DMA REPORTS

DATE 9-25-52

MR [illegible]

CHIEF, MINERALS DIVISION

CALVIN PIERSON

MT. WEATHER

[illegible]

ADMIN. ASST.

FOR YOUR INFORMATION AND REVIEW.

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

New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 11 1952

September 8, 1952

Memorandum

To: Secretary to the Operating Committee

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2611 (Beryl) Percy F. Werner Juniper Beryl Claims, Verde Lode Mining Co., Yavapai County, Arizona

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

The proposed exploration outlined by the applicant at a cost of $100,000 does not seem justified.

We recommend that the loan be denied.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 11 1952

[illegible]

September [illegible], 1952

[illegible] andum

To: [illegible] Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2611, Juniper Beryl Claims, Verde Lode Mining Company, Yavapai County, Arizona

Enclosed are the original and 8 copies of the geologic report by C. S. Bromfield of the U. S. Geological Survey covering the above docket. It has been recommended that the loan be denied.

There will be no separate engineering report submitted on this docket. The brochure is enclosed.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (10)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible], University [illegible]
[illegible], Arizona

[illegible] 23, 1954

Memorandum

To: [illegible]

From: [illegible], Redfield, [illegible], Arizona

Subject: Geologic report, [illegible], [illegible] and [illegible], [illegible] Copper Company, [illegible] County, Arizona

[illegible] are the original [illegible] copies of the [illegible] report [illegible] Redfield [illegible] exploration [illegible] were [illegible] separate [illegible] report submittals.

The report recommends [illegible] exploration [illegible] drilled.

The structure is enclosed.

[illegible], Redfield
Geologist

Enclosures 1.

[illegible] CLAIMS
[illegible] MINE QUARRY
[illegible] COUNTY, ARIZONA
DMEA 2011

[illegible]

Geology

[illegible] Bromfield
Geologist, U. S. Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE

_____
(date)

[illegible] INTERLAND
[illegible] MINING CORP.
[illegible] CO., [illegible]
[illegible]

[illegible]

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INTRODUCTION

Several pegmatite dikes containing small amounts of beryl outcrop on the Juniper claims in Yavapai County, Arizona. The property consists of 16 unpatented mining claims (Fig. 2) and is owned by the Verde Lode Mining Company. The company has applied for an exploration loan of $100,000. The program proposed by the applicant included 600 feet of crosscutting and drifting, and 500 feet of raising. This part of the program was to cost $50,000. An additional $50,000 was desired to construct a 50-ton beryl flotation mill. The latter item, it was explained to the applicants, is not a part of a legitimate exploration project.

The property was visited on August 14, 1956 by the writer in company with Mr. B. F. Petty, Secretary of the Verde Lode Mining Company, and Mr. J. D. Walker, a prospector and one of the original locators.

LOCATION

The Juniper claims are on the east side of the Bradshaw Mountains at an altitude of about 5500 feet. The claims are 27 miles from Mayer on the Crown King road, and approximately 4 miles north of Crown King and 2 miles south of the Peck-Swastika district (Fig. 1).

HISTORY AND OWNERSHIP

The Juniper claims were located in 1949 by J. D. Walker, B. F. Petty, and C. J. Leader of Mayer, Arizona. The Verde Lode Mining Company obtained control of the claims in 1950 by quit claim deed.

In March 1950, B. F. Petty made a shipment of 4510 pounds of sorted beryl ore to the Beryl Ores Company, Arvada, Colorado. The shipment, reportedly 40 percent waste, netted $107.40 to the shipper.

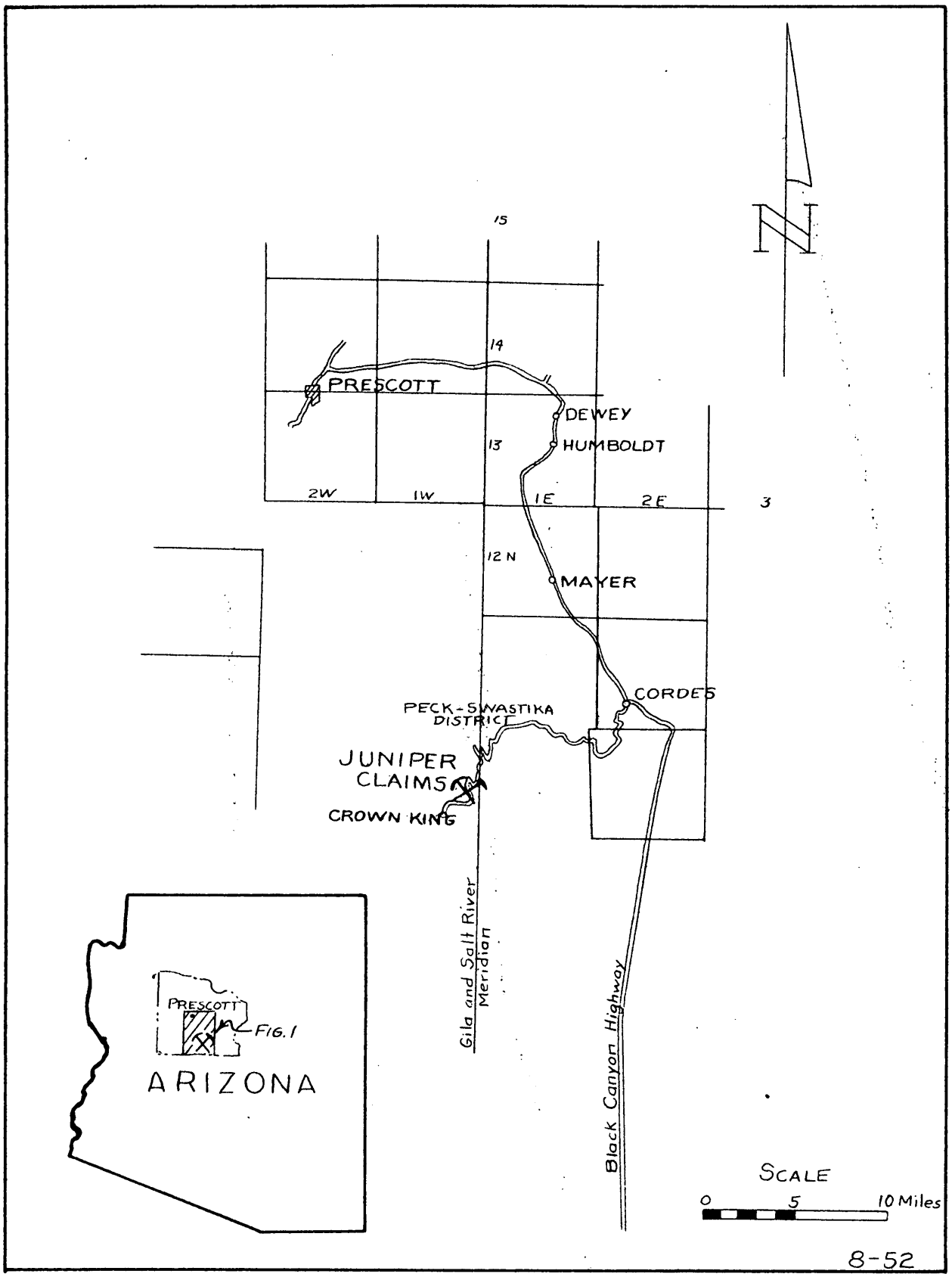

FIG. 1 — LOCATION MAP, JUNIPER LODE CLAIMS
YAVAPAI COUNTY, ARIZONA
DMEA - 2611

This has been the only production from the property up to the date of this examination. In 1950, on the strength of this shipment, the U. S. Bureau of Mines carried out a limited program of bulldozing, trenching, and sampling on the pegmatite dikes (Fig. 2)[1]. The project failed to show any favorable indications that would encourage further work. No additional development, other than a small amount of annual assessment work of a superficial nature, has been done by the owners.

