File Copy
Surname
Klugescheid
Wiswell
Geehan
Kiilsgaard
Selfridge

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

OCT 14 1955

Mr. Charles E. Lamm
701 East 36th Street
Tucson, Arizona

Re: Docket No. DMEA-3907 (Lead-Zinc-Copper)
Charles E. Lamm
Moonlight Claims Nos. 2 & 3
Cochise County, Arizona

Dear Mr. Lamm:

Your application for aid for an exploration project and other reports available to us in Washington concerning your application 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 marginal ore 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,

Frank E. Johnson

ACTING Administrator

WPKlugescheid/er 10/13/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

R.G.S.

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

October 13, 1955

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-3907, Charles E. Lamm, Moonlight Claims Nos. 2 & 3, Cochise County, Arizona, Lead-Zinc-Copper.

The cited application, dated July 2, 1955, was forwarded by the Executive Officer, Region III, and was received by this office on August 15, 1955. The Field Team made an examination of the property on August 23 and 24, 1955.

The Applicant proposed an exploration program consisting of driving a 130-foot raise above the existing adit and also sinking a 100-foot winze below this same adit. The raise and the winze would be fairly close together. The Applicant's cost for the proposed work is $10,000.00.

The ore bodies consist of a number of pods of sphalerite, galena, and chalcopyrite, widely spaced, along a limestone-quartzite contact. The larger pods probably do not exceed 20 feet measured along the dip and strike, and 3 feet in width. The average grade of combined zinc, lead and copper content of selectively mined ore is about 6 percent. The small tonnages and low grade of ore in the pods do not warrant an exploration program.

We concur with the recommendations of the Field Team and the Commodity members of the U. S. G. S. and the U. S. B. M. that this application be denied.

W. R. Griswold

W. R. Griswold

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

October 13, 1955

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-3907, Charles E. Lamm, Moonlight Claims Nos. 2 & 3, Cochise County, Arizona, Lead-Zinc-Copper.

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W. R. Griswold

W. R. Griswold

File Copy
Surname Klugeschied

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

October 13, 1955

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMLA-3907, Charles E. Lamm, Moonlight Claims Nos. 2 & 3, Cochise County, Arizona, Lead-Zinc-Copper.

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W. R. Griswold

W. R. Griswold

WPKlugeschied/er
Copy to: Docket
~~CRCE~~
Base Metals
Chron.

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

RECEIVED
OCT 11 1955

October 10, 1955

Re: DMEA-3907
(Lead-Zinc-Copper,
$10,000)
Charles Lamm
Moonlight (J. Escapule
Group
Cochise County, Ariz.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop,
Branch of Base Metals

Subject: Review of field team report of September 15, 1955, received September 22, 1955

I have reviewed the subject application and the reports of Leonid Bryner (USGS) and T. M. Romslo (USBM). It was their observation that limited quantities of ore occurred as sparsely distributed lenses or pods on the limestone-quartzite contact in areas where folding and fracturing had prepared the country rock for replacement. The largest replacement mass had measured about 20 feet in strike and dip length and 3 feet in thickness. Combined zinc, lead and copper value were in the order of 6 percent.

The field examiners concluded that the application should be denied since the masses were too sparsely distributed and too small to form an attractive target.

I agree with their observations and would also note that the complexity and leaness of the ore would make the property non-commercial unless the ore was present in such large quantities as to permit the economies of mass production.

O. M. Bishop
O. M. Bishop

Copy to - Div. of Minerals
Mr. Kiilsgaard, Rm. 5222
O. M. Bishop
Files

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

RECEIVED
OCT 1 0 1955

October 10, 1955

Re: DMEA-3907
(Lead-Zinc-Copper,
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Moonlight (J. Escapule
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Cochise County, Ariz.

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O. M. Bishop

O. M. Bishop

Copy to - Div. of Minerals
Mr. Kiilsgaard, Rm. 5222
O. M. Bishop
Files

IN REPLY REFER TO:

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

RECEIVED
SEP 26 1955

September 26, 1955

Re: DMEA 3907
Charles Lamm
Moonlight Claims
Cochise County, Arizona
$10,000 - Lead, Zinc, Copper

Memorandum

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

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

Subject: Review of Field Team Report.

The applicant requested a loan of $10,000 to be used in exploring a narrow zinc-lead-copper-bearing lime silicate zone.

As concluded by the examiners the metallization is practically limited to several small pods, localized in isolated folded and fractured structures, the size and grade of which promise little. Considerable work has yielded a small tonnage of marginal material, size of pods considered, and only a few tons of indicated and inferred reserves remain in place.

The conclusions of the examiners are accepted as well taken and the recommendation of the Field Team that the application be denied is justified.

I concur with the recommendation of the Field Team.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
SEP 26 1955

September 26, 1955

Re: DMEA 3907
Charles Lane
Moonlight Claims
Cochise County, Arizona
$10,000 - Lead, Zinc, Copper

Memorandum

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

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

Subject: Review of Field Team Report.

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The conclusions of the examiners are accepted as well taken and the recommendation of the Field Team that the application be denied is justified.

I concur with the recommendation of the Field Team.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-9/26/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
O. M. Bishop, 3617

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

RECEIVED
SEP 2 1955

September 15, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 3907 (Lead-Zinc-Copper), Charles Lamm, Moonlight claims Nos. 2 and 3, Cochise County, Arizona

Enclosed are the original and three copies of the report pertaining to the above application. The report consists of the following:

a. Summary, Conclusions, and Recommendations by Leonid Bryner, Geologist, U. S. Geological Survey and T. M. Romslo, Mining Engineer, U. S. Bureau of Mines.
b. Examination Report (Geology) by Leonid Bryner, U. S. Geological Survey
c. Engineering Report by T. M. Romslo, U. S. Bureau of Mines
d. Memoranda of transmittal and comment by E. N. Harshman, Walter R. Storms, and J. N. Faick.

The examining team believes that chances are poor for the discovery of significant reserves of lead, zinc, and copper ore by means of further exploration; and, therefore they recommend that the application be denied.

We concur with this recommendation.

W. M. Traver

W. M. Traver

Reviewed by
DMEA OPERATING COMMITTEE
9-26-55
(date)

E. N. Harshman

E. N. Harshman

Enclosures

DMEA
Date Rec'd
SEP 1 1955
BUREAU OF MINES
Denver, Colorado

TRANSMITTED
SEP 15 1955

Box 4097
Tucson 5, Arizona

September 9, 1955

Memorandum

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

From : Superintendent, Southwest Experiment Station

Subject : Field Examination Report, Docket DMEA-3907, Charles Lamm's Moonlight (J. Escapule) Group of Zinc-Lead-Copper Claims, Cochise County, Ariz.

Enclosed are original and 8 copies of the section on Summary, Conclusions and Recommendations by L. Bryner of the Geological Survey and T. M. Remale of the Bureau of Mines, and the section on Engineering by Remale for the above report. A separate section on Geology will be submitted by the Geological Survey.

As there seems little chance of making a significant discovery by additional exploratory work, the DMEA examiners recommend denial of Government aid. I concur with this recommendation.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. M. Traver (8)
J. N. Faick
DMEA-3907
DF

WRStorms:frj

Reviewed by
DMEA CLEARANCE COMMITTEE
9-26-55
(Date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3907, Charles Lamm's Moonlight (J. Escapule)

Group of Zinc-Lead-Copper Claims

Cochise County, Arizona

Leonid Bryner, Geologist
U. S. Geological Survey

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

September 1955

Reviewed by
DMEA OPERATING COMMITTEE
9-26-55
(Date)

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Leonid Bryner[1] and T. M. Romslo[2]

Charles Lamm applied to the Defense Minerals Exploration Administration for Governmental aid on a proposed exploratory project at the Moonlight Claims in Cochise County, Ariz. The application was docketed as DMEA-3907. Proposed explorations for zinc-lead-copper ores involved driving a 130-foot raise and a 100-foot winze at an estimated cost of $10,000.00.

The Moonlight Claims were located in 1942 and intermittently worked from then to the fall of 1954 by the present owner, Joe Escapule. The applicant acquired the property under a lease agreement early in 1955 and did a little exploratory work before the DMEA examination of August 23 and 24, 1955. Total production from the property amounted to 120 tons of selectively mined ore that is stored on the property.

Mine workings consist of two short trenches and a shallow inclined shaft on the surface, and a 260-foot adit from which 3 shallow winzes have been sunk. All workings are along a limestone-quartzite contact that strikes north-northwest and dips about 35 degrees to the southwest. Pods of ore minerals, sphalerite, galena and chalcopyrite, occur at each of the widely

---

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

separated surface workings and winzes. The pods are localized at the intersections of faults and fractures with small folds in the strata. The larger pods probably do not exceed 20 feet measured along the dip and the strike, and 3 feet in width. The average combined zinc, lead and copper content of selectively mined ore is placed at about 6 percent.

Denial of the requested assistance is recommended because possibilities of discovering significant ore reserves are considered unfavorable.

DMEA-3907, CHARLES LAMM'S MOONLIGHT (J. ESCAPULE) GROUP OF ZINC-LEAD-COPPER CLAIMS COCHISE COUNTY, ARIZONA

Engineering Report

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

September 1955

Reviewed by
DMEA OPERATING COMMITTEE
9-26-55
(date)

DMEA-3907, CHARLES LAMM'S MOONLIGHT (J. ESCAPULE)
GROUP OF ZINC-LEAD-COPPER CLAIMS
COCHISE COUNTY, ARIZONA

CONTENTS

Engineering report	Page
Introduction	1
Location, accessibility, physical features and climate	1
History and production	2
Extent and ownership of property	3
Present status	3
Description of the deposits	4
Ore reserves	5
Conclusions and recommendations	5

ILLUSTRATIONS

Figure		Following page
1	Location map	1
2	Claim map	3
3	Geologic map	(See geologic report)

INTRODUCTION

The Moonlight zinc-lead-copper claims in Cochise County, Ariz. were examined for the Defense Minerals Exploration Administration in connection with an application for Governmental exploration aid by Charles Lamm, Tucson, Ariz. The application was received July 19, 1955. It was docketed as DMEA-3907, reviewed by the Operating Committee and referred to the Field Team, Region III, for examination of the property.

The application contained a proposed exploratory project that involved driving a 130-foot raise and a 100-foot winze from an adit. Cost of the project was estimated at $10,000.00.

Examination of the property was carried out August 23 and 24, 1955 by Leonid Bryner, geologist, U. S. Geological Survey and T. M. Romslo, mining engineer, U. S. Bureau of Mines. Messrs. E. H. Allen and J. Escapule, representatives of the applicant, accompanied the DMEA examining team to the property. Mr. Allen left the property shortly after the initiation of the investigations. Before leaving he informed the team that Mr. Escapule, the owner of the property, would furnish necessary information regarding past and proposed operations.

LOCATION, ACCESSIBILITY, PHYSICAL FEATURES AND CLIMATE

The Moonlight claims are situated about 12 air miles northeast of Tombstone, Ariz., a village on U. S. Highway 80 (figure 1). They are described as being in section 19 of unsurveyed T. 18 S., R. 24 E., Cochise County, Ariz.

