(Applicant)

By [signature]
President

ATTEST: Milton Fields
Secretary

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

SHEETS ACCOMPANYING APPLICATION FOR AID IN EXPLORATION PROJECT

1.(a) ARIZONA-UTAH MINES COMPANY, c/o W. J. Robinson, 33 North La Salle Street, Chicago, Illinois.

(b) Applicant is a corporation organized under the laws of the State of Arizona.

(c) William J. Robinson, President
John P. Lichter, Vice-President
Morton Kallis, Treasurer
Milton Fields, Secretary
all having the common address of 33 North La Salle Street, Chicago, Illinois.

3. (a) The following described unpatented lode-mining claims, located in Black Canyon Mining District, Yavapai County, Arizona, the names, books and pages of the notices of the amended locations thereof recorded in the County Recorder's records of Yavapai County, being as follows:

NAME	BOOK	PAGE
French Lily Proper Amended	131	4
French Lily No. 1 Amended	131	5
French Lily No. 2 Amended	131	6
Camp Claim Amended	131	1
Twilight Amended	131	7
Camp Extension 1 Amended	131	2
Camp Extension 2 Amended	131	3
Twilight Extension 1 Original	154	24
Twilight Extension 2 Original	154	25
French Lily No. 3 Original	154	26
French Lily No. 4 Original	154	27

(b) French Lily Mine

(c) Applicant owns the property outright

(e) There are no liens or encumbrances on the land, except $100,000.00 first mortgage on record.

4. (a) The property has been opened to a depth of 550 feet down to and including the 550 foot level. The vein has been explored by drifts. They extend approximately 600 feet to either side of the shaft in the first, second, third and fourth levels. The 550 foot level has been explored by drifts, of 200 feet to the west along the vein and approximately 250 feet to the east. The shaft goes down on an incline, on the vein. There are stations at each level. On the 550 foot level, a large station has been constructed, equipped with ore pocket and a sump.

The mine is electrified and is equipped with adequate pumping facilities. The hoist is in good condition, having recently been replaced and fully overhauled. It has capacity to go 1000 feet. New cable beyond 650 would be required. There are ore bins on top and various facilities. The mine has sufficient machinery and equipment to operate. There is located on the property an up to date flotation mill, capable of handling from 50 to 70 tons of ore per day. Most of the operations were carried on by predecessors in interest of the present owner. Most all mine workings are accessible for examination purposes.

4. (b) This property has been operated for a number of years by predecessors of the applicant. The records of production have been lost. The indications, from the tailings dump, are that prior to 1946, approximately 6,000 tons of ore were milled. We have no way of knowing the returns received. Since 1946, the best available records indicate that 4,000 tons have been milled, the net smelter returns being in round numbers, $50,000. Considerable ore sold direct.

The chief values in this ore were : zinc 8%, copper, between 1 and 2%, gold, $10 per ton, and some lead and silver.

(c) Fissure vein in shist continuous for about 4500 feet, averaging 3 to 5 feet in width. Commercial values have, so far, been confined to a quartz component, 1 to 2½ feet in width, with some values in the other vein matter. Indications are that with depth, the fissure will fill with commercial ore. As the vein goes down it has widened, and the ore streaks are also more pronounced. The mineralization along the vein is persistent, and has, where it occurs, a fairly uniform commercial value.

(d) The property is accessible by road. A good road leads from what is known as the Black Canyon Highway, a state highway, to the property a distance of approximately 15 miles.

(e) All necessary manpower, materials, supplies, equipment and power are available. Sufficient water is produced in the mine for ordinary mining and milling purposes. The company, however, owns a pipeline from which a further adequate supply can be secured. Commercial electric power installed, furnished by Arizona Public Service.

5. (a) Copper, zinc, lead with by-products of gold and silver.

(b) The proposed work consists of the following: 600 feet of drifting on the 550 to intersect and develope ore chutes appearing on the 400 ft. level. Sink shaft an additional 100 feet, 1200 feet of drifting on 650 foot level to develop ore chutes which appear on 550 ft level.

Escape raise from 650 to 550 ft. level; construct at 650 ft. level, a station, sump, and ore pocket, and install pumping equipment.

(c) The work can begin in 10 days, and can be completed with 18 months from the date of an exploration contract.

5. (d) Operations will be under the general supervision of Charles H. Dunning, 817 West Madison St., Phoenix, Arizona, a Mining Engineer, who has been engaged in mining operations in the Southwest for 45 years.

6. Estimate of costs:

Drifting on 550 level 600 ft. at $30.00 per	$18,000
Sinking shaft 100 ft. $150 per ft.	15,000
Drifting 650 ft. level 1200 ft. $30.00 per ft.	36,000
Station, ore pocket & pumps 650 ft. level	10,000
Escape raise	5,000
Total	$84,000

(a) No independent contracts.

(b) Cost of labor, supervision, etc. included in above estimates.

(c) Materials and supplies included in above estimates.

(d) Operating equipment now at mine, owned by applicant. Sufficient for above work, and consisting generally of the following:

300 foot compresor, full line of steel drills, hose, pipe, rails, timber, 4 jackhammers, 3 stopers, Gardner-Denver mucking machine, recently fully repaired, hoist, new cable, 2skips ore cars, pumps, spare parts, welding and blacksmith equipment, electric lines and appliances, general supplies and parts. General utility dump truck. Estimate of rental value in present condition, $2,000.00 per month.