DESCRIPTION OF DEPOSITS

Several pegmatites containing beryl as a minor constituent are found on the Juniper claims. The most prominent of these are shown on Figure 2. They are lettered A through F. These pegmatites are elongate tabular bodies or dikes which strike northwesterly and dip northeasterly at angles ranging from 50° to 75°. The dikes range in width from a foot or so to 15 feet.

Several cuts across and along the dikes are the only workings on the property. The numbered cuts were made by the U. S. Bureau of Mines. The workings and geology are shown on Figure 2.

The country rock of the area is the pre-Cambrian Bradshaw granite. The granite is medium-to-coarse grained, yellow in color, and weathers readily to rounded boulders.

The pegmatites contain quartz, feldspar, mica, and small amounts of beryl and garnet. Sillimanite was identified by L. R. Evans, petrologist of the Bureau of Mines during the course of the Bureau project. Copper carbonate stain was noticed in one place. Individual cuts and

---

1/ Stewart, L. R., Supplemental Examination Report, Juniper Beryl Deposit, Yavapai County, Arizona: U. S. Bureau of Mines, June 23, 1950.

outcrops show that the pegmatites may be subdivided into several units; the principal ones are quartz, quartz-feldspar, and feldspar-mica. In the brief examination of the deposit no pattern of distribution of these units was discernible. Gray to milky quartz made up the major part of most exposures. In places a quartz core is bordered by narrower medium grained (1 to 4 inches) feldspar-mica zones, and in other places a feldspar-mica core is bordered by quartz zones. The few beryl crystals observed in place were found in the quartz zone, though some beryl in feldspar-mica matrix was observed in rock excavated from the pit. The beryl is a light green or bluish green color and contrasts with the white or gray of the pegmatite.

ORE RESERVES

Six pegmatite dikes are exposed in the area proposed for exploration. Of these 6 dikes only the dike lettered C (Fig. 2) has yielded any production of beryl. From a volume of pegmatite 17 feet long, 3 feet wide, and 6 feet deep, 2500 pounds of beryl bearing pegmatite was sorted. This is reported to have been 20 percent waste; the amount of beryl recovered was probably on this basis about 1000 pounds. Assuming a tonnage factor of 12 cubic feet to the ton, approximately 25 tons of rock was taken from the pit. This gives a rough grade estimate of 2 percent of beryl in the pocket excavated. The face at either end of the pit is barren of beryl. The lens or streak containing the beryl is reported[2] to have been 3 to 12 inches wide.

Another small lens within the same dike is located 200 feet to the northwest and was encountered in the bottom of cut C. This cut contained the only concentration of beryl discovered by the Bureau of Mines

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2/ Op. cit., p. 3.

in the course of their project on the Juniper Claims. A 300 pound bulk sample from a cut 11 feet long, 1.4 feet wide, and 0.3 feet deep was taken by the Bureau in 1950. An analysis showed 0.5 percent BeO, or calculated on the basis of 11.1* percent BeO in the beryl, about 90 pounds of beryl to the ton, a 4.5 percent beryl content. However, this sample represents only a width of 1.4 feet. A sample over a 3 or 4 foot mining width would contain mostly barren quartz or feldspar and would lower this grade considerably. The face of this pit shows the highest concentration of beryl in place. A beryl count of this face by the writer gave the following results:

No. of crystals	Area of crystals	Area of face	Beryl content	Pounds/ton
5	1[illegible] sq. in.	7200 sq.in. (10 ft. x 5 ft. wide)	0.2[illegible]	4.4

The dike was here about 5 feet wide. The beryl was concentrated along the center of the dike. Beryl was not found in any other of the pits dug by the Bureau of Mines. A few scattered crystals can be found along the outcrops. The dikes are for the most part barren of beryl mineralization.

There are no persistent zones containing any appreciable amounts of beryl exposed on the Juniper claims and only the two small laterally limited lenses have been uncovered through the work done by the applicants and the Bureau of Mines. From one of these the applicant recovered about [illegible] pounds of beryl. On the outcrops no commercial amounts of beryl are exposed or indicated. Further work might reveal a limited amount of beryl in local concentrations, but the reserves are assuredly small and recovery almost certainly would not be economic.

* The figure was derived from the analysis of only one selected crystal.

PROPOSED PROGRAM

The program proposed by the applicant consists of a crosscut driven southwest to intersect the pegmatite dikes at depth. This crosscut would be started at about the 5450 contour as shown on figure 2. Additional exploratory drifting and raising were proposed on any pegmatite dikes exposed by the drifting.

CONCLUSIONS AND RECOMMENDATIONS

Very little beryl is present in the pegmatites of the Juniper Lode Claims. No persistent zones containing beryl are found in the pegmatites. Beryl has been found only in two small pods of narrow width and limited strike extent. No concentrations of economic grade are now exposed or indicated. Work by the Bureau of Mines has adequately tested the pegmatites and indicated their limited potential and nature; the program outlined by the applicant does not seem justified.

It is recommended that the application of the Verde Lode Mining Company for exploration of the Juniper claims be denied.

600

OCT 6 1952

Mr. Percy F. Worner, President
Verde Lode Mining Company, Inc.
Mayer, Arizona

Subject: Docket No. DMEA-2611 - Beryl
Verde Lode Mining Company
Yavapai County, Arizona

Dear Mr. Worner:

Your application for exploration assistance, Docket No. DMEA-2611, dated June 24, 1952, for beryl in Yavapai County, Arizona, has been reviewed by this office.

A careful study of your proposal and other information available to this agency indicates that the probability of making a significant discovery on your prospect is not sufficiently encouraging to justify Government participation in the proposed work; therefore, your application is denied.