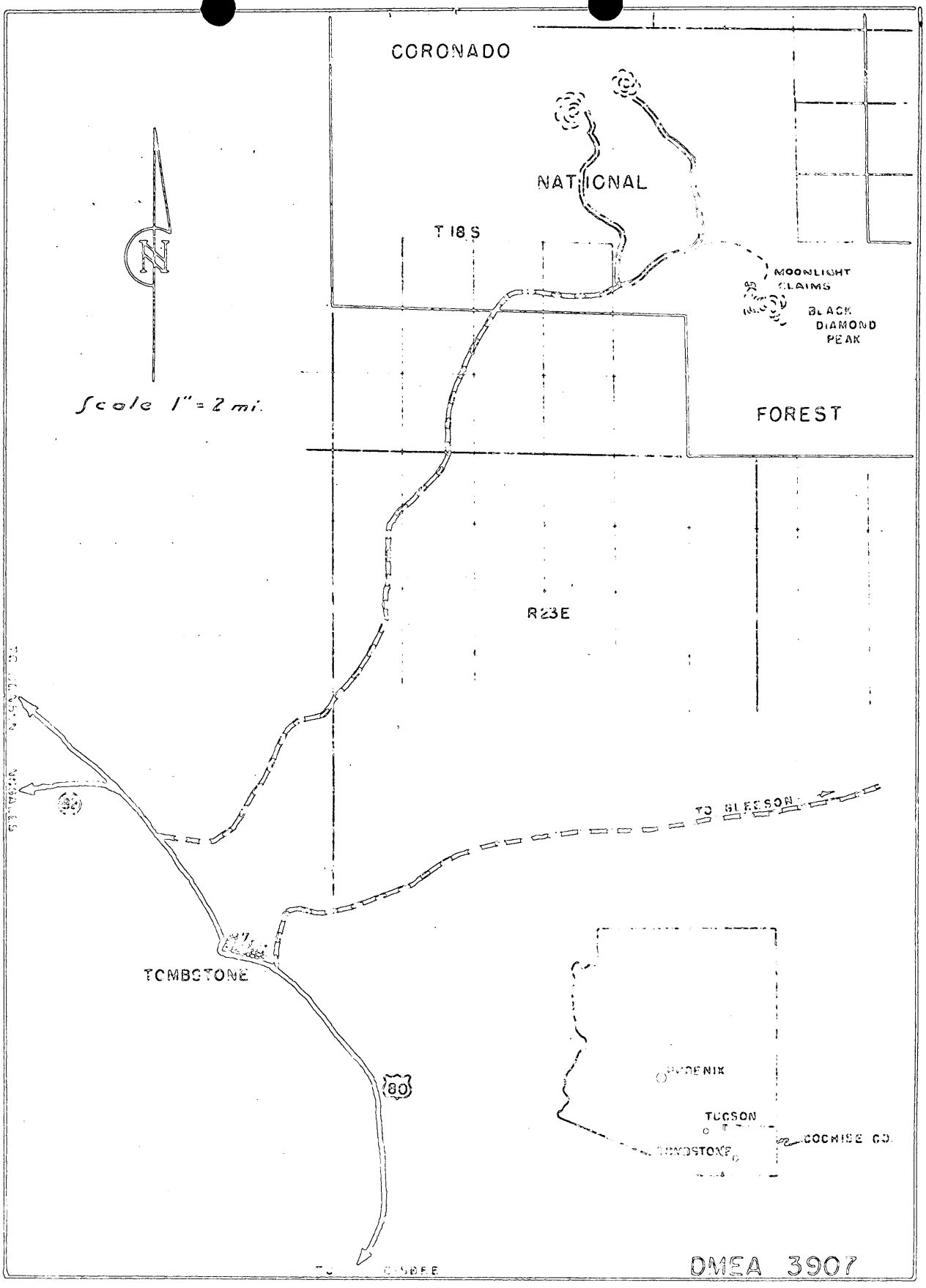

FIG. 1 LOCATION MAP, MOONLIGHT CLAIMS NOS 2 & 3
COCHISE CO. ARIZONA

The claims are accessible from Tombstone by traveling 2.0 miles toward Benson on U. S. Highway 80, thence 14.1 miles northeasterly on the graded Middlemarch Road to its junction with an unimproved road that ascends a steep mountain slope and ends at the mine workings. This section of road is passable only with 4-wheel-drive vehicles.

The claims are in the south central portion of the Dragoon Mountains at an average altitude of about 6,000 feet. They are on the rugged northeastern slope of Black Diamond Mountain that has a peak altitude of approximately 7,000 feet.

Vegetation consists mainly of forage grasses, a variety of scrubs, and scattered groves of live-oak trees.

Summers are pleasant and winters are mild. Precipitation of about 15 inches annually occurs mainly as heavy summer rainstorms, and light rain and snowfalls in the winter.

Drainage is southwesterly to the San Pedro river. There are no permanent streams in the vicinity.

HISTORY AND PRODUCTION

Joe Escapule reported that he located the Moonlight claims in 1942 and worked the claims intermittently from then to the fall of 1954. During the period he built the access road, completed most of the present exploratory workings and constructed a small ore bin. During February 1955 he leased the property to Charles Lamm, the applicant. Since June 1955, he has been in charge of the lessee's

operations. These operations comprise road repairs, enlarging a winze and its station, 4 feet of advance in the adit, and hauling in a crushing and grinding unit and an air-table concentrator.

Total production from the mine amounts to approximately 120 tons of selectively mined ore that is stored at two places on the property. About 60 tons is on the dump of the most southerly surface working, and the other 60 tons is stored in the bin near the portal of the adit.

EXTENT AND OWNERSHIP OF PROPERTY

The property comprises 2 adjoining unpatented lode mining claims, Moonlight Nos. 2 and 3 (figure 2). It is owned by Joe Escapule of Tombstone, Ariz.

Charles Lamm, the applicant, holds the 2 claims under a lease agreement for a period of 4 years from February 15, 1955.

PRESENT STATUS

Surface exploratory workings consist of two 25-foot trenches and an irregularly inclined shaft. The shaft attains a vertical depth of about 22 feet (figure 3). Underground workings comprise a 260-foot long adit from which shallow inclined winzes have been put down at 3 places.

Structures erected on the property are confined to a small ore bin near the portal of the adit.

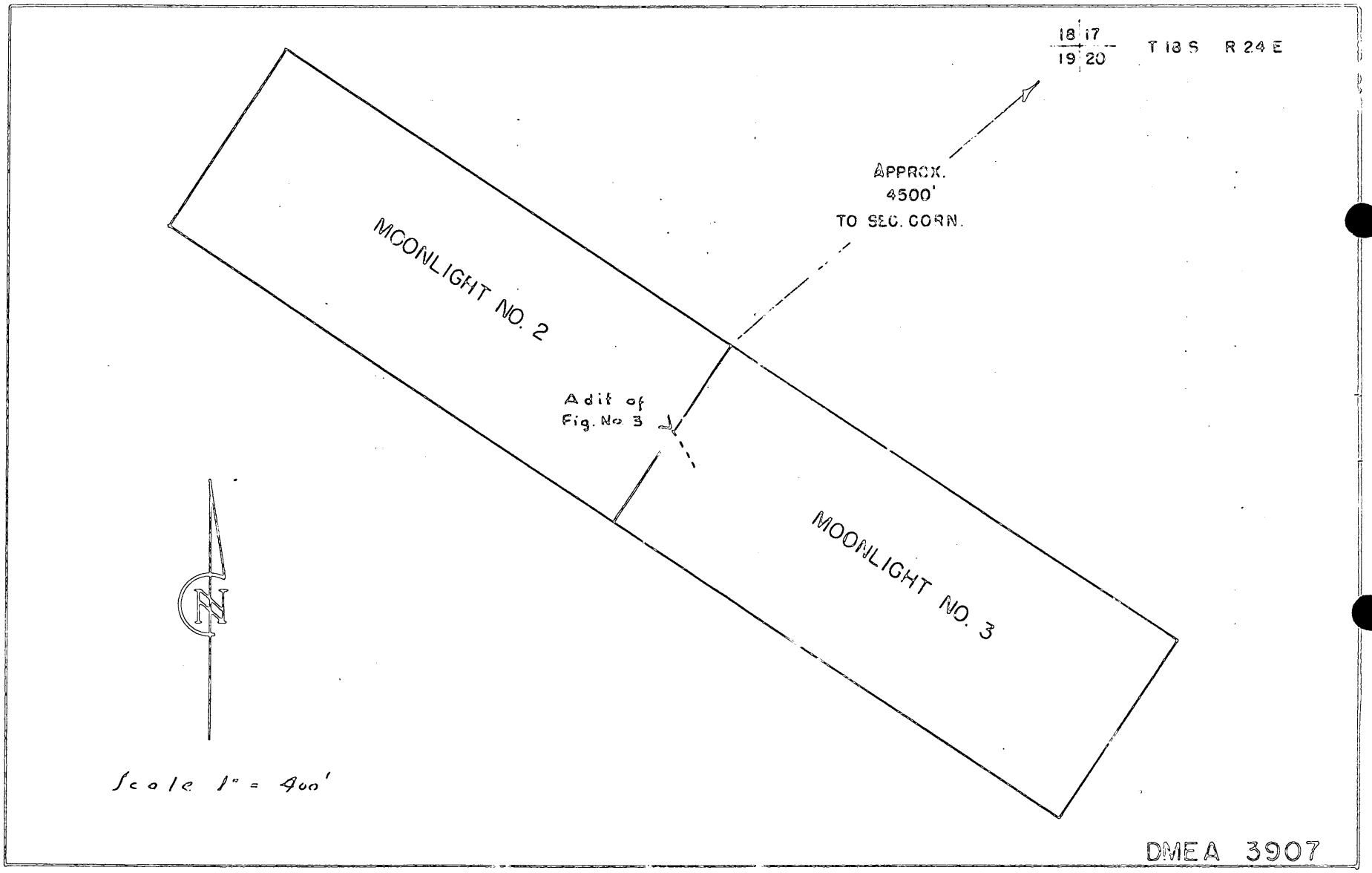

FIG - 2 - CLAIM MAP, MOONLIGHT CLAIMS, COCHISE CO. ARIZONA

Major mining equipment on the property is confined to an old 110 c.f.m. air-compressor. The compressor, and air drills, steel, bits, pipe, and miscellaneous other equipment stored at Tombstone, are owned by Joe Escapule. He has agreed to sell all necessary mining equipment and supplies to the applicant.

Milling equipment consists of the crushing and grinding unit, and air-table concentrator that presently is being installed. This equipment, poorly designed in my opinion, was manufactured at Tucson, Ariz. by the Montford Manufacturing Co., Montford, Wis. Mr. Allen said he was manager of the company's Tucson plant and that Charles Lamm, the applicant, is president of the company.

DESCRIPTION OF THE DEPOSITS

The surface and underground workings are along a limestone-quartzite contact. At the mine the rock formations have a northwesterly strike and a dip to the southwest of about 35 degrees. Ore minerals occur as irregular masses in widely scattered fractured zones of silicated limestone. The largest masses measure about 20 feet in dip and strike length, and approximately 3 feet in width.

The ore minerals mainly are sphalerite and galena; chalcopyrite and pyrite are present in minor amounts.

ORE RESERVES

Measured reserves are confined to the 2 60-ton lots of reportedly selectively mined ore that is stored on the property. A 75-pound grab sample was obtained from each lot. Bureau of Mines assays of the samples follow:

Sample No.	Location	Percent			Ounces per ton	
		Zinc	Lead	Copper	Gold	Silver
11443	Dump of main upper working	5.1	1.7	0.21	Tr	3.4
11444	Stored ore from adit and winzes	3.7	1.7	0.16	Tr	1.9

Indicated and inferred reserves are confined to a few tons of ore that remain in the walls and floor of the winze near the end of the adit and in the main upper workings.

CONCLUSIONS AND RECOMMENDATION

Ore mineralization at the Moonlight mine is confined to small and widely scattered deposits of zinc, lead and copper sulfides. Furthermore, geologic conditions do not appear to be favorable for the discovery of significant reserves of such minerals.

Consequently, denial of the requested assistance for exploration of theMoonlight claims is recommended.

IN REPLY REFER TO:

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

DMEA
Date Rec'd.
SEP 13 1955
BUREAU OF MINES
Denver, Colorado

TRANSMITTED
SEP 15 1955

September 12, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3907 (Lead-zinc-copper), Moonlight claims, Cochise County, Arizona

Enclosed are the original and eight copies of a geological report by Leonid Bryner, U. S. Geological Survey, covering his examination of the subject property.

Small isolated low-grade bodies of lead-zinc-copper ore are localized in areas of minor folding and fracturing in a limestone bed about 2 to 3 feet above the contact with an underlying quartzite member of the Naco formation. A sample of the ore mined from the small stope at the south end of the main adit contained about 5.6 percent combined lead, zinc, and copper.

Bryner concludes that the proposed exploration will not result in the discovery of significant deposits of lead-zinc-copper ore and recommends denial of the application for exploration assistance.

I concur with this recommendation.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (9)

ENHarshman:arh

Reviewed by
DMEA OPERATING COMMITTEE
9-26-55
(date)

DMEA
Date Rec'd.
SEP 13 1955
BUREAU OF MINES
Denver, Colorado

Box 4126 University Station
Tucson, Arizona

September 9, 1955

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: J. N. Faick

SUBJECT: DMEA Docket 3907, Moonlight claims (Lead-Zinc-Copper)
Cochise County, Arizona

Enclosed are the original and 8 copies of a geological report of examination of the above subject property. This report recommends that the application be denied because of the small size of the ore bodies exposed in existing workings, and because geological conditions do not indicate that larger ore bodies would be found by the applicant's proposed exploration.

I concur with this recommendation.

John N. Faick

John N. Faick

JNF:ms

cc. Harshman (8)
Storms

Reviewed by
DMEA OPERATIONS COMMITTEE
9-26-55
(Date)

U.S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY
DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

GEOLOGY

EXAMINATION REPORT
DMEA-3907

CHARLES LAMM'S MOONLIGHT (J. ESCAPULE) GROUP OF CLAIMS
COCHISE COUNTY, ARIZONA

(Lead, Zinc, Copper)

Reviewed by
DMEA OPERATING COMMITTEE
9-26-55
(date)

By
Leonid Bryner
Geologist
U.S. Geological Survey

September 9, 1955

U.S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY
DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

GEOLOGY
EXAMINATION REPORT
DMEA-3907

CHARLES LAMM'S MOONLIGHT (J. ESCAPULE) GROUP OF CLAIMS
COCHISE COUNTY, ARIZONA

(Lead, Zinc, Copper)

CONTENTS

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INTRODUCTION	1
GEOLOGY	2
PRODUCTION AND GRADE	5
EXPLORATION	6
RESERVES	6
CONCLUSIONS AND RECOMMENDATIONS	6

ILLUSTRATIONS

Fig. 1 Location	See Engineering Report
Fig. 2 Claim Map	" " "
Fig. 3 Geologic Map	Following page 6

INTRODUCTION

In an application to the Defense Minerals Exploration Administration, dated July 2, 1955, Charles Lamm requested government participation in a program estimated to cost $10,000, to explore for lead, zinc, and copper on the Moonlight (J. Escapule) Mine on the Moonlight group of claims.