(e) No rehabilitation of present equipment or buildings required.

(f) New buildings, improvements, etc. For housing for 6 men, office and warehouse $15,000.00

(g) Included in above estimates.

(h) Contingencies:
(1) For general, exploratory drilling purposes $15000.

(2) Conditional Contingencies: If proposed work determines that vein continues to widen and is filling with commercial ore, sink shaft 350 ft. to 1000 ft. level, cost: 53500.

Stations on two levels	15000.
2400 ft. of drifts	72000.
350 ft. raise	17500.
Total	$157,000.

7. (a) Yes

(b) It is estimated that the overall cost will run approximately $6,000.00 per month. We propose to furnish our share of costs, as follows:

Rental use of equipment	$2,000.00 per month
Cash	1,000.00 per month

Arizona-Utah Mines Co.
33 North La Salle St.
Chicago, Illinois

May 24, 1954
Subject: DMEA-3361
Re: Exploration Assistance
French Lily Mine

Gentlemen:

The receipt of your application dated April 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3361 and referred to the Base Metals Division.

Kindly refer to DMEA-3361 in any future correspondence relating to your application.

Sincerely yours,

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

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

224 New Customhouse
Denver 2, Colorado

May 19, 1954.

Memorandum

To: Secretary of the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Application - Arizona-Utah Mines Company, Yavapai County, Arizona.

Enclosed are the original and two copies of an application with three copies of a map showing the proposed work.

The application is for assistance in exploring for lead, zinc and copper at an estimated cost of $84,000.00 with Government assistance at 50% or $42,000.00.

W H King
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. 3361
Metal or Mineral Copper-Lead-Zinc
Date Received
Estimated Cost $157,000
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-UTAH MINES COMPANY, 33 North La Salle Street, Chicago, Illinois.

(*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. Corporation (see attached sheet)

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

(*d*) If a partnership, add to the above statement the names and addresses of all partners. No

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

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

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

(*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 $100,000 first mortgage on record.

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

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. attached sheet

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

(*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. see attached sheet

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

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

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Copper, zinc, lead with by-products of gold and silver.

(*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. (see attached sheets)

(*c*) The work will start within 10 days and be completed within 18 months from the date of an exploration project contract. (see attached sheets)

(*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. (attached sheet)

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: ditto

(*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.). none

(*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. (attached sheet)

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

(*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. (attached sheet)

(*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. (attached sheet)

(*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. ditto

(*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. (see sheets attached)

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

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

Explain in detail on acompanying paper. (attached sheet)

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 April, 1954

ARIZONA-UTAH MINES COMPANY
(Applicant)

By [signature] President

ATTEST: [signature] Secretary

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

SHEETS ACCOMPANYING APPLICATION FOR AID IN EXPLORATION PROJECT

1.(a) ARIZONA-UTAH MINES COMPANY, c/o W. J. Robinson, 33 North La Salle Street, Chicago, Illinois.

(b) Applicant is a corporation organized under the laws of the State of Arizona.

(c) William J. Robinson, President
John P. Lichter, Vice-President
Morton Kallis, Treasurer
Milton Fields, Secretary
all having the common address of 33 North La Salle Street, Chicago, Illinois.

3. (a) The following described unpatented lode-mining claims, located in Black Canyon Mining District, Yavapai County, Arizona, the names, books and pages of the notices of the amended locations thereof recorded in the County Recorder's records of Yavapai County, being as follows:

NAME	BOOK	PAGE
French Lily Proper Amended	131	4
French Lily No. 1 Amended	131	5
French Lily No. 2 Amended	131	6
Camp Claim Amended	131	1
Twilight Amended	131	7
Camp Extension 1 Amended	131	2
Camp Extension 2 Amended	131	3
Twilight Extension 1 Original	154	24
Twilight Extension 2 Original	154	25
French Lily No. 3 Original	154	26
French Lily No. 4 Original	154	27

(b) French Lily Mine

(c) Applicant owns the property outright

(e) There are no liens or encumbrances on the land, except $100,000.00 first mortgage on record.

4. (a) The property has been opened to a depth of 550 feet down to and including the 550 foot level. The vein has been explored by drifts. They extend approximately 600 feet to either side of the shaft in the first, second, third and fourth levels. The 550 foot level has been explored by drifts, of 200 feet to the west along the vein and approximately 250 feet to the east. The shaft goes down on an incline, on the vein. There are stations at each level. On the 550 foot level, a large station has been constructed, equipped with ore pocket and a sump.

The mine is electrified and is equipped with adequate pumping facilities. The hoist is in good condition, having recently been replaced and fully overhauled. It has capacity to go 1000 feet. New cable beyond 650 would be required. There are ore bins on top and various facilities. The mine has sufficient machinery and equipment to operate. There is located on the property an up to date flotation mill, capable of handling from 50 to 70 tons of ore per day. Most of the operations were carried on by predecessors in interest of the present owner. Most all mine workings are accessible for examination purposes.

4. (b) This property has been operated for a number of years by predecessors of the applicant. The records of production have been lost. The indications, from the tailings dump, are that prior to 1946, approximately 6,000 tons of ore were milled. We have no way of knowing the returns received. Since 1946, the best available records indicate that 4,000 tons have been milled, the net smelter returns being in round numbers, $50,000. Considerable ore sold direct.