Your interest in the exploration program is appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

LFHearne:gad 10/1/52

Copy to: Admin. Reading File
Operating Committee (2)
Field Team, Region IV
Docket File
Mr. Needleman, 1347
Mr. Norton, G-232 GSA Bldg.
Mr. Houk

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

224 New Customhouse
Denver 2, Colorado

September 8, 1952

Memorandum

To: Secretary to the Operating Committee

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2611 (Beryl) Percy F. Wormer Juniper Beryl Claims, Verda Lode Mining Co., Yavapai County, Arizona

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

The proposed exploration outlined by the applicant at a cost of $100,000 does not seem justified.

We recommend that the loan be denied.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 11

W. H. King

A. H. Koschmann

Enclosures

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

200 New Customhouse
Denver 2, Colorado

September 2, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 11 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2611, Juniper Beryl Claims, Verde Lode Mining Company, Yavapai County, Arizona

Enclosed are the original and 8 copies of the geologic report by C. S. Bromfield of the U. S. Geological Survey covering the above docket. It has been recommended that the loan be denied.

There will be no separate engineering report submitted on this docket. The brochure is enclosed.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (10)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O. Box 4128, University Station
Tucson, Arizona

August 29, 1952

Memorandum

To: Field Team, Region IV, Denver, Colorado
Through: Mr. A. . Koschmann

From: Calvin S. Bromfield, Tucson, Arizona

Subject: Geologic Report, DMEA 2011, Juniper Metal Claims, Verde Lode Mining Company, Mavapai County, Arizona

Enclosed are the original and 3 copies of the above report by C. S. Bromfield of the Geological Survey. There will be no separate engineering report submitted.

The report recommends that the exploration loan be denied.

The brochure is enclosed.

Calvin S. Bromfield
Geologist

Enclosures 10

JUNIPER CLAIMS
VERDA LODE MINING COMPANY
YAVAPAI COUNTY, ARIZONA
DMEA 2611

BERYL

Geology

By
Calvin S. Bromfield
Geologist, U. S. Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE

_____
(date)

JUNIPER CLAIMS
VERDA LODE MINING COMPANY
YAVAPAI COUNTY, ARIZONA
DMEA 2611

BERYL

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ILLUSTRATIONS

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Figure 2 Geologic Map, Juniper Beryl Claims	1

INTRODUCTION

Several pegmatite dikes containing small amounts of beryl outcrop on the Juniper claims in Yavapai County, Arizona. The property consists of 10 unpatented mining claims (Fig. 2) and is owned by the Verda Lode Mining Company. The company has applied for an exploration loan of $100,000. The program proposed by the applicant included 600 feet of crosscutting and drifting, and 500 feet of raising. This part of the program was to cost $50,000. An additional $50,000 was desired to construct a 50-ton beryl flotation mill. The latter item, it was explained to the applicants, is not a part of a legitimate exploration project.

The property was visited on August 12, 1952 by the writer in company with Mr. B. F. Petty, Secretary of the Verda Lode Mining Company, and Mr. M. C. Gaither, a prospector and one of the original locators.

LOCATION

The Juniper claims are on the east side of the Bradshaw Mountains at an altitude of about 5500 feet. The claims are 27 miles from Mayer on the Crown King road, and approximately 2 miles north of Crown King and 3 miles south of the Peck-Swastika district (Fig. 1).

HISTORY AND PRODUCTION

The Juniper claims were located in 1949 by M. C. Gaither, B. F. Petty, and J. H. Pender of Mayer, Arizona. The Verda Lode Mining Company obtained control of the claims in 1950 by quit claim deed.

In March 1950, B. F. Petty made a shipment of 2510 pounds of sorted beryl ore to the Beryl Ores Company, Arvada, Colorado. The shipment, reportedly 40 percent waste, netted $109.90 to the shipper.