The claims are located about 1000 feet north of the summit of Black Diamond Peak in the Dragoon Mountains, Cochise County, Arizona. Elevation of the claims is about 6,500 feet. The property is reached from Tombstone by driving north 2 miles on Federal Highway 80 to the Pearce road. Via the Pearce road and a right-hand turn-off from this road, it is 15.2 miles to the mine portal. A pickup truck or jeep is needed at least on the last mile of road.

The owner of the two unpatented claims that comprise this property is Joe M. Escapule. The claims are recorded as the Moonlight No. 2 and the Moonlight No. 3, and are leased by Escapule to the applicant.

The examination was made on August 23 and 24 by T. M. Romslo of the U. S. Bureau of Mines and by the writer. Joe Escapule assisted the examiners by showing them over the property and giving information that was lacking in the docket.

The geologic examination consisted of mapping the mine and nearby surface workings mainly to determine the extent of the deposit and the geologic controls. The conclusion drawn from this work is that the ore occurs in very small bodies that have been localized at rather widely scattered places by a combination of lithologic and structural controls.

The deposit is very briefly described in an unpublished Bureau of Mines report by Curtis G. Mohney, dated December 30, 1942. Mohney concluded that the deposit was of no interest to the U.S.Bureau of Mines. At that time, however, much less development work had been done than at present.

GEOLOGY

The Moonlight Mine is near the head of a draw on the steep, north slope of Black Diamond Peak. The country rock here is the Naco group of Pennsylvanian or Permian age. The mine workings are along a conformable contact between limestone and quartzite units that probably belong either to the Scherrer or the Earp formation described by Gilluly.[1] At the mine the strata strike about north-northwest and dip about 35 degrees to the southwest. Further to the west they are comparatively flat-lying and immediately to the east their dip steepens, apparently due to faulting and perhaps folding. A faulted zone to the east of the deposit seems to be part of a zone of deformation that persists far beyond the mine area and includes normal as well as reverse faulting, and folding

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1/ Gilluly, James; Cooper, J.R., and Williams, J. S., Late Paleozoic Stratigraphy of central Cochise County, Arizona, U. S. Geol. Survey Prof. Paper 266, 1954.

parallel to the faulting. These types of deformation are present also on a small scale within the mine (fig. 3). The strata, as in cross-section A-A' (fig. 3), display small folds superimposed on a southwesterly dipping monocline. The axes of these small folds are more or less parallel to the strike of the beds. The folds are faulted and fractured.

Most of the faults at the mine strike north to northwest, but a few strike northeast. The dip of these faults is both easterly and westerly but the displacement generally is up on the east side, and at the mine, at least, amounts only to a few feet or a few inches. The faults that show the most direct relationship to the ore are the ones that change up-dip from rather steep faults that cut across bedding to bedding-plane faults with hardly any recognizable displacement. Some of the faults apparently are an expression of the same forces that produced the folding.

Fracturing is in two main directions, northeast and northwest, and the dips are generally very steep to vertical, Many of the fracture faces show slickensides but no recognizable displacement, and therefore the distinction between fractures and faults is not clearcut. Slickensides on fracture and fault faces vary from vertical to nearly horizontal.

The ore minerals are sphalerite and galena. There are also minor amounts of chalcopyrite and pyrite but not enough to constitute a significant proportion of the ore. The gangue minerals are mainly lime-magnesia silicates occurring as masses of greenish, radiating crystals. In the mine and in nearby workings the zone of silicated

limestone is at the base of the limestone or within a foot or two of the base, that is, adjacent to the underlying quartzite. The silicate zone is practically continuous. It probably averages one or two feet in thickness and attains a maximum thickness, in the main upper-working (fig. 3), of about 7 feet.

The ore minerals occur in isolated irregular masses in the zone of silicated limestone. These bodies seem to be somewhat tabular, and roughly parallel to the bedding. They do not appear to greatly exceed about 20 feet in dip or strike length, and three feet in thickness. One of the smallest but most well-defined bodies is exposed on the north wall of the upper main working. It measured $4\frac{1}{2}$ feet in length and 3 inches in average thickness. The two largest bodies seen during the examination are in the south end of the main working and the south end of the main upper working. The known dimensions together with the habit of the ore bodies as seen here and in other parts of the mine point to quite a small order of magnitude for the ore bodies of this deposit. The structural controls of the ore bodies are a further indication that the ore bodies are likely to be small.

The ore appears to have been localized along the small folds which have been mentioned as being superimposed on the monocline which accounts for the moderate average southwesterly dip of the beds. Two such folds are recognized at the mine. The lower one is followed by the main working and the upper one is cut by the main upper working. These folds have breadths of not over 50 or 60 feet, and the ore bodies apparently are localized on one or the other limb of a fold; that is, they do not persist down dip across the entire fold. Besides being

localized by folds the ore bodies also appear to have been localized by comparatively profuse small-scale faulting and fracturing that occurs at irregular intervals along these folds. The combination of folding, faulting, and fracturing, which seems to have prepared the ground for these deposits, is an isolated rather than a widespread phenomenon in the mine area. The fracturing probably was an important factor because of the competency of the quartzite in comparison to the overlying limestone and the consequent channeling of ore solutions through the quartzite to the limestone where ore deposition took place.

PRODUCTION AND GRADE

No ore is known to have been shipped from the property. Present dumps and material in the ore bin are sufficient to account for the amount of rock that has been mined.

Two large grab samples taken by the U. S. Bureau of Mines during the examination provide the most reliable information at hand on the grade of this deposit. U. S. Bureau of Mines sample 11443 was obtained from the dump of the upper main working (fig. 3) and probably represents rock mined from this working. This sample assayed 5.1 percent Zn, 1.7 percent Pb, 0.21 percent Cu, 3.4 oz. Ag, and a trace of Au. The other sample, U. S. Bureau of Mines No. 11444, was from the bin and probably represents rock mined from the stope at the south end of the main working (fig. 3). This sample assayed 3.7 percent Zn, 1.7 percent Pb, 0.16 percent Cu, 1.9 oz. Ag, and a trace Au. A spectrographic analysis of this rock indicated no vanadium or molybdenum.

EXPLORATION

The work proposed by the applicant consists of raising 130 feet from the main working to the surface and of sinking a 100-foot winze from the south end of the main working.

RESERVES

A few tons of indicated and inferred reserves remain at the south end of the main working and the main upper working. But the tonnage for these reserves would be too small to be of any significance. Therefore no reserves are estimated.

CONCLUSIONS AND RECOMMENDATIONS

Because of the small size and isolated habit of the ore bodies, it is concluded that exploration at the Moonlight Mine would not be likely to discover significant reserves of lead-zinc ore, and therefore denial of the application is recommended.

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

Acc

September 15, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 3907 (Lead-Zinc-Copper), Charles Lemm, Moonlight claims Nos. 2 and 3, Cochise County, Arizona

Enclosed are the original and three copies of the report pertaining to the above application. The report consists of the following:

a. Summary, Conclusions, and Recommendations by Leonid Bryner, Geologist, U. S. Geological Survey and T. M. Romslo, Mining Engineer, U. S. Bureau of Mines.
b. Examination Report (Geology) by Leonid Bryner, U. S. Geological Survey
c. Engineering Report by T. M. Romslo, U. S. Bureau of Mines
d. Memoranda of transmittal and comment by E. N. Harshman, Walter R. Stoune, and J. R. Faick.

The examining team believes that chances are poor for the discovery of significant reserves of lead, zinc, and copper ore by means of further exploration; and therefore they recommend that the application be denied.

We concur with this recommendation.

Wm. James
W. M. Trever

E. N. Harshman
E. N. Harshman

Reviewed by O.C.
9/26/55

Enclosures

DMEA
Date Rec'd.
SEP 12 1955
BUREAU OF M...
Denver, Colo...

TRANSMITTED
SEP 15 1955

Box 4097
Tucson 5, Arizona

September 9, 1955

Memorandum

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

From : Superintendent, Southwest Experiment Station

Subject : Field Examination Report, Docket DMEA-3907, Charles Lane's Moonlight (J. Escapule) Group of Zinc-Lead-Copper Claims, Cochise County, Ariz.

Enclosed are original and 8 copies of the section on Summary, Conclusions and Recommendations by L. Bryner of the Geological Survey and T. M. Rasula of the Bureau of Mines, and the section on Engineering by Rasula for the above report. A separate section on Geology will be submitted by the Geological Survey.

As there seems little chance of making a significant discovery by additional exploratory work, the DMEA examiners recommend denial of Government aid. I concur with this recommendation.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. M. Tranor (8)
J. M. Falck
DMEA-3907
DF

WRStorms:frj

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-[illegible], Charles Lewis's Moonlight (J. Kennedy)

Group of Zinc-Lead-Copper Claims

Cochise County, Arizona

Leonid Dryner, Geologist
U. S. Geological Survey

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

September 1955

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Leonid Bryner[1] and T. M. Rennie[2]

Charles Lane applied to the Defense Minerals Exploration Administration for Governmental aid on a proposed exploratory project at the Moonlight Claims in Cochise County, Ariz. The application was docketed as DMEA-3207. Proposed explorations for zinc-lead-copper ores involved driving a 130-foot raise and a 100-foot winze at an estimated cost of $10,000.00.

The Moonlight Claims were located in 1943 and intermittently worked from then to the fall of 1954 by the present owner, Joe Escapule. The applicant acquired the property under a lease agreement early in 1955 and did a little exploratory work before the DMEA examination of August 23 and 24, 1955. Total production from the property amounted to 130 tons of selectively mined ore that is stored on the property.

Mine workings consist of two short trenches and a shallow inclined shaft on the surface, and a 200-foot adit from which 3 shallow winzes have been sunk. All workings are along a limestone-quartzite contact that strikes north-northwest and dips about 35 degrees to the southwest. Pods of ore minerals, sphalerite, galena and chalcopyrite, occur at each of the widely

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

separated surface workings and winzes. The pods are localized at the intersections of faults and fractures with small folds in the strata. The larger pods probably do not exceed 20 feet measured along the dip and the strike, and 3 feet in width. The average combined zinc, lead and copper content of selectively mined ore is placed at about 6 percent.

Denial of the requested assistance is recommended because possibilities of discovering significant ore reserves are considered unfavorable.

BMEA-3907, CHARLES LANG'S MOONLIGHT (J. ESCAPULE)
GROUP OF ZINC-LEAD-COPPER CLAIMS
COCHISE COUNTY, ARIZONA

CONTENTS

Engineering report	Page
Introduction	1
Location, accessibility, physical features and climate	1
History and production	2
Extent and ownership of property	3
Present status	3
Description of the deposits	4
Ore reserves	5
Conclusions and recommendations	5

ILLUSTRATIONS

Figure		Following page
1	Location map	1
2	Claim map	3
3	Geologic map	(See geologic report)

INTRODUCTION

The Moonlight zinc-lead-copper claims in Cochise County, Ariz. were examined for the Defense Minerals Exploration Administration in connection with an application for Governmental exploration aid by Charles Lane, Tucson, Ariz. The application was received July 19, 1955. It was docketed as DMEA-3007, reviewed by the Operating Committee and referred to the Field Team, Region III, for examination of the property.

The application contained a proposed exploratory project that involved driving a 130-foot raise and a 100-foot winze from an adit. Cost of the project was estimated at $10,000.00.

Examination of the property was carried out August 23 and 24, 1955 by Leonid Dryner, geologist, U. S. Geological Survey and T. M. Rosale, mining engineer, U. S. Bureau of Mines. Messrs. E. H. Allen and J. Kosegula, representatives of the applicant, accompanied the DMEA examining team to the property. Mr. Allen left the property shortly after the initiation of the investigations. Before leaving he informed the team that Mr. Kosegula, the owner of the property, would furnish necessary information regarding past and proposed operations.

LOCATION, ACCESSIBILITY, PHYSICAL FEATURES AND CLIMATE

The Moonlight claims are situated about 12 air miles northeast of Tombstone, Ariz., a village on U. S. Highway 80 (figure 1). They are described as being in section 19 of unsurveyed T. 18 S., R. 24 E., Cochise County, Ariz.