The chief values in this ore were : zinc 8%, copper, between 1 and 2%, gold, $10 per ton, and some lead and silver.

(c) Fissure vein in shist continuous for about 4500 feet, averaging 3 to 5 feet in width. Commercial values have, so far, been confined to a quartz component, 1 to 2½ feet in width, with some values in the other vein matter. Indications are that with depth, the fissure will fill with commercial ore. As the vein goes down it has widened, and the ore streaks are also more pronounced. The mineralization along the vein is persistent, and has, where it occurs, a fairly uniform commercial value.

(d) The property is accessible by road. A good road leads from what is known as the Black Canyon Highway, a state highway, to the property a distance of approximately 15 miles.

(e) All necessary manpower, materials, supplies, equipment and power are available. Sufficient water is produced in the mine for ordinary mining and milling purposes. The company, however, owns a pipeline from which a further adequate supply can be secured. Commercial electric power installed, furnished by Arizona Public Service.

5. (a) Copper, zinc, lead with by-products of gold and silver.

(b) The proposed work consists of the following: 600 feet of drifting on the 550 to intersect and develope ore chutes appearing on the 400 ft. level. Sink shaft an additional 100 feet, 1200 feet of drifting on 650 foot level to develop ore chutes which appear on 550 ft level.

Escape raise from 650 to 550 ft. level; construct at 650 ft. level, a station, sump, and ore pocket, and install pumping equipment.

(c) The work can begin in 10 days, and can be completed with 18 months from the date of an exploration contract.

5. (d) Operations will be under the general supervision of Charles H. Dunning, 817 West Madison St., Phoenix, Arizona, a Mining Engineer, who has been engaged in mining operations in the Southwest for 45 years.

6. Estimate of costs:

Drifting on 550 level 600 ft. at $30.00 per	$18,000
Sinking shaft 100 ft. $150 per ft.	15,000
Drifting 650 ft. level 1200 ft. $30.00 per ft.	36,000
Station, ore pocket & pumps 650 ft. level	10,000
Escape raise	5,000
Total	$84,000

(a) No independent contracts.

(b) Cost of labor, supervision, etc. included in above estimates.

(c) Materials and supplies included in above estimates.

(d) Operating equipment now at mine, owned by applicant. Sufficient for above work, and consisting generally of the following:

300 foot compresor, full line of steel drills, hose, pipe, rails, timber, 4 jackhammers, 3 stopers, Gardner-Denver mucking machine, recently fully repaired, hoist, new cable, 2skips ore cars, pumps, spare parts, welding and blacksmith equipment, electric lines and appliances, general supplies and parts. General utility dump truck. Estimate of rental value in present condition, $2,000.00 per month.

(e) No rehabilitation of present equipment or buildings required.

(f) New buildings, improvements, etc. For housing for 6 men, office and warehouse $15,000.00

~~Construction of storage and other~~ ~~$5,000.00~~

(g) Included in above estimates.

(h) Contingencies:
(1) For general, exploratory drilling purposes $15000.

(2) Conditional Contingencies: If proposed work determines that vein continues to widen and is filling with commercial ore, sink shaft 350 ft. to 1000 ft. level, cost: 52500.

Stations on two levels	15000.
2400 ft. of drifts	72000.
350 ft. raise	17500.
Total	$157,000.

7. (a) Yes

(b) It is estimated that the overall cost will run approximately $6,000.00 per month. We propose to furnish our share of costs, as follows:

Rental use of equipment	$2,000.00 per month
Cash	1,000.00 per month

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

224 New Customhouse
Denver 2, Colorado

May 7, 1954.

Ruf 53

No commodity

Mr. William J. Robinson
Attorney at Law
33 North La Salle Street - Suite 1531
Chicago, Illinois

Dear Mr. Robinson:

Returned herewith for your further consideration are the two applications in quadruplicate which accompanied your letter dated May 6, 1954.

Utah Properties

On signed Forms MF-103 of the Cedar-Talisman, paragraph 3(e), you state: "No liens or encumbrances." The accompanying answer sheet states: "One hundred thousand dollars first mortgage on record."

As stated under paragraph 5(b), Form MF-103, a map or sketch of the property showing the present mine workings and the location of your proposed work with relation to property boundaries should accompany the application. The description of your proposed work contains only road building, opening and examining old mine workings. This does not constitute an exploration project. Road building and rehabilitation may be included in the application if you will specify the kind and amount of exploration work you propose to do after the road is built and the shaft is rehabilitated. Please show this proposed work on the map which you submit as a part of the application.

Arizona Properties

Signed Forms MF-103 state that there are no liens or encumbrances on the property. Unsigned answer sheets state: "One hundred thousand dollars first mortgage on record."

Enclosed for your information is a copy of Form MF-201 "Subordination Agreement," which would be required later should the application become a contract and the property is mortgaged.

Construction of ore bins is not an allowable cost of exploration.

Please furnish a map or sketch of the property showing the present mine workings and the location of your proposed work with reference to the property boundaries.

When we receive your corrected applications, as noted above, we will be pleased to process them.

Very truly yours,

W H King

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

Enclosures

HMC:cwm

cc: Subject
Administrator, DMEA
AHKoschmann
WRStorms
SRWilson
Chron.