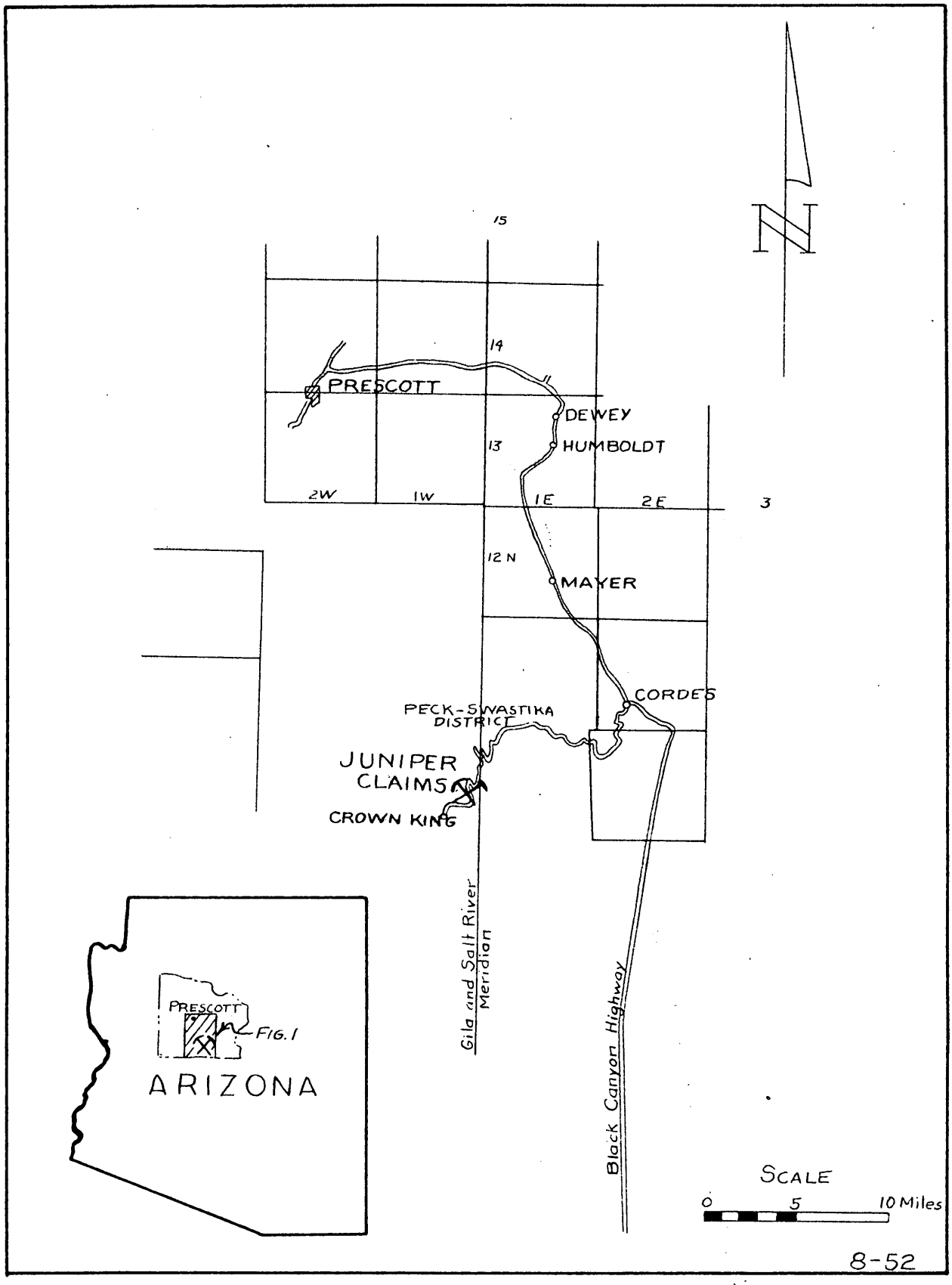

FIG. 1 — LOCATION MAP, JUNIPER LODE CLAIMS
YAVAPAI COUNTY, ARIZONA
DMEA - 2611

This has been the only production from the property up to the date of this examination. In 1950, on the strength of this shipment, the U. S. Bureau of Mines carried out a limited program of bulldozing, trenching, and sampling on the pegmatite dikes (Fig. 2)[1]. The project failed to show any favorable indications that would encourage further work. No additional development, other than a small amount of annual assessment work of a superficial nature, has been done by the owners.

DESCRIPTION OF DEPOSITS

Several pegmatites containing beryl as a minor constituent are found on the Juniper claims. The most prominent of these are shown on Figure 2. They are lettered A through F. These pegmatites are elongate tabular bodies or dikes which strike northwesterly and dip northeasterly at angles ranging from 50° to 75°. The dikes range in width from a foot or so to 15 feet.

Several cuts across and along the dikes are the only workings on the property. The numbered cuts were made by the U. S. Bureau of Mines. The workings and geology are shown on Figure 2.

The country rock of the area is the pre-Cambrian Bradshaw granite. The granite is medium-to-coarse grained, yellow in color, and weathers readily to rounded boulders.

The pegmatites contain quartz, feldspar, mica, and small amounts of beryl and garnet. Bismutite was identified by L. G. Evans, petrologist of the Bureau of Mines during the course of the Bureau project. Copper carbonate stain was noticed in one place. Individual cuts and

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1/ Stewart, L. R., Supplemental Examination Report, Juniper Beryl Deposit, Yavapai County, Arizona: U. S. Bureau of Mines, June 28, 1950.

outcrops show that the pegmatites may be subdivided into several units; the principal ones are quartz, quartz-feldspar, and feldspar-mica. In the brief examination of the deposit no pattern of distribution of these units was discernible. Gray to milky quartz made up the major part of most exposures. In places a quartz core is bordered by narrower medium grained (1 to 4 inches) feldspar-mica zones, and in other places a feldspar-mica core is bordered by quartz zones. The few beryl crystals observed in place were found in the quartz zone, though some beryl in feldspar-mica matrix was observed in rock excavated from the pit. The beryl is a light green or bluish green color and contrasts with the white or gray of the pegmatite.

ORE RESERVES

Six pegmatite dikes are exposed in the area proposed for exploration. Of these 6 dikes only the dike lettered D (Fig. 2) has yielded any production of beryl. From a volume of pegmatite 17 feet long, 3 feet wide, and 6 feet deep, 2500 pounds of beryl bearing pegmatite was sorted. This is reported to have been 40 percent waste; the amount of beryl recovered was probably on this basis about 1000 pounds. Assuming a tonnage factor of 12 cubic feet to the ton, approximately 25 tons of rock was taken from the pit. This gives a rough grade estimate of 2 percent of beryl in the pocket excavated. The face at either end of the pit is barren of beryl. The lens or streak containing the beryl is reported[2/] to have been 8 to 12 inches wide.

Another small lens within the same dike is located 200 feet to the northwest and was encountered in the bottom of Cut 6. This cut contained the only concentration of beryl discovered by the Bureau of Mines

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2/ Op. cit., p. 8.

in the course of their project on the Juniper Claims. A 300 pound bulk sample from a cut 11 feet long, 1.2 feet wide, and 0.3 feet deep was taken by the Bureau in 1950. An analysis showed 0.5 percent BeO, or calculated on the basis of 11.1* percent BeO in the beryl, about 90 pounds of beryl to the ton, a 4.5 percent beryl content. However, this sample represents only a width of 1.2 feet. A sample over a 3 or 4 foot mining width would contain mostly barren quartz or feldspar and would lower this grade considerably. The face of this pit shows the highest concentration of beryl in place. A beryl count of this face by the writer gave the following results:

No. of crystals	Area of crystals	Area of face	Beryl content	Est.lbs/ton
5	16 sq. in.	7200 sq.in. (10 ft. x 6 ft. wide)	0.22%	4.4

The dike was here about 6 feet wide. The beryl was concentrated along the center of the dike. Beryl was not found in any other of the pits dug by the Bureau of Mines. A few scattered crystals can be found along the outcrops. The dikes are for the most part barren of beryl mineralization.

There are no persistent zones containing any appreciable amounts of beryl exposed on the Juniper claims and only the two small laterally limited lenses have been uncovered through the work done by the applicants and the Bureau of Mines. From one of these the applicant recovered about 1000 pounds of beryl. On the outcrops no commercial amounts of beryl are exposed or indicated. Further work might reveal a limited amount of beryl in local concentrations, but the reserves are assuredly small and recovery almost certainly would not be economic.

* The figure was derived from the analysis of only one selected crystal.

PROPOSED EXPLORATION

The program proposed by the applicant consists of a crosscut driven southwest to intersect the pegmatite dikes at depth. This crosscut would be started at about the 5450 contour as shown on figure 2. Additional exploratory drifting and raising were proposed on any pegmatite dikes exposed by the drifting.

CONCLUSIONS AND RECOMMENDATIONS

Very little beryl is present in the pegmatites of the Juniper Lode Claims. No persistent zones containing beryl are found in the pegmatites. Beryl has been found only in two small pods of narrow width and limited strike extent. No concentrations of economic grade are now exposed or indicated. Work by the Bureau of Mines has adequately tested the pegmatites and indicated their limited potential and nature; the program outlined by the applicant does not seem justified.

It is recommended that the application of the Verda Lode Mining Company for exploration of the Juniper claims be denied.

September 30, 1952

Docket No. DMEA-2611 - Beryl
Verde Lode Mining Co.
Yavapai County, Arizona

Review of Docket

June 24, 1952 - Application made to Region IV office for $45,000 for underground work and $55,000 for flotation plant.
July 7,1952 - Application received from Region IV.
July 10, 1952 - U.S.G.S. recommends field examination stating that it has no specific information on the area.
July 11, 1952 - U.S.B.M. recommends field examination.
July 17, 1952 - Application referred to field.
Sept. 8, 1952 - Field Team recommends denial and submits report by Calvin S. Bromfield, U.S.G.S., dated August 29, 1952. The report concludes that very little beryl is present and refers to exploratory work previously done by the U.S.B.M.