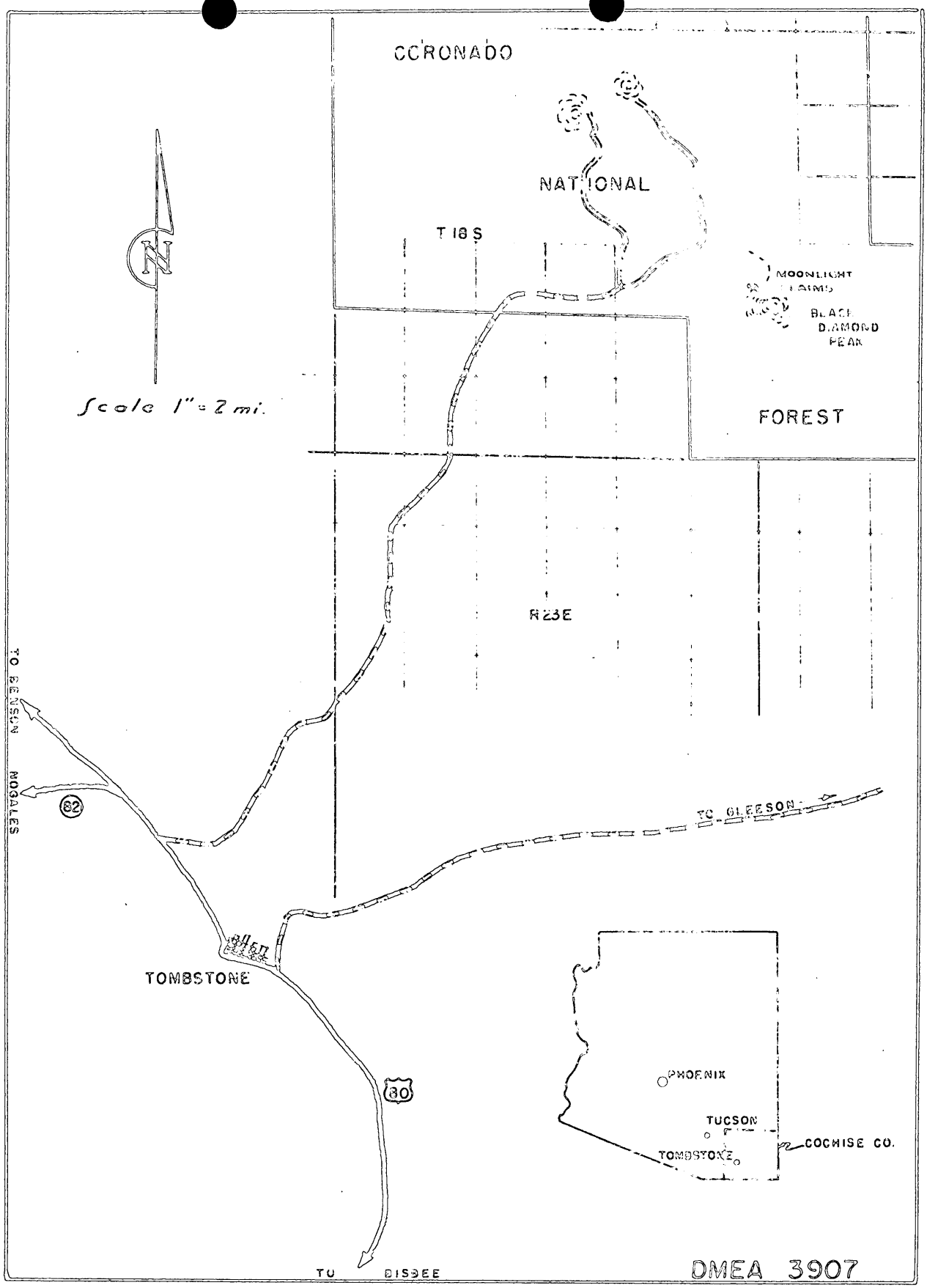

FIG.-1-LOCATION MAP, MOONLIGHT CLAIMS NOS. 2 & 3
COCHISE CO. ARIZONA

The claims are accessible from Tombstone by traveling 2.0 miles toward Benson on U. S. Highway 80, thence 14.1 miles northeasterly on the graded Middlemarch Road to its junction with an unimproved road that ascends a steep mountain slope and ends at the mine workings. This section of road is passable only with 4-wheel-drive vehicles.

The claims are in the south central portion of the Dragoon Mountains at an average altitude of about 6,000 feet. They are on the rugged northeastern slope of Black Diamond Mountain that has a peak altitude of approximately 7,000 feet.

Vegetation consists mainly of forage grasses, a variety of scrubs, and scattered groves of live-oak trees.

Summers are pleasant and winters are mild. Precipitation of about 15 inches usually occurs mainly as heavy summer rainstorms, and light rain and snowfalls in the winter.

Drainage is southwesterly to the San Pedro river. There are no permanent streams in the vicinity.

HISTORY AND PRODUCTION

Joe Estopale reported that he located the Moonlight claims in 1942 and worked the claims intermittently from then to the fall of 1954. During the period he built the access road, completed most of the present exploratory workings and constructed a small ore bin. During February 1955 he leased the property to Charles Lane, the applicant. Since June 1955, he has been in charge of the lessee's

operations. These operations comprise road repairs, enlarging a winze and its station, 4 feet of advance in the adit, and hauling in a crushing and grinding unit and an air-table concentrator.

Total production from the mine amounts to approximately 120 tons of selectively mined ore that is stored at two places on the property. About 60 tons is on the dump of the most southerly surface working, and the other 60 tons is stored in the bin near the portal of the adit.

EXTENT AND OWNERSHIP OF PROPERTY

The property comprises 2 adjoining unpatented lode mining claims, Moonlight Nos. 2 and 3 (figure 2). It is owned by Joe Kocapule of Tombstone, Ariz.

Charles Lamm, the applicant, holds the 2 claims under a lease agreement for a period of 4 years from February 15, 1956.

PRESENT STATUS

Surface exploratory workings consist of two 20-foot trenches and an irregularly inclined shaft. The shaft attains a vertical depth of about 22 feet (figure 3). Underground workings comprise a 250-foot long adit from which shallow inclined winzes have been put down at 3 places.

Structures erected on the property are confined to a small ore bin near the portal of the adit.

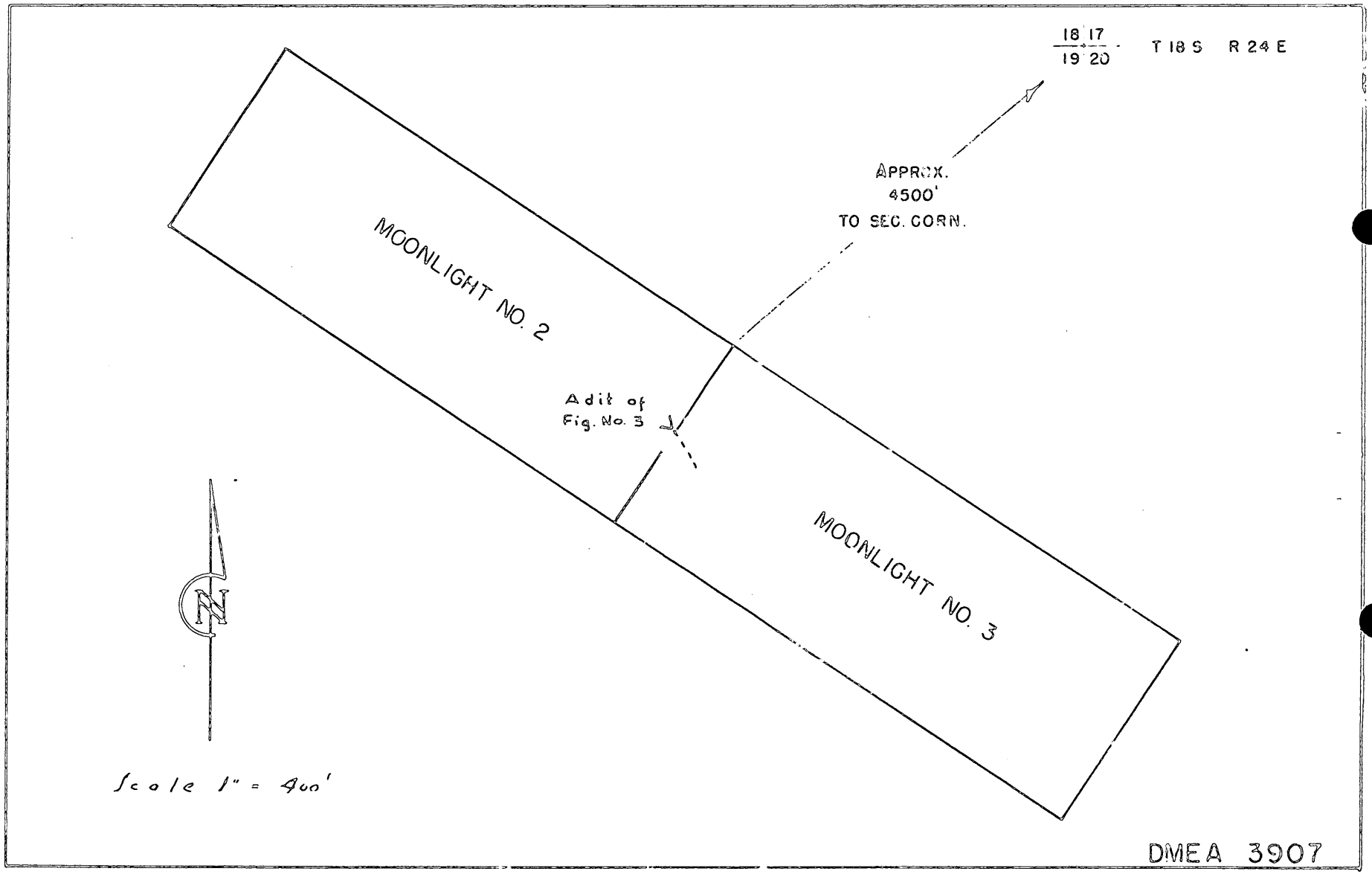

FIG - 2 - CLAIM MAP, MOONLIGHT CLAIMS, COCHISE CO. ARIZONA

Major mining equipment on the property is confined to an old 110 c.f.m. air-compressor. The compressor, and air drills, steel, bits, pipe, and miscellaneous other equipment stored at Tombstone, are owned by Joe Kosapsie. He has agreed to sell all necessary mining equipment and supplies to the applicant.

Milling equipment consists of the crushing and grinding unit, and air-table concentrator that presently is being installed. This equipment, poorly designed in my opinion, was manufactured at Tucson, Ariz. by the Hartford Manufacturing Co., Hartford, Wis. Mr. Allen said he was manager of the company's Tucson plant and that Charles Lamm, the applicant, is president of the company.

DESCRIPTION OF THE DEPOSITS

The surface and underground workings are along a limestone-quartzite contact. At the mine the rock formations have a northwesterly strike and a dip to the southwest of about 35 degrees. Ore minerals occur as irregular masses in widely scattered fractured zones of silicated limestone. The largest masses measure about 20 feet in dip and strike length, and approximately 3 feet in width.

The ore minerals mainly are sphalerite and galena; chalcopyrite and pyrite are present in minor amounts.

ORE RESERVES

Measured reserves are confined to the 2 60-ton lots of reportedly selectively mined ore that is stored on the property. A 75-pound grab sample was obtained from each lot. Bureau of Mines assays of the samples follow:

Sample No.	Location	Percent Zinc	Percent Lead	Percent Copper	Ounces per ton Gold	Ounces per ton Silver
11443	Dump of main upper working	5.1	1.7	0.21	Tr	3.4
11444	Stored ore from adit and winzes	3.7	1.7	0.16	Tr	1.9

Indicated and inferred reserves are confined to a few tons of ore that remain in the walls and floor of the winze near the end of the adit and in the main upper workings.

CONCLUSIONS AND RECOMMENDATION

Ore mineralization at the Moonlight mine is confined to small and widely scattered deposits of zinc, lead and copper sulfides. Furthermore, geologic conditions do not appear to be favorable for the discovery of significant reserves of such minerals.

Consequently, denial of the requested assistance for exploration of the Moonlight claims is recommended.

IN REPLY REFER TO:

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

TRANSMITTED
SEP 15 1955

DMEA
Date Rec'd.
SEP 13 1955
BUREAU OF MINES
Denver, Colorado

September 12, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman

Subject: DMEA Docket 3907 (Lead-zinc-copper), Moonlight claims, Cochise County, Arizona

Enclosed are the original and eight copies of a geological report by Leonid Bryner, U. S. Geological Survey, covering his examination of the subject property.

Small isolated low-grade bodies of lead-zinc-copper ore are localized in areas of minor folding and fracturing in a limestone bed about 2 to 3 feet above the contact with an underlying quartzite member of the Naco formation. A sample of the ore mined from the small stope at the south end of the main adit contained about 5.6 percent combined lead, zinc, and copper.

Bryner concludes that the proposed exploration will not result in the discovery of significant deposits of lead-zinc-copper ore and recommends denial of the application for exploration assistance.

I concur with this recommendation.

E. N. Harshman

E. N. Harshman
Member, Field Team

Enclosures (9)

ENHarshman:arh

MINERAL DEPOSITS
DMEA
RECEIVED
SEP 12 1955
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

DMEA
Date Rec'd
SEP 13 1955
BUREAU OF MINES
Denver, Colorado

Box 4126 University Station
Tucson, Arizona

September 9, 1955

MEMORANDUM

TO: Mr. E. N. Harshman

FROM: J. N. Faick

SUBJECT: DMEA Docket 3907, Moonlight claims (Lead-Zinc-Copper)
Cochise County, Arizona

Enclosed are the original and 8 copies of a geological report of examination of the above subject property. This report recommends that the application be denied because of the small size of the ore bodies exposed in existing workings, and because geological conditions do not indicate that larger ore bodies would be found by the applicant's proposed exploration.