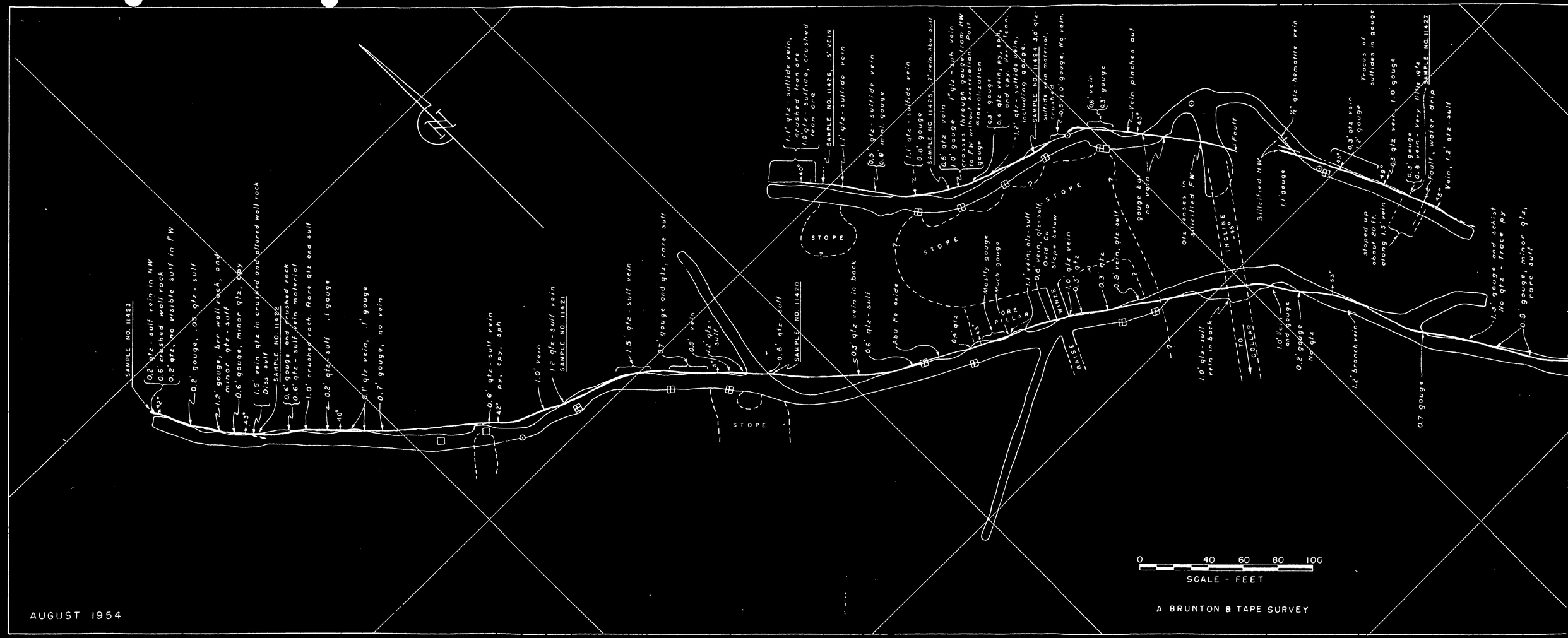
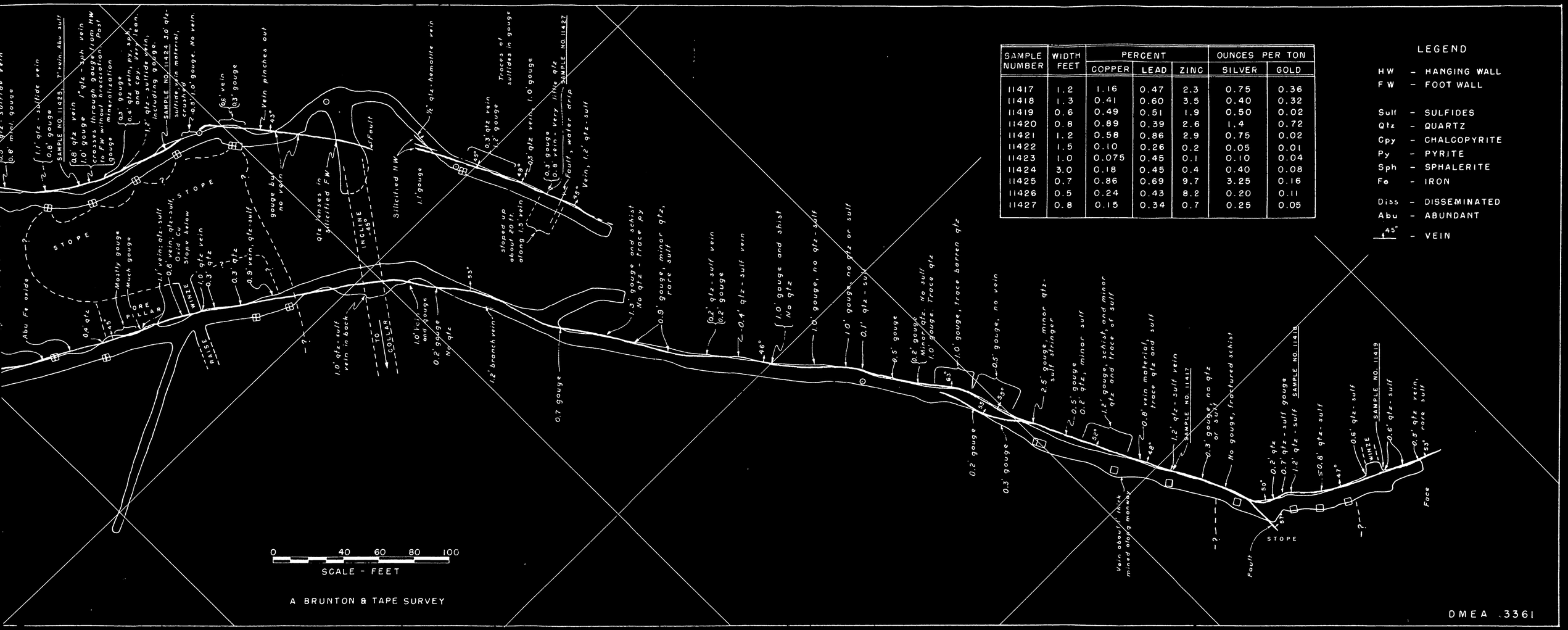