A copy of U.S.B.M. "Supplemental Examination Report, Juniper Beryl Deposit, Yavapai County, Arizona", by Lincoln A. Stewart, is attached. It shows that sufficient work was done by the Bureau during the Spring of 1950 to demonstrate that any worthwhile discoveries are unlikely.

Sept. 18, 1952 - U.S.B.M. Rare and Precious Metals Branch recommends denial.

Sept. 30, 1952 - USGS recommends denial.

LFHearne:gad
Copy to: Mr. Houk

Mr. Forey F. Worman, President
Verde Lode Mining Company, Inc.
Mayer, Arizona

Subject: Docket No. DMEA-2611 - Beryl
Verde Lode Mining Company
Yavapai County, Arizona

Dear Mr. Worman:

Your application for exploration assistance, Docket No. DMEA-2611, dated June 24, 1954, for beryl in Yavapai County, Arizona, has been reviewed by this office.

A careful study of your proposal and other information available to this agency indicates that the probability of making a significant discovery on your prospect is not sufficiently encouraging to justify Government participation in the proposed work; therefore, your application is denied.

Your interest in the exploration program is appreciated.

Sincerely yours,

Administrator

LFHearne:gad 10/1/54

Copy to: Admin. Reading File
Operating Committee (2)
Field Team, Region IV
Docket File
Mr. Needleman, 1347
Mr. Norton, G-232 GSA Bldg.
Mr. Houk

IN REPLY REFER TO:

G-MD-CNM

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

September 30, 1952

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-2611 (beryl)

To: L. G. Houk, Defense Minerals Exploration Administration
From: R. E. Van Alstine, U. S. Geological Survey
Applicant: Verda Lode Mining Company
Name of property: Juniper Lode claims 1,2,3,4,5,6,7,8,9,10.
Location of property: Yavapai County, Arizona
Date of field team report: August 29, 1952
Authorship of field team report: C. S. Bromfield
Field team's recommendation:

Denial -- very little beryl in the pegmatites; no persistent beryl-bearing zones. No concentrations of economic grade are now exposed or indicated.

Comments:

Field examination by geologist and previous explanation by U. S. Bureau of Mines indicate very limited potentiality of these pegmatites as a source of beryl.

Action Suggested:

Follow field team's recommendation and deny application.

R. E. Van Alstine

Copy to: Director's Reading, 4212
Branch Reading, 4212
DMEA
Van Alstine
Norton files

REVan Alstine:fw
G-10/1/52

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

September 13, 1952

Memorandum

To: L. G. Houk, Chief
Nonmetallics Division, DMEA

From: A. J. Kauffman, Jr.
Rare and Precious Metals Branch

Subject: DMEA Docket 2611, Juniper Beryl Claims, Verde Lode Co., Yavapai County, Arizona.

In agreement with the Field Team report we recommend denial of this application.

Signed

A. J. Kauffman, Jr.

Attachments

DEPARTMENT OF THE INTERIOR
Bureau of Mines
Denver
SEP 15 1952

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

Subject: Docket No. DMEA-2611 - Beryl
Juniper Lode Claims
Yavapai County, Arizona

Dear Mr. King:

A field review for the above referred application is requested, together with a field examination if you consider it justified.

The matters of time schedule, amount and location of work, detailed costs, and so forth, should be discussed with the applicant as he has not properly completed application form MF-103.

Memoranda from the Bureau of Mines and Geological Survey regarding the application, are enclosed.

Sincerely yours,

George C. Selfridge
ACTING Chairman, Operating Committee
Defense Minerals Exploration
Administration

Approved:

J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

Enclosures - 2

LFHearne:mp 7/15/52
cc: Docket File
Operating Committee
Adm. Reading File
Mr. Needleman, 1347
Mr. Norton, G-232, GSA Bldg.
Mr. Houk

Mr. Percy F. Wormer, President
Verde Lode Mining Company, Inc.
Mayer, Arizona

Subject: Docket No. DMEA-2611 - Beryl
Juniper Lode Claims
Yavapai County, Arizona

Dear Mr. Wormer:

Your application is being referred to Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV, Bureau of Mines, 224 New Customhouse Building, Denver 2, Colorado, for further information.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Administrator
Defense Minerals Exploration
Administration

LFHearne:mp 7/15/52
cc: Docket File
Adm. Reading File
Operating Committee
Field Team, Region IV
Mr. Needleman, 1347
Mr. Norton, G-232, GSA Bldg.
Mr. Houk

Mr. N. R. King
Executive Officer, GSA
Field Area, Region 11
[illegible] New Customhouse Building
Denver 2, Colorado

Subject: Docket No. [illegible]-2611 - Beryl
Juniper Lode Claims
Navajo County, Arizona

Dear Mr. King:

A field review for the above referred application is requested, together with a field examination if you consider it justified.

The matters of time schedule, amount and location of work, detailed costs, and so forth, should be discussed with the applicant as he has not properly completed application form [illegible]-103.

Memoranda from the Bureau of Mines and Geological Survey regarding the application, are enclosed.

Sincerely yours,

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Approved:

Director, Bureau of Mines

Director, Geological Survey

Enclosures - 2

15Hearnemp 7/15/52
cc: Docket File
Operating Committee
Adm. Heading File
Mr. Goodleman, 1307
Mr. Barton, C-732, GSA Bldg.
Mr. Houk

Mr. Percy F. Warner, President
Verde Lode Mining Company, Inc.
Mayer, Arizona

Subject: Docket No. DMEA-2611 - Beryl
Juniper Lode Claims
Yavapai County, Arizona

Dear Mr. Warner:

Your application is being referred to Mr. W. E. King, Executive Officer, DMEA Field Team, Region IV, Bureau of Mines, 224 New Customhouse Building, Denver 2, Colorado, for further information.

Sincerely yours,

Acting Administrator
Defense Minerals Exploration
Administration

LFHearne:mp 7/15/52
cc: Docket File
Addr. Reading File
Operating Committee
Field Team, Region IV
Mr. Needleman, 1347
Mr. Norton, G-232, GSA Bldg.
Mr. Rook

DMEA 2611
Beryl $100,000
Participation 9-1

Review of Application for Exploration Assistance
Name of Applicant: Uncle Lode Mining Co, Inc.
Percy E. Hanson, Pres
Kingman, Arizona
Location: Yavapai County, Arizona
Geologic Probability of Discovery: Needs field exam.
Applicants are owners by right of location
Subordination agreements are unnecessary
A field check is needed on the points of manpower, equipment, accessibility, water, power, and the experience of the applicant
The property is not adequately described
There is no map or sketch of the proposed work.
The proposed work is "exploration" under DMEA order 1
The cost estimates are not sufficiently detailed and a field examination is necessary to complete Exhibit A.

Comments by U.S.G.S. "The U.S.G.S. has not specific information on the area. No commercial beryl deposits are at present known to exist in Arizona. The application makes some rather extravagant requests. One of these is a request for $50,000 for flotation mill, hardly a point of an exploration project."
Comments by U.S.B.M. "It may be advisable to make a field examination to determine whether further interest is justified."