I concur with this recommendation.

John N. Faick

John N. Faick

JNF:mm

cc. Harshman (8)
Storms

U.S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY
DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

GEOLOGY

EXAMINATION REPORT
DMEA-3907

CHARLES LAMM'S MOONLIGHT (J. ESCAPULE) GROUP OF CLAIMS
COCHISE COUNTY, ARIZONA

(Lead, Zinc, Copper)

By
Leonid Bryner
Geologist
U.S. Geological Survey

September 9, 1955

U.S. DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY
DEFENSE MINERALS EXPLORATION ADMINISTRATION

REGION III

GEOLOGY
EXAMINATION REPORT
DMEA-3907

CHARLES LAMM'S MOONLIGHT (J. ESCAPULE) GROUP OF CLAIMS
COCHISE COUNTY, ARIZONA

(Lead, Zinc, Copper)

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INTRODUCTION	1
GEOLOGY	2
PRODUCTION AND GRADE	5
EXPLORATION	6
RESERVES	6
CONCLUSIONS AND RECOMMENDATIONS	6

ILLUSTRATIONS

Fig. 1 Location	See Engineering Report
Fig. 2 Claim Map	" " "
Fig. 3 Geologic Map	Following page 6

INTRODUCTION

In an application to the Defense Minerals Exploration Administration, dated July 2, 1955, Charles Lamm requested government participation in a program estimated to cost $10,000, to explore for lead, zinc, and copper on the Moonlight (J. Escapule) Mine on the Moonlight group of claims.

The claims are located about 1000 feet north of the summit of Black Diamond Peak in the Dragoon Mountains, Cochise County, Arizona. Elevation of the claims is about 6,500 feet. The property is reached from Tombstone by driving north 2 miles on Federal Highway 80 to the Pearce road. Via the Pearce road and a right-hand turn-off from this road, it is 15.2 miles to the mine portal. A pickup truck or jeep is needed at least on the last mile of road.

The owner of the two unpatented claims that comprise this property is Joe M. Escapule. The claims are recorded as the Moonlight No. 2 and the Moonlight No. 3, and are leased by Escapule to the applicant.

The examination was made on August 23 and 24 by T. M. Romslo of the U. S. Bureau of Mines and by the writer. Joe Escapule assisted the examiners by showing them over the property and giving information that was lacking in the docket.

The geologic examination consisted of mapping the mine and nearby surface workings mainly to determine the extent of the deposit and the geologic controls. The conclusion drawn from this work is that the ore occurs in very small bodies that have been localized at rather widely scattered places by a combination of lithologic and structural controls.

The deposit is very briefly described in an unpublished Bureau of Mines report by Curtis G. Mohney, dated December 30, 1942. Mohney concluded that the deposit was of no interest to the U.S.Bureau of Mines. At that time, however, much less development work had been done than at present.

GEOLOGY

The Moonlight Mine is near the head of a draw on the steep, north slope of Black Diamond Peak. The country rock here is the Naco group of Pennsylvanian or Permian age. The mine workings are along a conformable contact between limestone and quartzite units that probably belong either to the Scherrer or the Earp formation described by Gilluly.[1] At the mine the strata strike about north-northwest and dip about 35 degrees to the southwest. Further to the west they are comparatively flat-lying and immediately to the east their dip steepens, apparently due to faulting and perhaps folding. A faulted zone to the east of the deposit seems to be part of a zone of deformation that persists far beyond the mine area and includes normal as well as reverse faulting, and folding

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[1] Gilluly, James; Cooper, J.R., and Williams, J. S., Late Paleozoic Stratigraphy of central Cochise County, Arizona, U. S. Geol. Survey Prof. Paper 266, 1954.

parallel to the faulting. These types of deformation are present also on a small scale within the mine (fig. 3). The strata, as in cross-section A-A' (fig. 3), display small folds superimposed on a southwesterly dipping monocline. The axes of these small folds are more or less parallel to the strike of the beds. The folds are faulted and fractured.

Most of the faults at the mine strike north to northwest, but a few strike northeast. The dip of these faults is both easterly and westerly but the displacement generally is up on the east side, and at the mine, at least, amounts only to a few feet or a few inches. The faults that show the most direct relationship to the ore are the ones that change up-dip from rather steep faults that cut across bedding to bedding-plane faults with hardly any recognizable displacement. Some of the faults apparently are an expression of the same forces that produced the folding.

Fracturing is in two main directions, northeast and northwest, and the dips are generally very steep to vertical, Many of the fracture faces show slickensides but no recognizable displacement, and therefore the distinction between fractures and faults is not clearcut. Slickensides on fracture and fault faces vary from vertical to nearly horizontal.

The ore minerals are sphalerite and galena. There are also minor amounts of chalcopyrite and pyrite but not enough to constitute a significant proportion of the ore. The gangue minerals are mainly lime-magnesia silicates occurring as masses of greenish, radiating crystals. In the mine and in nearby workings the zone of silicated

limestone is at the base of the limestone or within a foot or two of the base, that is, adjacent to the underlying quartzite. The silicate zone is practically continuous. It probably averages one or two feet in thickness and attains a maximum thickness, in the main upper-working (fig. 3), of about 7 feet.

The ore minerals occur in isolated irregular masses in the zone of silicated limestone. These bodies seem to be somewhat tabular, and roughly parallel to the bedding. They do not appear to greatly exceed about 20 feet in dip or strike length, and three feet in thickness. One of the smallest but most well-defined bodies is exposed on the north wall of the upper main working. It measured 4½ feet in length and 3 inches in average thickness. The two largest bodies seen during the examination are in the south end of the main working and the south end of the main upper working. The known dimensions together with the habit of the ore bodies as seen here and in other parts of the mine point to quite a small order of magnitude for the ore bodies of this deposit. The structural controls of the ore bodies are a further indication that the ore bodies are likely to be small.

The ore appears to have been localized along the small folds which have been mentioned as being superimposed on the monocline which accounts for the moderate average southwesterly dip of the beds. Two such folds are recognized at the mine. The lower one is followed by the main working and the upper one is cut by the main upper working. These folds have breadths of not over 50 or 60 feet, and the ore bodies apparently are localized on one or the other limb of a fold; that is, they do not persist down dip across the entire fold. Besides being

localized by folds the ore bodies also appear to have been localized by comparatively profuse small-scale faulting and fracturing that occurs at irregular intervals along these folds. The combination of folding, faulting, and fracturing, which seems to have prepared the ground for these deposits, is an isolated rather than a widespread phenomenon in the mine area. The fracturing probably was an important factor because of the competency of the quartzite in comparison to the overlying limestone and the consequent channeling of ore solutions through the quartzite to the limestone where ore deposition took place.

PRODUCTION AND GRADE

No ore is known to have been shipped from the property. Present dumps and material in the ore bin are sufficient to account for the amount of rock that has been mined.

Two large grab samples taken by the U. S. Bureau of Mines during the examination provide the most reliable information at hand on the grade of this deposit. U. S. Bureau of Mines sample 11443 was obtained from the dump of the upper main working (fig. 3) and probably represents rock mined from this working. This sample assayed 5.1 percent Zn, 1.7 percent Pb, 0.21 percent Cu, 3.4 oz. Ag, and a trace of Au. The other sample, U. S. Bureau of Mines No. 11444, was from the bin and probably represents rock mined from the stope at the south end of the main working (fig. 3). This sample assayed 3.7 percent Zn, 1.7 percent Pb, 0.16 percent Cu, 1.9 oz. Ag, and a trace Au. A spectrographic analysis of this rock indicated no vanadium or molybdenum.

EXPLORATION

The work proposed by the applicant consists of raising 130 feet from the main working to the surface and of sinking a 100-foot winze from the south end of the main working.

RESERVES

A few tons of indicated and inferred reserves remain at the south end of the main working and the main upper working. But the tonnage for these reserves would be too small to be of any significance. Therefore no reserves are estimated.

CONCLUSIONS AND RECOMMENDATIONS

Because of the small size and isolated habit of the ore bodies, it is concluded that exploration at the Moonlight Mine would not be likely to discover significant reserves of lead-zinc ore, and therefore denial of the application is recommended.

File Copy
Surname
J. Alt
Griswold
Selfridge
Mittendorf

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

AUG 2 9 1955

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

Re: Docket No. DMEA-3907 (Lead-Zinc-Copper)
Charles Lamm
Moonlight Claims Nos. 1 and 2
Cochise County, Arizona

Dear Mr. Traver:

With reference to the cited application, we are enclosing copies of a letter dated July 23 from the Applicant to Mr. Griswold. The attached extension of lease and claim map are for your files.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (24B)

Enclosures

JWAlt/er 8/24/55

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

P. F. Yopes (24B)
Member, Bureau of Mines

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

R.C.S.

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

Alt
Betty

224 New Customhouse
Denver 2, Colorado

August 12, 1955

Memorandum

Docket

To: W. H. King (w/brochure)
J. N. Fuick

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3907 (Lead-Zinc-Copper), Charles Lamm, Moonlight claims Nos. 1 and 2, Cochise County, Arizona

Enclosed is the subject application in the amount of $10,000.00. The brochure consists of:

1. Form MF-103
2. Exhibit A - Legal description
3. Exhibit B - Unsigned copies of lease agreement
4. Exhibit C to P inclusive - accompanying answer sheets to the Form MF-103

Also attached is a copy of a letter from the Chairman of the Operating Committee with memoranda from members of the Branch of Base Metals. A field examination and suitable report are required.

W. M. TRAVER,

W. M. Traver

Enclosures

HMC:pw

RECEIVED
AUG 15 1955

cc: Subject
Chron
Sec.Op.Comm. (2)
Harshman

File Copy
Surname

500

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

AUG - 8 1955

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

Re: Docket No. DMEA-3907 (Lead-Zinc-Copper)
Charles Lamm
Moonlight Claims Nos. 1 and 2
Cochise County, Arizona

Dear Mr. Traver:

A review of the cited application, of which you have a copy, indicates that an examination of the property is necessary. Will you please have such an examination made and submit your report and recommendations to us.

The amount of information contained in the application is very limited. There is no object in pointing out to you information that is needed to complete the processing of this application.

The Applicant should be requested to submit a property map showing the location of his leases and also the location of the proposed work.

Enclosed are copies of memorandums from the Commodity Members, O. M. Bishop, USBM, dated July 29, and N. E. Nelson, USGS, dated August 1, giving their recommendations and comments regarding the application.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (JB)

Enclosures

JWAlt/bjl (8/4/55)

APPROVED:

/s/ Robert W. Geehan (JB)
Members Bureau of Mines

/s/ N. E. Nelson (JB)
Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kiilsgaard
Chron.

R.C.G.

File Copy
Surname

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

AUG - 8 1955

Mr. Charles Lamm
701 E. 36th Street
Tucson, Arizona

Re: Docket No. DMEA-3907 (Lead-Zinc-Copper)
Charles Lamm
Moonlight Claims Nos. 1 and 2
Cochise County, Arizona

Dear Mr. Lamm:

Your application for Government assistance to explore your property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration, and has been referred for a field examination to:

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

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

Sincerely yours,

C. O. Mittendorf

Administrator

MR JWAlt/bjl (8/4/55)

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

IN REPLY REFER TO:

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

RECEIVED
AUG - 2 1955

August 1, 1955

Re: DMEA 3907
Charles Lamm
Moonlight Group
Cochise County, Arizona
$10,000 - Lead-Zinc-Copper

Memorandum

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

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

Subject: Review of Application.

No information on this prospect is at hand.

The scanty information given in the application does not unqualifiedly support the "tremendous possibilities" assertion. The assay certificate, if the samples are representative of mining widths, suggests that the short ore shoot between the drift and surface is ready for development. Perhaps the winze is warranted.

A visit by field examiners appears justified and is so recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
AUG - 3 1955

August 1, 1955

Re: DMEA 3907
Charles Lane
Moonlight Group
Cochise County, Arizona
$10,000 - Lead-Zinc-Copper

Memorandum

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

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

Subject: Review of Application.

No information on this prospect is at hand.

The scanty information given in the application does not unqualifiedly support the "tremendous possibilities" assertion. The assay certificate, if the samples are representative of mining widths, suggests that the short ore shoot between the drift and surface is ready for development. Perhaps the winze is warranted.

A visit by field examiners appears justified and is so recommended.

N. E. Nelson

N. E. Nelson

NENelson:iml
G-8/1/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
O. M. Bishop, 3617

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

RECEIVED
AUG - 1 1955

July 29, 1955

Re: DMEA-3907
Charles Lamm
Moonlight Mine
Cochise County, Ariz
Arizona

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop,
Branch of Base Metals

Subject: Recommendation for field referral

The application, although prepared with considerable care, fails to provide information that is necessary for an understanding and evaluation of the proposed work. I therefore recommend that the application be referred to the Region III Field Team for field review and possible examination of the claims if discussion with the applicant indicates that to be the proper course.