FIGURE 4. – GEOLOGIC MAP OF LEVELS 4 AND 5 – FRENCH LILY MINE – Y



SAMPLE NUMBER	WIDTH FEET	PERCENT			OUNCES PER TON	
		COPPER	LEAD	ZINC	SILVER	GOLD
11417	1.2	1.16	0.47	2.3	0.75	0.36
11418	1.3	0.41	0.60	3.5	0.40	0.32
11419	0.6	0.49	0.51	1.9	0.50	0.02
11420	0.8	0.89	0.39	2.6	1.4	0.72
11421	1.2	0.58	0.86	2.9	0.75	0.02
11422	1.5	0.10	0.26	0.2	0.05	0.01
11423	1.0	0.075	0.45	0.1	0.10	0.04
11424	3.0	0.18	0.45	0.4	0.40	0.08
11425	0.7	0.86	0.69	9.7	3.25	0.16
11426	0.5	0.24	0.43	8.2	0.20	0.11
11427	0.8	0.15	0.34	0.7	0.25	0.05

LEGEND

HW - HANGING WALL
FW - FOOT WALL

Sulf - SULFIDES
Qtz - QUARTZ
Cpy - CHALCOPYRITE
Py - PYRITE
Sph - SPHALERITE
Fe - IRON

Diss - DISSEMINATED
Abu - ABUNDANT
45° - VEIN

DMEA .3361

GEOLOGIC MAP OF LEVELS 4 AND 5 - FRENCH LILY MINE - YAVAPAI COUNTY, ARIZONA

5. *The exploration project.*—(*a*) [illegible] the mineral resources for which you are to explore. Copper, zinc, lead with by-products of gold

(*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. (See attached sheet)

(*c*) The work will start within 10 days and be completed within 18 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. (Attached sheet)

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.). None

(*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. (Attached sheet)

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(*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. None

(*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. (See sheet attached)

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above. None

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

Explain in detail on acompanying paper. (attached sheet)

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 April, 195[illegible]

ARIZONA-UTAH MINES COMPANY
(Applicant)

By [signature] President

ATTEST: Milton Fields Secretary

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

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. 3361
Metal or Mineral Copper-Lead-Zinc
Date Received
Estimated Cost $157,000
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-UTAH MINES COMPANY, 33 North La Salle Street, Chicago, Illinois.

(*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. Corporation (see attached sheet)

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

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

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

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

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

(*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. see attached sheet

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

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

16—66551-1

The mine is electrified and is equipped with adequate pumping facilities. The hoist is in good condition, having recently been replaced and fully overhauled. It has capacity to go 1000 feet. New cable beyond 650 would be required. There are ore bins on top and various facilities. The mine has sufficient machinery and equipment to operate. There is located on the property an up to date flotation mill, capable of handling from 50 to 70 tons of ore per day. Most of the operations were carried on by predecessors in interest of the present owner. Most all mine workings are accessible for examination purposes.

4. (b) This property has been operated for a number of years by predecessors of the applicant. The records of production have been lost. The indications, from the tailings dump, are that prior to 1946, approximately 6,000 tons of ore were milled. We have no way of knowing the returns received. Since 1946, the best available records indicate that 4,000 tons have been milled, the net smelter returns being in round numbers, $50,000. Considerable ore sold direct.

The chief values in this ore were : zinc 8%, copper, between 1 and 2%, gold, $10 per ton, and some lead and silver.

(c) Fissure vein in shist continuous for about 4500 feet, averaging 3 to 5 feet in width. Commercial values have, so far, been confined to a quartz component, 1 to 2½ feet in width, with some values in the other vein matter. Indications are that with depth, the fissure will fill with commercial ore. As the vein goes down it has widened, and the ore streaks are also more pronounced. The mineralization along the vein is persistent, and has, where it occurs, a fairly uniform commercial value.

(d) The property is accessible by road. A good road leads from what is known as the Black Canyon Highway, a state highway, to the property a distance of approximately 15 miles.

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5. (a) Copper, zinc, lead with by-products of gold and silver.

(b) The proposed work consists of the following: 600 feet of drifting on the 550 to intersect and develope ore chutes appearing on the 400 ft. level. Sink shaft an additional 100 feet, 1200 feet of drifting on 650 foot level to develop ore chutes which appear on 550 ft level.

Escape raise from 650 to 550 ft. level; construct at 650 ft. level, a station, sump, and ore pocket, and install pumping equipment.

(c) The work can begin in 10 days, and can be completed with 18 months from the date of an exploration contract.