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. dmea 2611
Metal or Mineral
Date Received 7-7-521
Estimated Cost
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: Percy F. Werner Mayer Arizona
Verde Lode Mining Co. Inc. An Arizona Corp. Mayer Arizona
Percy F. Werner, Pres. Mayer Arizona; R.F. Petty Jr. Geo. Meyer, Ariz.
Myrtle Nunn, Vice Pres. 4107 Shaw St. Long Beach, Calif.

(*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 Unpatented Mining Claims
Juniper Group #1 to #10 ; Peck-Swastika-Crown King Mining District
Recorded, Yavapai County Court House, Prescott Arizona in Book
157, pages 74,75,,85,86,87,88,96,97,113,114.

(*b*) State any mine name by which the property is known. Beryl Prop. #1, Verde Lode Mining Co.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
Owners, by right of location.

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

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

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

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

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

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

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

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

16—66551-1

JUL 7 - 1952

5. *The exploration project.*—(*a*) [redacted]te the mineral or minerals for which you wi[redacted] explore Beryl.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated June 24, 1957

Verda Lode Mining Co Inc
(Applicant)

By Percy F. Wormer Pres.

Mayer

Arizona

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

Conclusion:

The property owned by the Verda Lode mining Company Inc. embraces 200 Acres. Containing 10 lode claims 600 by 1500 feet in the Peck-Swastika-Crown King mining district Yavapai County, Arizona. Within this area a number of well defined pegmatite dikes in the Bradshaw Granite are traceable. Most of these dikes containes beryl-feldspar and mica. The beryl is the most important. But on the other hand, if the right reduction plant is erected, mica and feldspar can be marketed as a by-product at a substantial profit in addition to beryl production.

The V.S.B.M. spent some $5000.00 in trenching and a geological investigation of this property. In a letter to Mr. B. F. Petty Jr. dated June 12th, 1950. This letter is parts, states as follows:

"An assay from dike cuts No. 4-5 and 6 lower end, a 300-pound representative sample taken by stewart and Berliner assayed 0.5 percent beryl- A pure crystal of beryl assayed 11.1 percent. Assuming that the cut sample represented beryl of grade equal to the crystal assayed--there would be an indicated content of 87 pounds of beryl per ton of ore".

During March 1950 - Mr. B. F. Petty Jr. made a small shipment to the Beryl ores Company, Arvada, Colorado , containing 2510 lbs. This unsorted ores, contained 40 percent waste. However, after deducting all charges it brought $109.90 net to the shipper.

In view of the preceding, it is evident that for profitable operation a deduction plant is required. Perhaps floatation. However before a decision is reached, metallurgical tests must be made. Determination of value of feldspar and mica should be included--in order to determine if these minerals have commercial value as a by-product.

There is no doubt but the demand for Beryllium- Aluminum-Silicate will increase. This property is favorable situated as to Transportation. Construction of a camp is not required as the workers can obtain living quarters at Crown King, or the Swastika camp may be rented.

At Crown King and also at cleator, The Bi-metal group at Cleator contains gold, silver, lead and zinc, The Philadelphia mine, situated a short distance south from the Verda Lode is worthy of investigation. (It contains abundance of water).

I suggest that a tunnel, starting at the 5450 contour, be driven a distance of 350 ft. intercepting at 100 ft. below the outcrop. When this work is completed, extensive drifting, raising and sinking is essential for permanent production of pay-ores. For location of proposed tunnel see map.

My opinion is favorable and the outlook appears substantial. Therefore, I recommend that $100,000.00 be provided for exploration of the meritorious beryllium bearing pegmatite dikes exposed within the boundaries of the Verda Lode Mining Company's holdings. With ample financing, other properties of merit may be investigated, and acquired.

Respectfully submitted,

A. Syverson

Humboldt. Nov. 21, 1950

A. Syverson, E. M.

Report on the

Verda Lode Mining Company Inc.

In the vicinity of Crown King - Yavapai County, Arizona

Company Officers:

Percy F. Wormer - President

Myrtle Nunn - Vice-President

B. F. Petty Jr. - Secretary and Treasurer

Charles E. McDaniel - Attorney

Property: The property of the Verda Lode Mining Co. Inc. consists of the following mining claims by rights of location.

Juniper	No.	1 - - - - - - -	20 Acres
"	"	2 - - - - - - -	20 "
"	"	3 - - - - - - -	20 "
"	"	4 - - - - - - -	20 "
"	"	5 - - - - - - -	20 "
"	"	6 - - - - - - -	20 "
"	"	7 - - - - - - -	20 "
"	"	8 - - - - - - -	20 "
"	"	9 - - - - - - -	20 "
"	"	10 - - - - - - -	20 "
		Total area	200 Acres

Situation:

The claims are situated between the Peck-Swastika and the Crown King Mining districts, Yavapai County, Arizona, about 55 miles distant by road from Prescott, the County seat and largest town in Northern Arizona.

Accessibility:

The property can be easily reached by State and County highway - constructed to Federal specifications to Crown King. The road is 20 ft. wide having a maximum grade of six percent. A temporary camp has been established 300 ft. from the highway, at a point 3 miles from Crown King, and about 27 miles from Mayer.

Transportation:

Prescott is served by Santa Fe. Prescott and Phoenix branch of the Santa Fe Railroad System with branch lines to Clarkdale and Mayer.

Telegraph - Phone and Power:

The Western Union Telegraph Company maintains offices at Prescott and Mayer.

The Arizona Power Company's 11,000 volt 60 cycle power line to Crown King. The telephone line is constructed across the property at a distance of some 600 feet in a southerly direction from the Verda Mining Company's Beryllium deposit.

Topography:

The claims are situated on the east slope of the Bradshaw mountains, ranging in elevation above sea level from 5300 to 5600 feet, the general drainage to the east. The Terrain is somewhat rough and precipitous. Vegetation is scant, and characteristic of the district, consisting of scrub and chaparral.

Water:

Some 300 feet Northwest of the present camp, there is a small spring in the granite, which will supply sufficient water for domestic use for two or three men.

Climate:

At the Swastika Mine, situated five miles to the North at the same elevation, the average temperature for a period of years was 58 degrees with a maximum of 104 degrees, and a minimum of 20 degrees. Average precipitation over a 10 year period 15 inches - The lowest temperature occurs in January. The highest in July - January, February, July and August have the highestmonthly precipitation. May, June and October the lowest. Although the summer Temperature may reach above 100 degrees, it is not unbearable due to low humidity.

Labor:

Experienced miners may be obtained from Crown King and Mayer. Wages for machine-men $10.00 - $11.00. Muckers $9.00 to $10.00 per 8 hr. shift.

Lumber:

The area embraced by the Juniper claims is void of timber suitable for mine use. Hence, whatever is needed for mine development must be delivered on the property at prevailing prices.