The application in its present condition gives very little data by which to gauge the width, grade or nature of the mineralized structure to be explored. Exhibit J 5b, a section showing existing mine workings, the proposed 130-foot raise to the surface, and the proposed winzing suggests the presence of several mineralized structures at some angle to the strike of the 300-foot adit, but the section itself is entitled Longitudinal Section Along Vein. The assays submitted suggest a complex silver-copper-lead-zinc ore, which may well be too lean for smelting ore and too complex to respond to normal concentrating practice.

Exhibit L suggests that the applicant is considering the use of a dry concentration process, and Exhibit J 6b indicates supervision, engineering and consulting services will approximate 40 percent of a 7-man payroll. Both of these elements should be investigated as having bearing on the capability of the applicant as a manager. In this regard it is noted that the lease provides that the lessor is to be the mine foreman, an element that might or might not be satisfactory.

O. M. Bishop

O. M. Bishop

Copy to - Division of Minerals
Mr. Kiilsgaard, Room 5222
O. M. Bishop
Files

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

RECEIVED
AUG - 1 1955

July 29, 1955

Re: DMEA-3907
Charles Lamm
Moonlight Mine
Cochise County,
Arizona

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop,
Branch of Base Metals

Subject: Recommendation for field referral

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Exhibit L suggeststhat the applicant is considering the use of a dry concentration process, and Exhibit J 6b indicates supervision, engineering and consulting services will approximate 40 percent of a 7-man payroll. Both of these elements should be investigated as having bearing on the capability of the applicant as a manager. In this regard it is noted that the lease provides that the lessor is to be the mine foreman, an element that might or might not be satisfactory.

O. M. Bishop

Copy to - Division of Minerals
Mr. Kiilsgaard, Room 5222
O. M. Bishop
Files

July 26, 1955
Subject: DMEA-3907
Re: Exploration Assistance
Moonlight #2, Dragoon Mountains
" #3, " "

Charles Lamm
701 E. 36th St.
Tucson, Arizona

Dear Mr. Lamm:

The receipt of your application dated July 2, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3907 and referred to the Base Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

July 23, 1955 alt

Mr. W. R. Griswold, Chief,
Base Metals Division,
Defense Minerals Exploration Administration,
Department of the Interior,
New Interior Building, Room 4444,
Washington, D. C.

Re: Application for Loan - $10,000.00
Charles Lamm, 701 East 36th Street, Tucson, Arizona.
Docket Number DMEA-3907

Dear Mr. Griswold:

Pursuant to instructions from our attorney, Mr. Frank D. Byrne, we are submitting the following:

Exhibit 1 Extension of the present lease for an additional period of two years.

Exhibit 11 Claim map showing the exact location of the work to be done.

We trust this information is satisfactory.

Very truly yours,

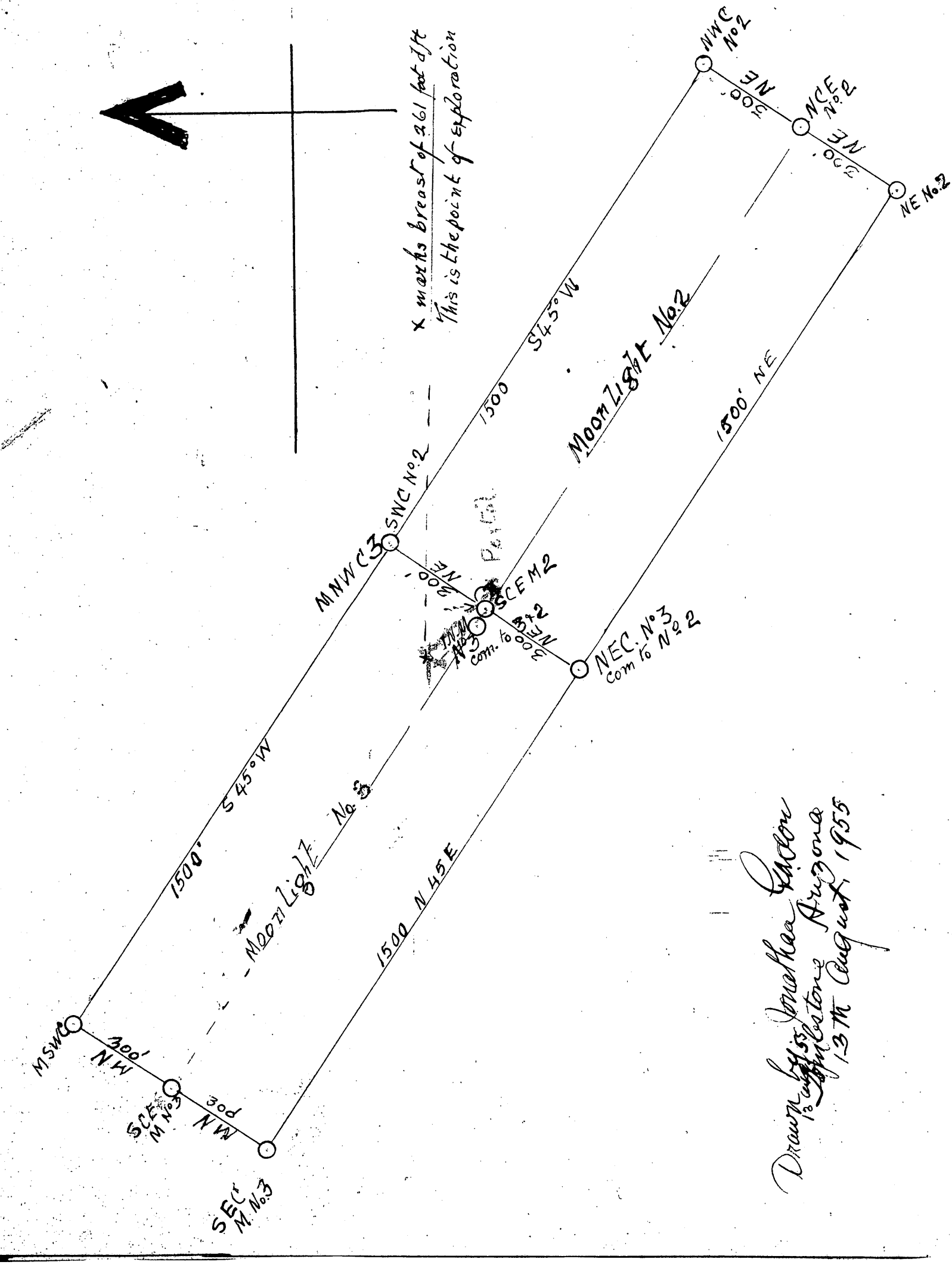
Charles Lamm

Charles Lamm

CC: Mr. Frank D. Byrne,
510 Pershing Drive,
Silver Springs, Maryland.

RECEIVED
AUG 17 1955

Exhibit 11



Drawn by Jonathan Gaston
Co-Locator
Arizona
13th August, 1955

Exhibit 1

Ammendman t to Lease

Joe M Escapule herein refered to as Lessor, and Charles Lamm herein refered to as Lessee do hereby acknowledge that they entered into a lease on the 15th day of February, 1955 concerning certain mining property in the Dragoon Mountains, Cochise County, Arizona recorded and named the Moonlight No.2 and the Moonlight No. 3.

The Lessor and the Lessee do hereby agree that the above mentioned lease be ammended so as to change the term of said lease from two years to four years. The option to renew shall be for a period of one years.

In Witness Whereof, the said parties have hereunto set their hands as of the 25 day of July, 1955.

Joe M. Escapule Lessor
Joe M. Escapule

Charles Lamm Lessee
Charles Lamm

STATE OF ARIZONA)
) ss
COUNTY OF COCHISE)

This instrument was acknowledged before me this 25 day of July, 1955 by Joe M. Escapule and Charles Lamm

A W Jarrett
Notary Public

My commission expires;
3-4-1959

Exhibit 1

A MODIFICATION OF LEASE

Joe M. Escapule hereinafter referred to as lessor, and Charles Lamm hereinafter referred to as lessee do hereby acknowledge that they entered into a lease on the 15th day of January, 1965 concerning certain mineral property in the Sequoia Pentland, Cochise County, Arizona recorded and as set forth in Exhibit No. A and the Exhibit No. B.

The lessor and the lessee do hereby agree that the above mentioned lease be amended so as to change the term of said lease from two years to five years. The option to renew shall be for a period of one years.

In witness thereof, the said parties have hereunto set their hands as of the 25 day of July, 1965.

Joe M. Escapule lessor
Joe M. Escapule

Charles Lamm lessee
Charles Lamm

STATE OF ARIZONA)
) ss
COUNTY OF COCHISE)

This instrument was acknowledged before me this 25 day of July, 1965 by Joe M. Escapule and Charles Lamm

A. W. Jarrett
Notary Public

My commission expires
3-4-1969

Exhibit 1

one

25

Joe M. Tosegnale

Charles Lamm

25

A W Jarrett

3-4-1959

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

JUL 1 1955

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. 3907
Metal or Mineral Lead-Zinc-Copper-Silver
Date Received 7-19-55
Estimated Cost None
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:

Charles Lamm
701 E. 36th Street
Tucson, Arizona.

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

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

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

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

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

EXHIBIT A attached

(*b*) State any mine name by which the property is known. Moonlight #2, Dragoon Mountains
Moonlight #3, Dragoon Mountains

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

(*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. EXHIBIT B attached

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Unpatented Claim Moonlight #2, Book 74, Page 290
Unpatented Claim Moonlight #3, Book 74, Page 291

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. EHIBIT C attached.

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

(*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. EXHIBIT E attached.

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

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

16—66551-1

All available to an excellent degree.

5. *The exploration project.*—(a) State the mineral or minerals for which you wish to explore Lead, Zinc, Copper 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. EXHIBIT G attached

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract. 4 men working now; will continue indefinitely.

(*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. EXHIBIT H attached.

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: [redacted]

(*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. EXHIBIT J.

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

(*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. EXHIBIT L

(*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. None

(*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. EXHIBIT M

(*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. EXHIBIT N.

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

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. [redacted].

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. EXHIBIT P.

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 July 2, 1955.

Charles Lamm
(Applicant)

By .....

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

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

EXHIBIT A

LEGAL DESCRIPTION

MOONLIGHT # 2: The length of this Claim is 1500 feet, and I claim 50 feet in a south easterly direction and 1450 feet in a northwesterly direction from the center of the discovery shaft, at which this notice is posted, lengthwise of the claim, together with 300 feet in width of the surface grounds, on each side of the center of said claim. The general course of the lode deposit and premises is from the North West to the South East.

The claim is situated and located in the Dragoon Mining District, in Cochise County, in the State of Arizona, about 2 miles in a Southerly direction from The Middle March Mine and about 15 miles in a North Easterly direction from Tombstone, in the head of the Middle Pass Canyon.

The surface boundaries of the claim are marked upon the ground as follows: Beginning at a Monument of Stone at a point in a South Easterly direction 50 feet from the discovery shaft, (at which this notice is posted),being in the center of the SouthEasterly end line of said claim; thence south Westerly 300 feet to a Monument of Stone, being the South Westerly corner of said claim; thence North Easterly 1500 feet to a Monument of Stone, being at the North Westerly corner of said claim; thence 300 feet to a Monument of Stone at the center of the North Easterly end of said claim; thence North Easterly 300 feet to a Monument of Stone, being at the North Easterly corner of said claim; thence South Westerly 1500 feet to a Monument of Stone at the South Easterly corner of said claim; thence South Westerly 300 feet to the place of beginning.

EXHIBIT A
(Continued)

LEGAL DESCRIPTION

MOON LIGHT NO.3: The length of this claim 1500 feet and I claim 50 feet in a North Westerly direction and 1450 feet in a South Easterly direction from the center of the discovery shaft, at which this notice is posted, lengthwise of the claim together with 300 feet in width of the surface grounds, on each side of the center of said claim. The general course of the lode deposit and premises is from the North West to the South East.

The claim is situated and located in the Dragoon Mining District, in Cochise County, in the State of Arizona, about 2 miles in a Southerly direction from The Middle March Mine and about 15 miles in a North Easterly direction from Tombstone, in the head of the Middle Pass Canyon.

The surface boundaries of the claim are marked upon the ground as follows: Beginning at Monument of Stone at a point in a South Easterly Direction 1450 feet from the discovery shaft (at which this notice is posted), being in the center of the South Easterly end line of said claim; thence South Westerly 300 feet to a Monument of Stone, being the South Westerly corner of said claim; thence North Easterly 1450 feet to a Monument of Stone, being at the North Westerly corner of said claim; thence North Easterly 300 feet to a Monument of Stone at the corner of the North Westerly end of said claim; thence North Easterly 300 feet to a Monument of Stone being at the North Easterly corner of said claim; thence South Easterly 1500 feet to a Monument of Stone at the South Easterly corner of said claim; thence Southwesterly 300 feet to the place of beginning.