5. (d) Operations will be under the general supervision of Charles H. Dunning, 817 West Madison St., Phoenix, Arizona, a Mining Engineer, who has been engaged in mining operations in the Southwest for 45 years.

6. Estimate of costs:

Drifting on 550 level 600 ft. at $30.00 per	$18,000
Sinking shaft 100 ft. $150 per ft.	15,000
Drifting 650 ft. level 1200 ft. $30.00 per ft.	36,000
Station, ore pocket & pumps 650 ft. level	10,000
Escape raise	5,000
Total	$84,000

(a) No independent contracts.

(b) Cost of labor, supervision, etc. included in above estimates.

(c) Materials and supplies included in above estimates.

(d) Operating equipment now at mine, owned by applicant. Sufficient for above work, and consisting generally of the following:

300 foot compresor, full line of steel drills, hose, pipe, rails, timber, 4 jackhammers, 3 stopers, Gardner-Denver mucking machine, recently fully repaired, hoist, new cable, 2skips ore cars, pumps, spare parts, welding and blacksmith equipment, electric lines and appliances, general supplies and parts. General utility dump truck. Estimate of rental value in present condition, $2,000.00 per month.

(e) No rehabilitation of present equipment or buildings required.

(f) New buildings, improvements, etc. For housing for 6 men, office and warehouse $15,000.00

(g) Included in above estimates.

(h) Contingencies:
(1) For general, exploratory drilling purposes $15000.

(2) Conditional Contingencies: If proposed work determines that vein continues to widen and is filling with commercial ore, sink shaft 350 ft. to 1000 ft. level, cost: 52500.

Stations on two levels	15000.
2400 ft. of drifts	72000.
350 ft. raise	17500.
Total	$157,000.

SHEETS ACCOMPANYING APPLICATION FOR AID IN EXPLORATION PROJECT

1.(a) ARIZONA-UTAH MINES COMPANY, c/o W. J. Robinson, 33 North La Salle Street, Chicago, Illinois.

(b) Applicant is a corporation organized under the laws of the State of Arizona.

(c) William J. Robinson, President
John P. Lichter, Vice-President
Morton Kallis, Treasurer
Milton Fields, Secretary
all having the common address of 33 North La Salle Street, Chicago, Illinois.

3. (a) The following described unpatented lode-mining claims, located in Black Canyon Mining District, Yavapai County, Arizona, the names, books and pages of the notices of the amended locations thereof recorded in the County Recorder's records of Yavapai County, being as follows:

NAME	BOOK	PAGE
French Lily Proper Amended	131	4
French Lily No. 1 Amended	131	5
French Lily No. 2 Amended	131	6
Camp Claim Amended	131	1
Twilight Amended	131	7
Camp Extension 1 Amended	131	2
Camp Extension 2 Amended	131	3
Twilight Extension 1 Original	154	24
Twilight Extension 2 Original	154	25
French Lily No. 3 Original	154	26
French Lily No. 4 Original	154	27

(b) French Lily Mine

(c) Applicant owns the property outright

(e) There are no liens or encumbrances on the land, except $100,000.00 first mortgage on record.

4. (a) The property has been opened to a depth of 550 feet down to and including the 550 foot level. The vein has been explored by drifts. They extend approximately 600 feet to either side of the shaft in the first, second, third and fourth levels. The 550 foot level has been explored by drifts, of 200 feet to the west along the vein and approximately 250 feet to the east. The shaft goes down on an incline, on the vein. There are stations at each level. On the 550 foot level, a large station has been constructed, equipped with ore pocket and a sump.

7. (a) Yes

(b) It is estimated that the overall cost will run approximately $6,000.00 per month. We propose to furnish our share of costs, as follows:

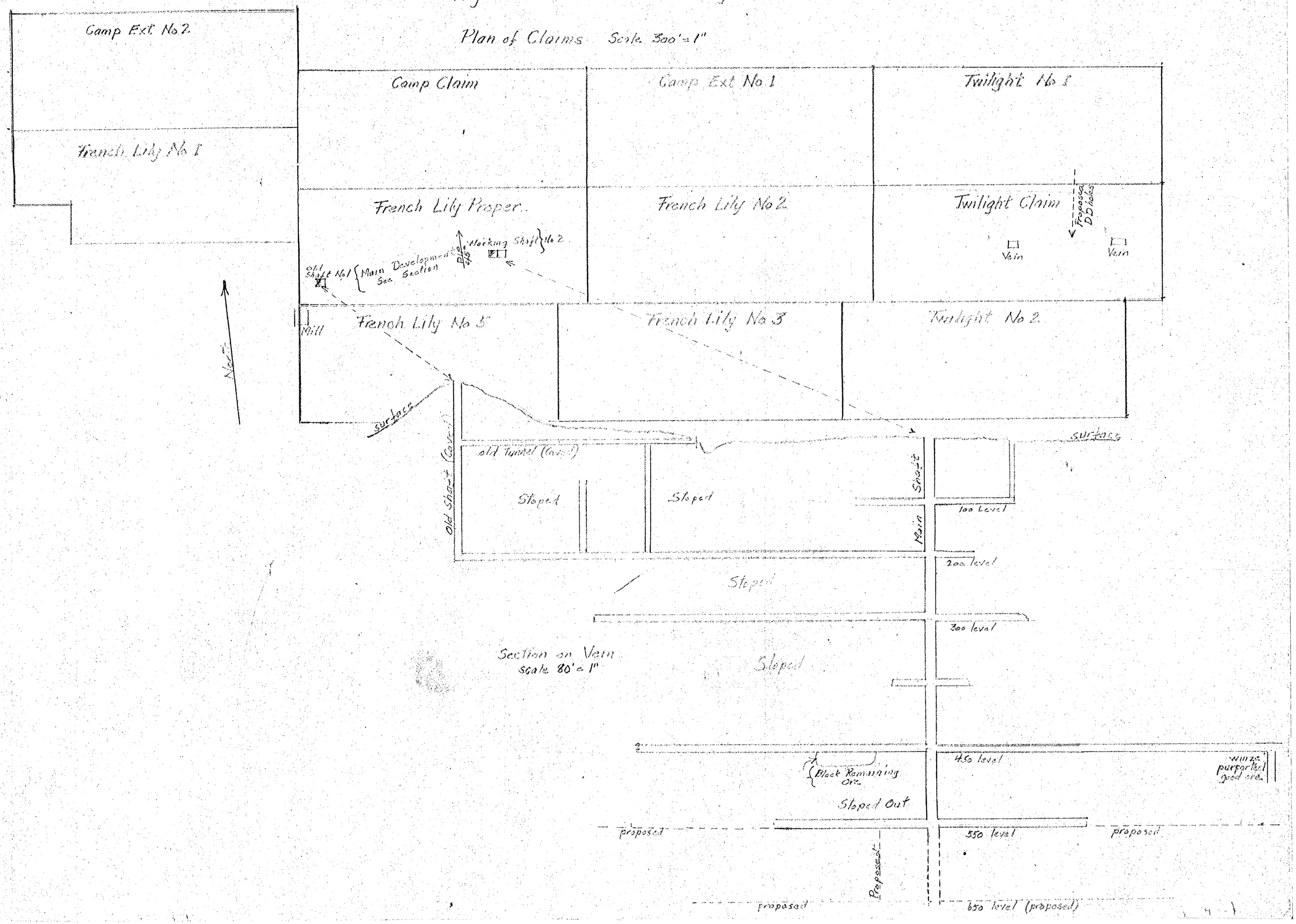
Rental use of equipment	$2,000.00 per month
Cash	1,000.00 per month

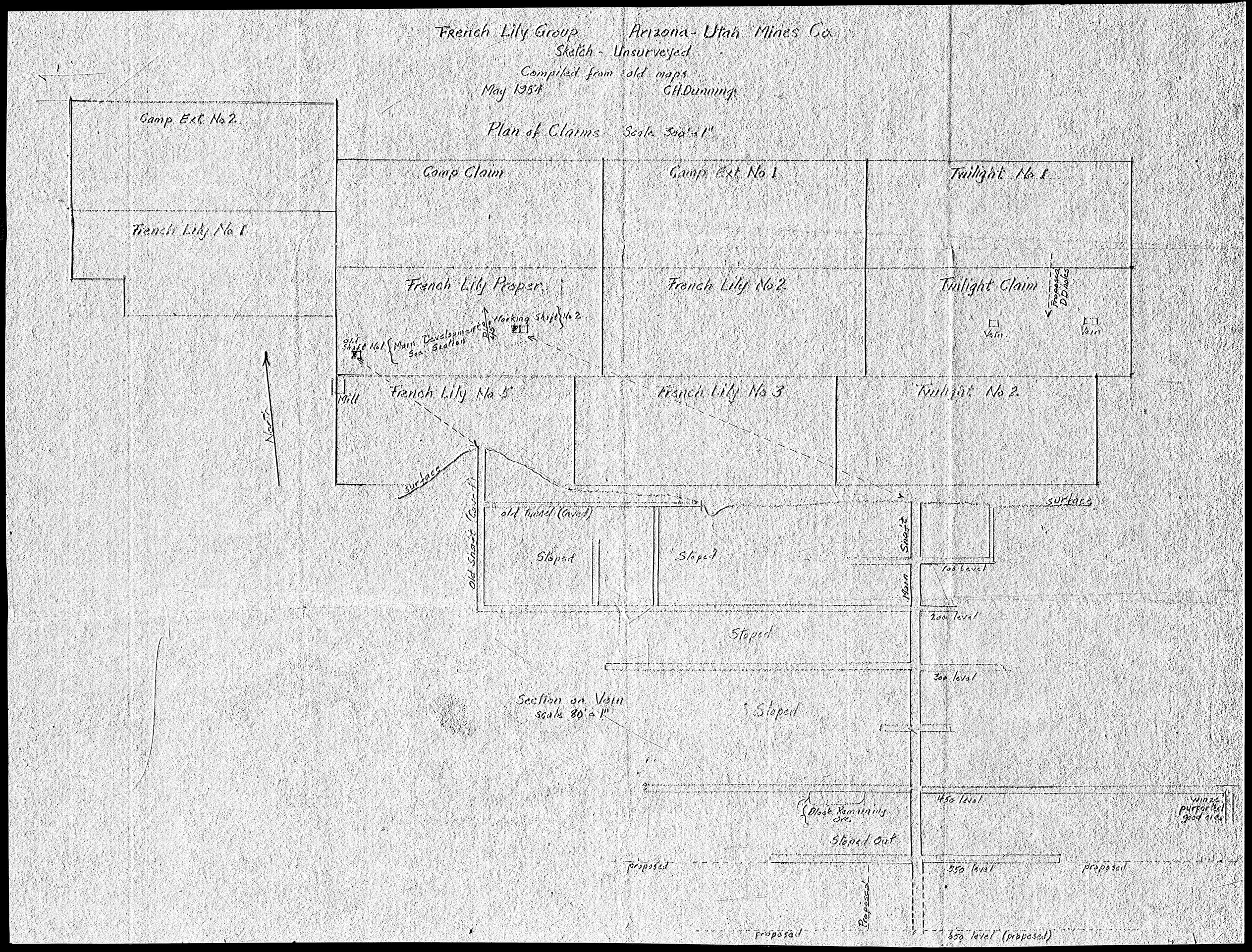
French Lily Group Arizona-Utah Mines Co.