Power:

As the high-tension power line is situated a short distance from contemplated exploration, the cost of installation would be very nominal.

Operating cost may be 3¢ per kilowatt hour, depending on the amount of power consumed in operation of the mine.

Equipment:

1 - Portable Compressor. 125 cubic feet capacity

1 - Jackhammer

Drill - steel

Miscellaneous tools and pipe

1 - Tent house

Geology:

The important formation of the northern and middle of the U. S. G. S., Bradshaw Mountain Quadrangle (Folio 126) are schist, diorites, rhyolites and granite. The area within the boundaries of the Verda Mining Company Inc, property, generally speaking is granite.

Several weal defined pegmatite dikes is exposed on the property, having various length and wid th, the strike is Southeast and Northwest. Approximate dip 60 degrees east. The granite foot-wall appea rs to be dense, whereas the hanging-wall is somewhat oxidized and shows a crushed condition. The wall rocks show sericitization and carbonatization, and high temperature minerals are absent.

According to Lindgren the veins in the district belong to the mesotharmal class, and were deposited at depths of 3000 or 4000 feet below what was then the surface.

Pegmatite Dikes:

(Juniper Claim)

8 ft. cut below cut No. 6 - 2 ft. wide shows spar and mica. Beryllium streak on hanging wall-

Cut No. 6:

8 ft. face shows spar - some mica - and some Beryllium-

Cuts Nos. 4 and 5:

Total length of pegmatite outcrop, including cuts four, five and six - is exposed over a distance of 300 feet. Some Beryl shown. Test made by the U. S. B. M. shows 0.5 percent and 11.1 percent Beo. Estimated value of beryl content per ton 87 lbs.

Cuts 1 - 2 and 3:

Due to excavation made by the U. S. B. M. along the outcrop, the bottom of the cuts have been covered by sand and debris. However the presence of beryl is indicated.

Cut "F":

Shows feldspar and mica - unexplored.

Cuts "C and B":

The pegmatite dikes are well defined and indicative of a beryl content, when explored in depth.

Cut "A":

This is a strong well defined pegmatite dike - exposed for a distance of 450 feet. As far as can be determined, this unexplored dike shows strong beryl mineralization throughout its entire length. For location of pegmatite dikes which show width from 2 to 15 feet see accompanying maps.

Budget:

Covering - Overhead, exploration and equipment:

600 linear feet of tunnels and drifts @ $20.00 per ft.	$12,000.00
500 linear feet of raises - - - - - - - - - - - - - -	7,500.00
225 c. f. Compressor - - - - - - - - - - - - - -	3,000.00
2 - Jackhammers, bars and carriages - - - - - -	1,200.00
Drill - steel and bits - - - - - - - - - - - -	150.00
Rails and ore - cars - - - - - - - - - - - - -	1,000.00
Installation of Electric Power - - - - - - -	3,000.00
1 - Pickup Truck - - - - - - - - - - - - - - - -	1,800.00
1.- General - Superintendent 18 months ¢$350.00 per month - - - - - - - - - -	6,300.00
1 - Mining Engineer 18 months ¢ $300.00 per month	5,400.00
Miscellaneous - Road work, water developmentetc.	3,650.00
Excavation and foundations for Floatation Plant	5,000.00
Estimated cost of new 50 ton Flotation Mill	50,000.00
Total Cost	$ 100,000.00

Andrew Syverson:

Professional Experience Record -

Christiana - Norway. School of Technology - E. M. - 1911 -

Correspondence Course - Geology - Columbia University - 1916 -

Correspondence Course - Mining International Correspondence School - 1912 - 1913 -

1911 -1912 - Mucher, Sampler and Surveyor, Nova Scotia Steel and Coal Co., Wabana, Newfoundland.

1912 - 1914 - Division Engineer, Dominion Steel and Coal Co., - Glace Bay - Nova Scotia, Canada.

1914 - 6 months Mining Engineer, San Practicio Mining Co. Porra 1 - Chihuahua, Mexico.

1915 - Mining Engineer, shift boss. Cananea Consolidated Mining Company. Sonora, Mexico.

1916 - 1922 - Chief Engineer, United Verde Extension Mining Co., Jerome, Arizona.

1923 - Superintendent, United Arizona Copper Mine Black Hills, Yavapai County, Arizona.

1924 - 1926 - General mine Examinations, Arizona, Nevada, Utah and Mexico - with the late Dr. Walter Harvey Weed.

1927 - General - Superintendent Julieta Gold Mines, Chihuahua, Mexico. Part time assisting Dr. Henry Louis of London, England.

1928 - 1930 - Chief Engineer and Geologist, San Luis Mining Co., Tyoltita, Sinaloa, Mexico.

1931 - 1934 - Manager, Desenganos Gold Mining Co., Punta Prieta. Baja California, Mexico.

1934 - 1940 - General Consulting practice - Los Angeles, Calif. Mine Examinations, California, Nevada, Oregon, Utah and Mexico.

1940 - 1943 - Manager of Manganese, Tungsten, and Gold mines in California. (All defunct)

1944 - Manager, Silver Plate Mining Co., Cottonwood, Arizona Gold, Silver and Copper production.

1944 - 1948 - Associated with Richard Kingdon - Swastika Mines - Peck Mining district, Arizona.

1948 - Superintendent, Swastika Mines - Silver and Copper.

1950 - Associated with the Humboldt Copper Co., Humboldt - in geological investigations, also mine examinations of various Copper, lead - molydenum and Beryllium -

Former member:

American Institute of Mining and Metallurgical Engineers
American Association of Engineers
American Mining Congress

References:

C. E. Mills Asst. Manager, Copper Queen Branch, Bisbee, Arizona

Harry R. Palmer, Consulting Engineer
2453 West 48 St.
Los Angeles 37, Calif.