EXHIBIT B

LEASE AGREEMENT

THIS AGREEMENT made and entered into this 15 day of February, 1955, by and between Joe M. Escapule, party of the first part, hereinafter known as Lessor, and Charles Lamm, party of the second part, hereinafter known as Lessee, WITNESSETH:

That in consideration of the covenants and agreements hereinafter setforth, the Lessor does by these presents lease and let unto the Lessee those certain two unpatented mining claims situated in the Dragoon Mountains, located and recorded and named MOONLIGHT NO. 2 and MOONLIGHT NO.3, - it is agreed that since both parties hereto are familiar with said mining property and its location the requirement of a more detailed description is hereby waived.

IT IS AGREED BY AND BETWEEN THE PARTIES HERETO:

1. That the term of this lease is for two years from date hereof, with the right to the Lessee to renew this lease for an additional period of two years providing the Lessee shall, on or before January 1st, 1957, notify the Lessor in writing of his desire and intention to renew said lease.

2. That the Lessee shall begin preliminary work on the mininh property within sixty days from date hereof and actual mining operations within ninety days from date hereof, and Lessee shall pursue such work and mining operations with diligence and at the rate of not less than thirty,eight hour shifts per month.

3. That all work shall be done in a good minerlike manner and in accordance with the mining laws of the State of Arizona - that the Lessee agreed to protect and hold harmless the Lessor from any and all claims for bills, damages for loss or injury to persons, livestock or property arising from Lessee's operations on said mining property. That the Lessee, before starting work upon the property, will cover all employees with adequate compensation insurance and shall post upon the property notices of such insurance coverage as required by law. That the Lessor shall record in the office of the County Recorder of Cochise County,Ariz. a Notice of Non-Liability, and he shall also post upon the mining property like notices of non-liability and the Lessee herein agrees to keep such notices posted, That the Lessor will execute and record the affidavit of annual labor performed as required by the Fedral Mining laws.

5. That the Lessee shall have the use of the track and pipe at present installed in the main shaft - any other track or pipe or other material or equipment installed underground by Lessee shall be left in place at the expiration or cancellation of this lease.

6. That the Lessee shall pay or cause to be paid to the Lessor a royalty of 12½ per-cent of the net mill or smelter value of all ore removed from said property. The net mill or smelter value shall be determined as that value of the ore after milling and smelting charges and railroad freight from the mine railroad shipping point to the mill or smelter have been deducted. Payment of the said 12½% royalty shall be made direct by the mill or smelter to the Lessor. The Mill or Smelter receiving said ore shall be given a copy of this lease agreement for their information and to guide them in making ore settlements.

7. This lease may be cancelled and terminated by the Lessee giving thirty days written notice to the Lessor of Lessee's desire and intention to terminate said Lease.

8. This Lease may be terminated and cancelled by the Lessor for failure of the Lessee to fully comply with the terms and conditions hereof, providing the Lessor shall give written notice to the Lessee to the effect that unless the violations are corrected within 30 days from the date of written notice, then at the expiration of the thirty days this lease shall be cancelled and terminated. In the event of the termination of this lease for any reason, all track, air lines and water lines and other equipment installed underground must be left in place on the mining property.

9. Lessor reserves all broken ore, approximately 75 tons in the upper dump and approximately 75 tons in the ore bin outside the main tunnel, and the Lessee hereby agrees to protect, conserve and save all this ore in the upper dump and in the ore bin for the benefit of the Lessor, unless however the parties hereto can mutually agree upon a price per ton, plus the 12½% royalty, for said broken ore. In the event that said outside broken ore reserved by the Lessor is in the way of the equipment or obstructive to operations, then the Lessee may move said ore to an equally accessible spot agreeable to the Lessor.

10. It is further understood and agreed that the Lessee will employ the mining experience and services of the Lessor as Foreman of Lessee's mining operations, to insure that the operations are conducted in a good and minerlike manner, during the term of this lease or until such time as it can be mutually agreed that the operations can be carried on without the services of the Lessor. Compensation for the Lessor services shall be based upon prevailing Mine Foreman wages or as may from time to time be agreed upon, based upon five eight hour shifts per week.

IN WITNESS WHEREOF, the said parties have hereunto set their hands as of the date first above written.

LESSOR.

Joe M. Escapule

LESSEE

Charles Lamm

STATE OF ARIZONA)
COUNTY OF COCHISE) ss

This instrument was acknowledged before me this 15 day of February, 1955 by Joe M. Escapule and Charles Lamm.

A.W. Jarrett, Notary Public

My Commission expires 3/3/55.

EXHIBIT C.

4. (a) Work has been started as follows:

A 300 foot drift in the side of the mountain, with one 20 foot ~~winch~~ WINZE and two 15 foot winzes; also a 50 foot shaft and stope

Four men with sufficient equipment are at work now, with expectations of more.

Operations are being conducted by me, as Lessee.

Mine may be examined at any time.

EXHIBIT D.

4. (b) Have a reserve of about 200 tons of good smelting ore out, with unlimited possibilities. (See attached assay report).

30 So. Main St.
P. O. Box 1889

Duplicate 7/2/55

JACOBS ASSAY OFFICE

REGISTERED ASSAYERS

Phone 2-0813

Tucson, Arizona, Feb 12th, 1955

Sample Submitted by Mr. Charles Lamm

Sample Marked	GOLD Ozs. per ton ore	GOLD Value per ton ore * $	SILVER Ozs. per ton ore	COPPER Per cent Wet Assay	LEAD Per cent Wet Assay	Zinc Per Cent Wet Assay	Per Cent Wet Assay	Per Cent Wet Assay
#1 TRACK Level	0 01	0 35	7 8/10	1 27/100	3 5/10	7 5/10		
#2 WINDS 4 ft FACE	0 02	0 70	16 0/10	2 36/100	5 5/10	14 7/10		
#3 WINDS	0 01	0 35	7 8/10	0 21/100	8 7/10	12 3/10		
Upper SHAFT	0 01	0 35	8 3/10	0 09/100	2 5/10	11 5/10		
			9.9	0.99	5.05	11.5		

* Gold Figured $35.00 per oz. Troy

Charges $ 22.00 Paid

Very respectfully,

Ben P. Jacobs

EXHIBIT E.

4 (c) The type of deposit is vein, containing lead, zinc, silver and copper.

Reason for wishing to explore is that I believe this is a very good deposit and certainly worth while working to produce the above listed minerals.

EXHIBIT F

4 (d) Mine is 15 miles from Tombstone, Arizona, with a good road to within 2 miles of the mine. The last 2 miles is a steep road, accessible by jeep or truck.

The altitude is approximately 6,000 feet.

EXHIBIT G.

5 (b) We propose to explore both up and down from our present 300 foot drift, following the veins which are now exposed showing a good grade of ore.

We plan to drive a 130-foot raise from the adit level to the surface to explore a possible ore shoot.

We plan to sink a winze 100 feet below the adit level to explore the downward extension of the ore.

We estimate that this work will cost $10,000 or about $44 per foot.

EXHIBIT H.

5 (d) I have made an intensive study of mining in this and other areas for the past 4 years. Also have worked with mine owners an d operators during this time. My object in doing this has been to prepare myself for developing a good mine such as the above.

My superintendent has been in all phases of the mining business for the past 38 years. He is familiar with the geological features of the above listed mines. He is one of the best men in the country as he has made mining a life-time vocation.

EXHIBIT J

6. (b)	Labor, (4 men)	$ 48.00 per day
	Superintendent	18.00 per day
	Consultant & engineering	25.00 per day
	Maintenance Man	12.00 per day
		$103.00 per day

EXHIBIT K

6 (c) Materials and Supplies:

Gasoline, Diesel Fuel, Carbide, Dynamite, water	Estimated Cost; $50.00 per day

EXHIBIT L.

6. (d) Operating Equipment:

1 air compressor to be purchased.	$4,000.00	
1 2½ ton GMC Truck	3,600.00	
1 1954 Jeep	1,500.00	
2 stoping machines	250.00	
3 Jackhammers	390.00	
3 Drifters	300.00	
Necessary steel	300.00	
Hose - air lines, water lines	125.00	
2 Mine cars and tracks	300.00	
Water Tank	50.00	
Small Equipment & Tools	100.00	
		$10,915.00
Rental of Crusher and dry Separator @ $10.00 per ton, - per day		120.00

EXHIBIT M.

6 (f) Galvanized steel roof to be built over Crusher and Dry Separator; also ore shutes, approximate cost $500.00

EXHIBIT N.

6 (g) Miscellaneous:

Depreciation and repairs on Equipment $2,000.00 per year.

Analytical work, Accounting, Workmen's compensation; Employer's Liability and Pay Roll Taxes cannot be estimated at present due to the fact that we are just now in operation and anticipate enlarging

EXHIBIT O.

6. (h) Contingencies:

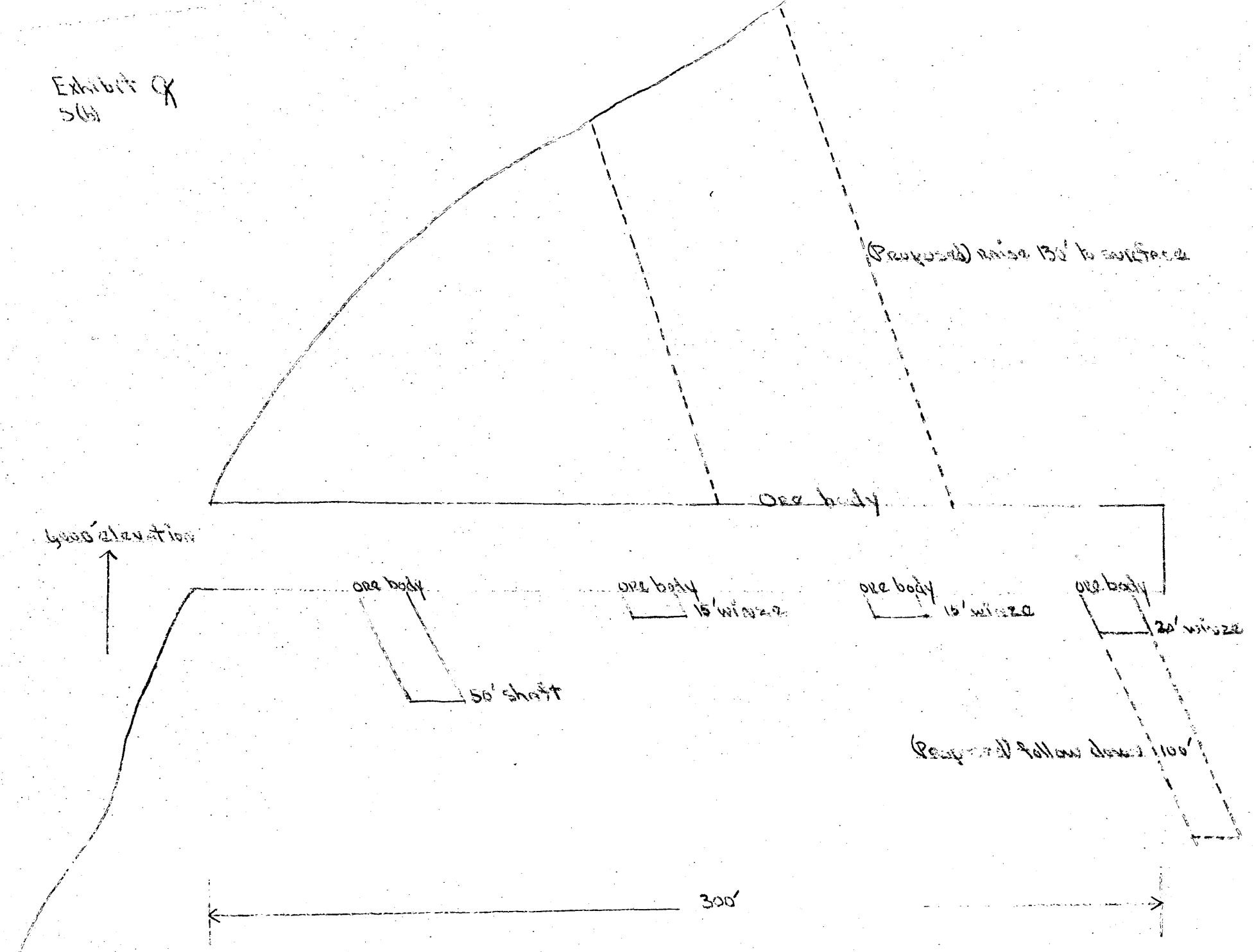
Estimated at $500.00 per month.

EXHIBIT P.