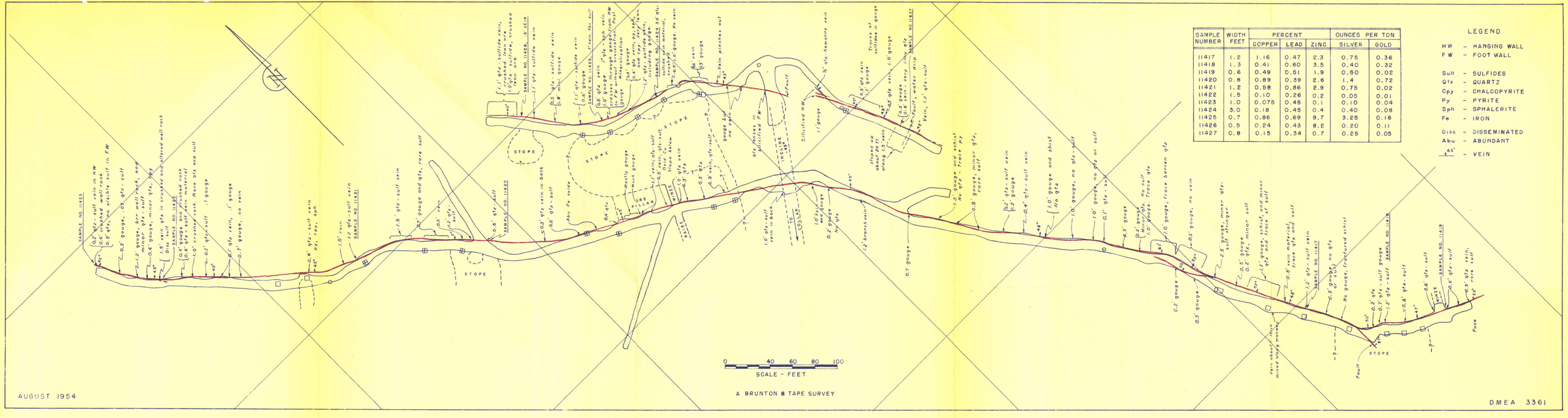
Sketch - Unsurveyed

Compiled from old maps

May 1954 C.H. Dunning




French Lily Group Arizona-Utah Mines Co
Sketch - Unsurveyed
Compiled from old maps
May 1954 C.H. Dunning
Plan of Claims Scale 300'=1"
Camp Ext. No 2
French Lily No 1
Camp Claim
Camp Ext No 1
Twilight No 1
French Lily Proper
French Lily No 2
Twilight Claim
Proposed DD holes
Vein
Vein
Working Shaft No 2
Old Shaft No 1
Main Development Sec Section
Dip of Vein
French Lily No 5
French Lily No 3
Twilight No 2
Mill
surface
surface
Old Shaft (Covered)
old tunnel (Caved)
Sloped
Sloped
Shaft
Main
100 Level
200 level
Sloped
300 level
Section on Vein
scale 80'=1"
Sloped
450 level
Block Remaining Ore
Sloped Out
Winze purposed good ore
proposed
550 level
proposed
Proposed
proposed
650 level (proposed)



SAMPLE NUMBER	WIDTH FEET	PERCENT			OUNCES PER TON	
		COPPER	LEAD	ZINC	SILVER	GOLD
11417	1.2	1.16	0.47	2.3	0.75	0.36
11418	1.3	0.41	0.60	3.5	0.40	0.32
11419	0.6	0.49	0.51	1.9	0.50	0.02
11420	0.8	0.89	0.39	1.6	1.4	0.72
11421	1.2	0.58	0.86	2.9	0.75	0.02
11422	1.5	0.10	0.26	0.2	0.05	0.01
11423	1.0	0.075	0.45	0.1	0.10	0.04
11424	3.0	0.18	0.45	0.4	0.40	0.08
11425	0.7	0.86	0.69	9.7	3.25	0.16
11426	0.5	0.24	0.43	8.2	0.20	0.11
11427	0.8	0.15	0.34	0.7	0.25	0.05

LEGEND

HW - HANGING WALL
FW - FOOT WALL

Sulf - SULFIDES
Qtz - QUARTZ
Cpy - CHALCOPYRITE
Py - PYRITE
Sph - SPHALERITE
Fe - IRON

Diss - DISSEMINATED
Abu - ABUNDANT
45° - VEIN

FIGURE 4. - GEOLOGIC MAP OF LEVELS 4 AND 5 - FRENCH LILY MINE - YAVAPAI COUNTY, ARIZONA