A. Lynchwing

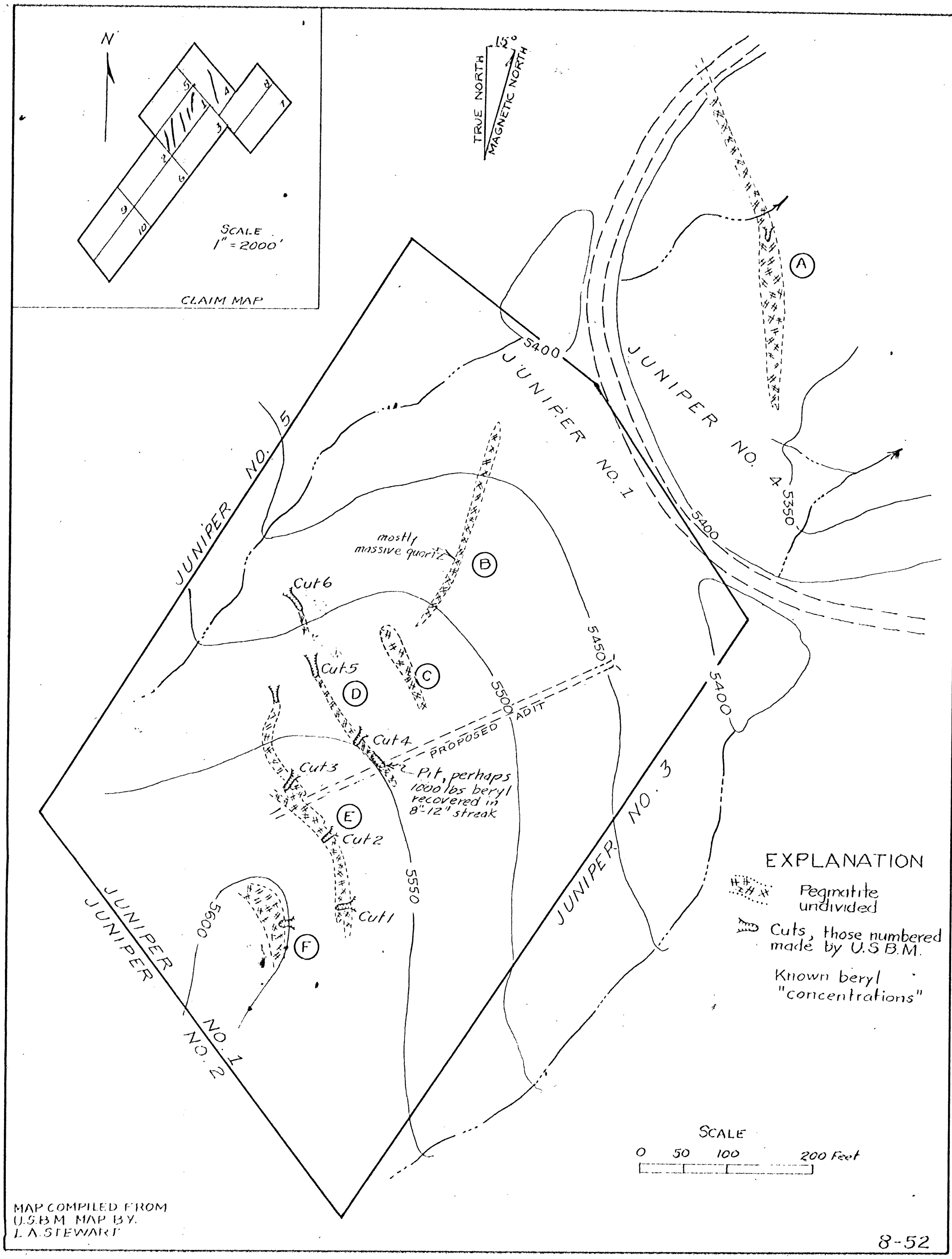

FIG. 2 -- GEOLOGIC MAP, JUNIPER BERYL CLAIMS
YAVAPAI COUNTY, ARIZONA
DMEA - 2611

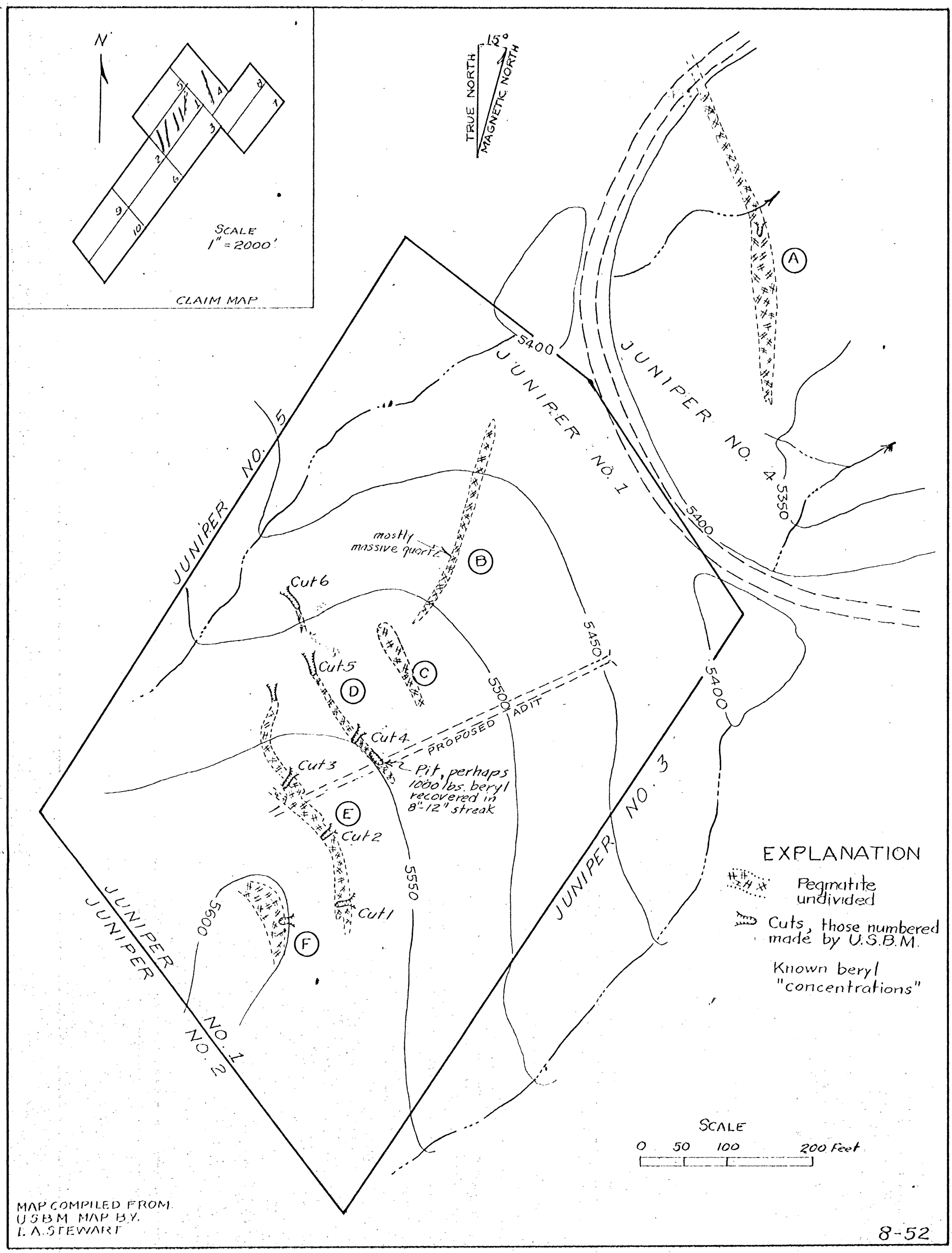

FIG. 2 – GEOLOGIC MAP, JUNIPER BERYL CLAIMS
YAVAPAI COUNTY, ARIZONA
DMEA - 2611