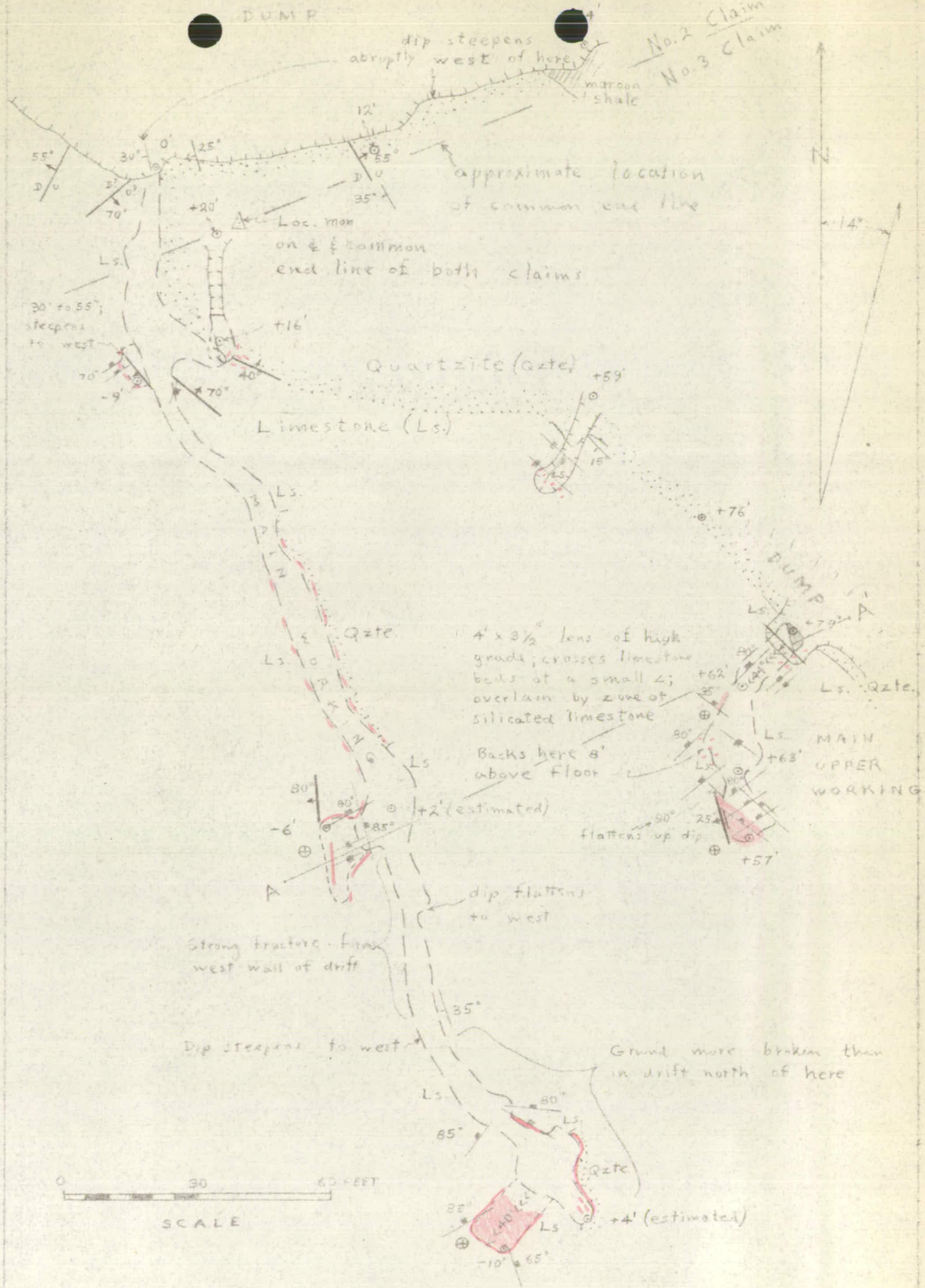
Previous to my leasing these mines, there had been approximately $80,000.00 spent in building the road and opening the drift. I now have the above listed equipment and materials with the exception of the Compressor, which I am planning to purchase.

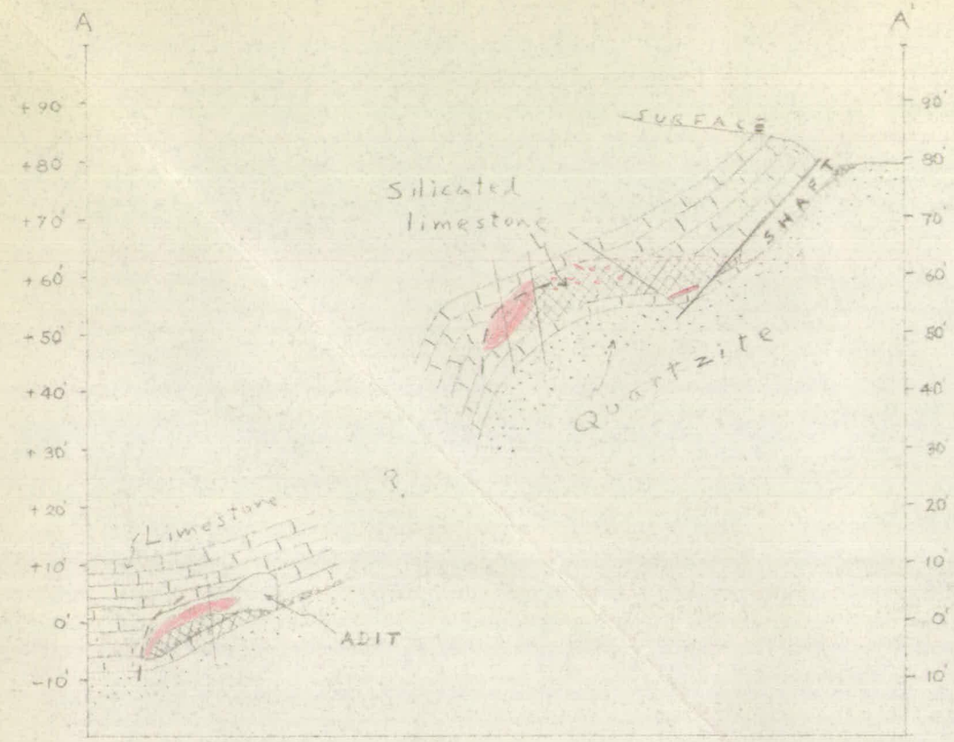
I am therefore submitting my application for a loan of $10,000.00, which I sincerely believe can be repaid within a relatively short time. In my opinion, supported by others qualified to judge, these mines have tremendous possibilities.

Exhibit X
5(b)



Longitudinal Section Alex Vein





SECTION A-A'

EXPLANATION

Contact, dotted where concealed

70° Fault, showing dip

65 Fracture, showing dip

35° Strike and dip of beds

⊕ Flat or nearly flat beds

-9' ⊙ Survey point, showing elevation above (+) or below (-) track at portal.

Sulphide mineralization shown in red.

Brunton-tape survey. Geology by Leonid Bryner, 8/23,24/55

FIGURE 3.- GEOLOGIC MAP, MOONLIGHT (J. ESCAPULE) MINE, COCHISE CO., ARIZ.

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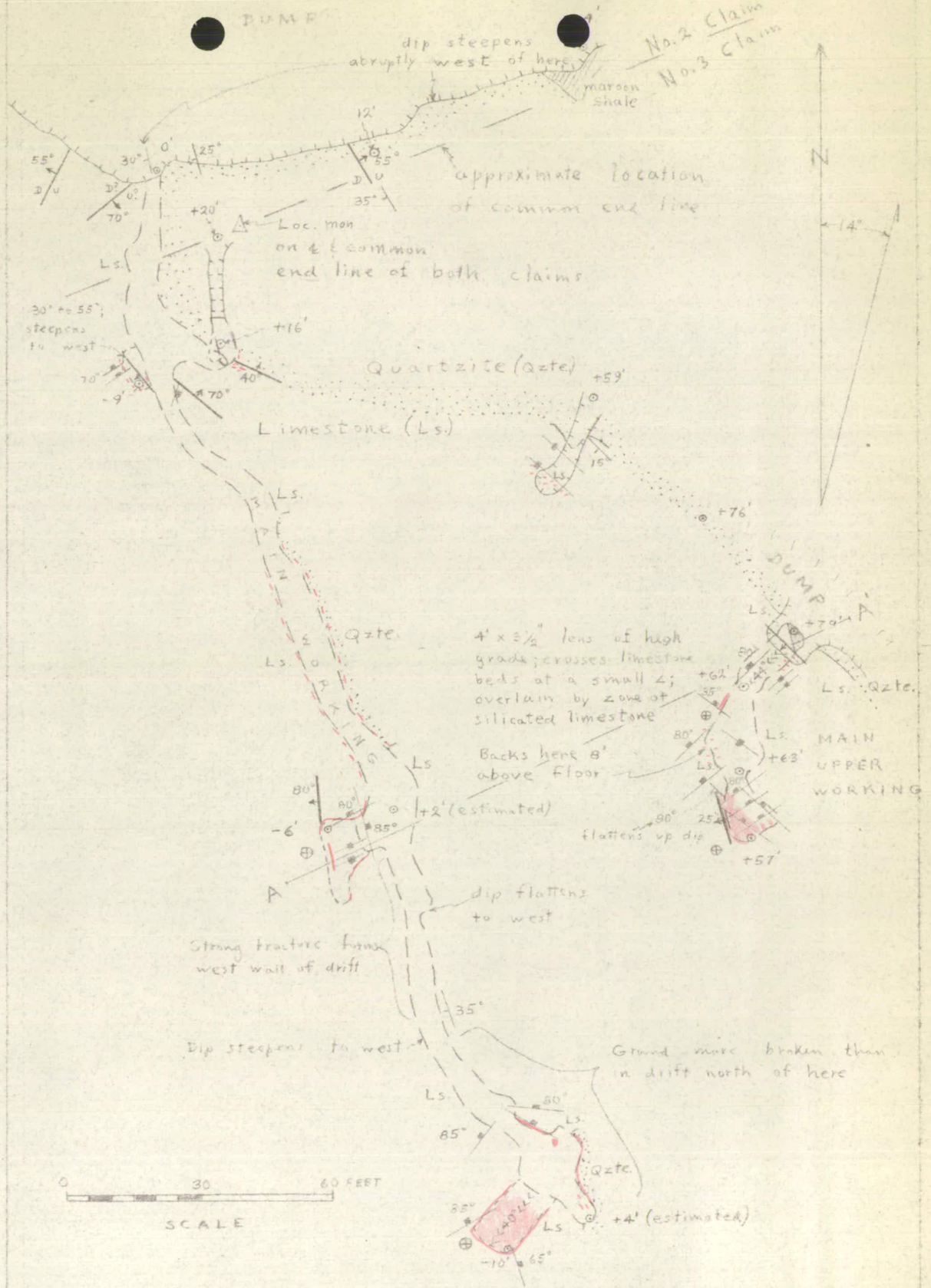

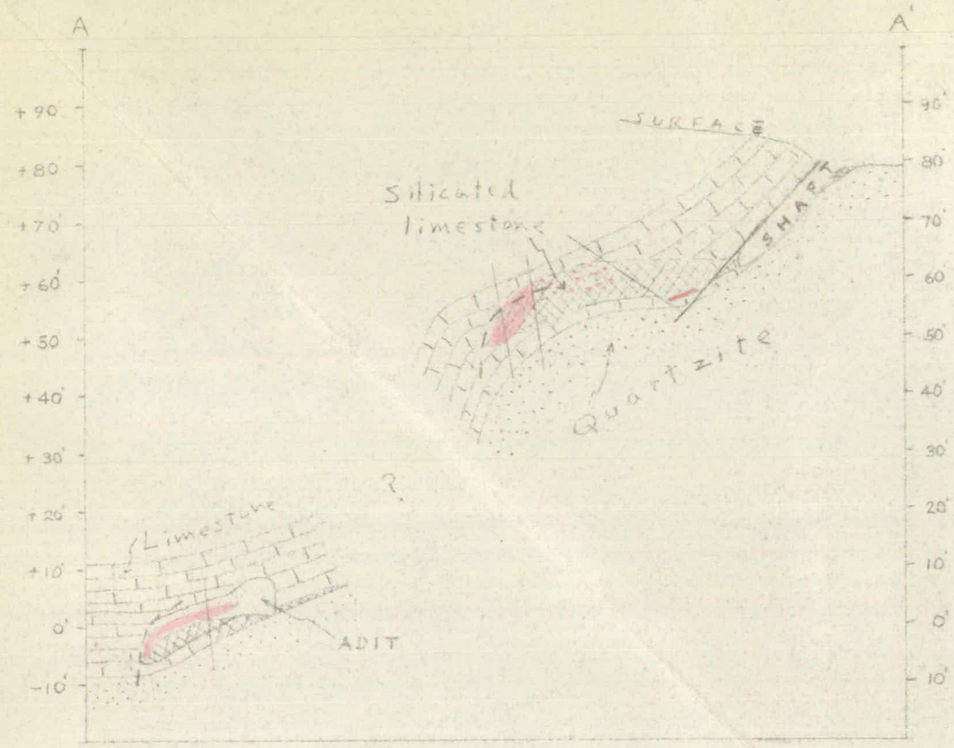

SECTION A-A'

EXPLANATION

Contact, dotted where concealed

70° Fault, showing dip

65 Fracture, showing dip

85° Strike and dip of beds

⊕ Flat or nearly flat beds

-9' ⊙ Survey point, showing elevation above (+) or below (-) track at portal.

Sulphide mineralization shown in red.

Brunton-tape survey. Geology by Leonid Bryner, 8/23,24/55

FIGURE 3.- GEOLOGIC MAP, MOONLIGHT (U. ESCAPULE) MINE, COCHISE CO., ARIZ.

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