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

224 New Customhouse
Denver 2, Colorado

October 24, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: Final Report, DMA Docket 1531X, L. E. Kramer and Son; applicant, Highland Lassie Lead-Zinc Mine, Tooele County, Utah

Enclosed herewith are the original and two copies of the report on the subject docket.

We concur with the conclusions and recommendations of the examining team that the exploration loan of $10,000 be denied.

The brochure is enclosed.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

October 24, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1531X, L. E. Kramer and Son; applicant, Highland Lassie Lead-Zinc Mine, Tooele County, Utah

The application of the subject docket was for an exploration loan of $10,000.

The purpose of this loan was to explore the downward extension of exploited ore bodies by means of an adit and crosscut.

Ore reserves are limited to a few tons and the geologic probability for discovery of additional reserves are unfavorable.

The examining team recommends denial of the loan, with which we concur.

Paul T. Allsman

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Division
Date Rec'd.
OCT 22 1951
BUREAU OF MINES
Denver, Colorado

October 19, 1951

Memorandum

TO: Paul T. Allsman, Chief, Mining Division, Region IV

From: Chief, Utah-Wyoming Branch, Mining Division

Subject: DMA 1531X, Highland Lassie Mine, Tooele County, Utah

Enclosed are eight copies of an engineering report prepared by R. L. Middleton. A section on Summary, Conclusions and Recommendations is also included.

The original brochure is enclosed.

Stephen R. Wilson

Stephen R. Wilson

Enclosures - 3

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

200 New Customhouse
Denver 2, Colorado

October 15, 1951

Memorandum

To: DMA Field Team, Region IV

From: Ogden Tweto

Subject: DMA Docket 1531X, L. E. Cramer and Sons, Highland Lassie or Last Hope, Lead-Zinc Prospect, Erickson Mining District, Tooele County, Utah.

Enclosed are eight copies of the geologic report by B. J. Sharp of the U. S. Geological Survey covering the above docket. It has been recommended that the loan be denied.

The brochure will accompany the U. S. Bureau of Mines report.

Ogden Tweto

Ogden Tweto, Alternate
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY Room 307, 320 South Main
Salt Lake City 1, Utah
11 October 1951

Memorandum

To: A. H. Koschmann, Field Team, Region IV

From: Ralph J. Roberts

Subject: Docket DMA-1531X, L. E. Cramer and Sons, Highland Lassie or Last Hope, Lead-Zinc Prospect, Erickson Mining District, Tooele County, Utah.

Enclosed are eight copies of a geologic report on the Highland Lassie prospect in the Erickson Mining District, Tooele County, Utah.

The Highland Lassie Mine is in an area of quartzites, shales, and slates. The ore bodies are very small and discontinuous and are in a gouge zone along a bedding fault that is cut off by a normal fault.

Ore reserves are limited to a few tons and there is no indication that exploration will reveal any large bodies of commercial ore. It is concluded that the possibilities for discovering important new reserves of lead-zinc ore are not good, and it is recommended that the request for an exploration loan be denied.

I concur with the examining geologist that the request for an exploration loan be denied.

Preston E. Hess
for - Ralph J. Roberts

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

Docket DMA-1531X, L. E. Cramer and Sons

Highland Lassie or Last Hope, Lead-Zinc Prospect

Erickson Mining District, Tooele County, Utah

B. J. Sharp, Geologist
U. S. Geological Survey

October 11, 1951

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By R. L. Middleton and Byron Sharp

The Highland Lassie Mine was examined during September 1951 by personnel of the Bureau of Mines and Geological Survey for the purpose of evaluating a DMA loan request.

Predominant rocks in the area consist of chloritic quartzite and micaceous shale and slate. The ore bodies occur in a gouge zone along a bedding fault and are small and discontinuous. The bedding fault is terminated by a normal fault approximately 70 feet from the portal of the main adit.

Ore reserves are limited to a few tons and there is no indication that exploration will reveal bodies of commercial significance. It is concluded that geologic possibilities for discovering additional ores are not promising, and it is therefore recommended that the loan request be denied.

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Figure 1. Index map of Utah showing location of the Highland Lassie or Last Hope Lead-Zinc prospect, Erickson Mining District, Tooele County, Utah

Figure 2. Claim map of Highland Lassie and Last Hope Lead-Zinc prospect, Erickson Mining District, Tooele County, Utah.

Figure 3. Detailed map of the Highland Lassie or Last Hope Lead-Zinc prospect, Erickson Mining District, Tooele County, Utah

Docket DMA-1531X, L. E. Cramer and Sons

Highland Lassie or Lost Hope, Lead-Zinc Prospect

Erickson Mining District, Tooele County, Utah

GEOLOGY

The Highland Lassie Mine is in an area of chloritic quartzite and interbedded green micaceous shale and slate. Many bedding faults cut the rocks and in turn are displaced by later normal faults.

ORE DEPOSITS

Ore deposits in the district are in small pods and stringers localized along bedding slips and cross faults.

At the Highland Lassie mine the ore minerals are galena and carbonates of lead and zinc. Vein quartz is the principal gangue mineral. The mineralization is in a gouge zone as much as one foot thick along a bedding slip striking N-S and dipping 10° E. Only one stringer of galena approximately two feet long and two inches wide was found in the gouge zone. About 70 feet from the portal a normal fault that strikes N. 35° E. and dips 45° W. cuts off the mineralized zone. The amount of displacement could not be determined.

ORE RESERVES

No reserves of any class have been calculated for this property. The past history of the property indicates that the deposits are likely to be small and discontinuous. Mineralization is limited to small stringers in fractures and it is unlikely that any large minable bodies of ore of commercial grade will be found.

PROPOSED EXPLORATION

The applicant proposes to drive a crosscut from the Highland Lassie No. 3 claim (fig. 2) approximately 800 feet lower than the present workings in the hope of intersecting the ore bed at depth.

The examining geologist does not agree with the proposed exploration program. A normal fault has cut off the ore and the applicant's proposed exploration is on the opposite direction of the offset, and at too great a depth to be within any ore zone. The amount of offset is not determinable at present. The quantity of minable ore is too small to warrant any project at this time.

SUMMARY AND CONCLUSIONS

The Highland Lassie mine is in an area of chloritic quartzite and micaceous shale and slate. The ore bodies are very small and discontinuous and are in a gouge zone along a bedding fault that is cut off by a normal fault about 70 feet from the portal of the adit. The ore minerals are galena and lead and zinc carbonates. Quartz in local stringers accompanies the ore minerals.

Ore reserves are limited to a few tons and there is no indication that exploration will reveal any large bodies of commercial ore. The past history of the property indicates that any new deposits are likely to be small and discontinuous.

It is concluded that the geological possibilities for discovering an important new reserve of lead-zinc ore are not good, and it is recommended that the request for an exploration loan be denied.

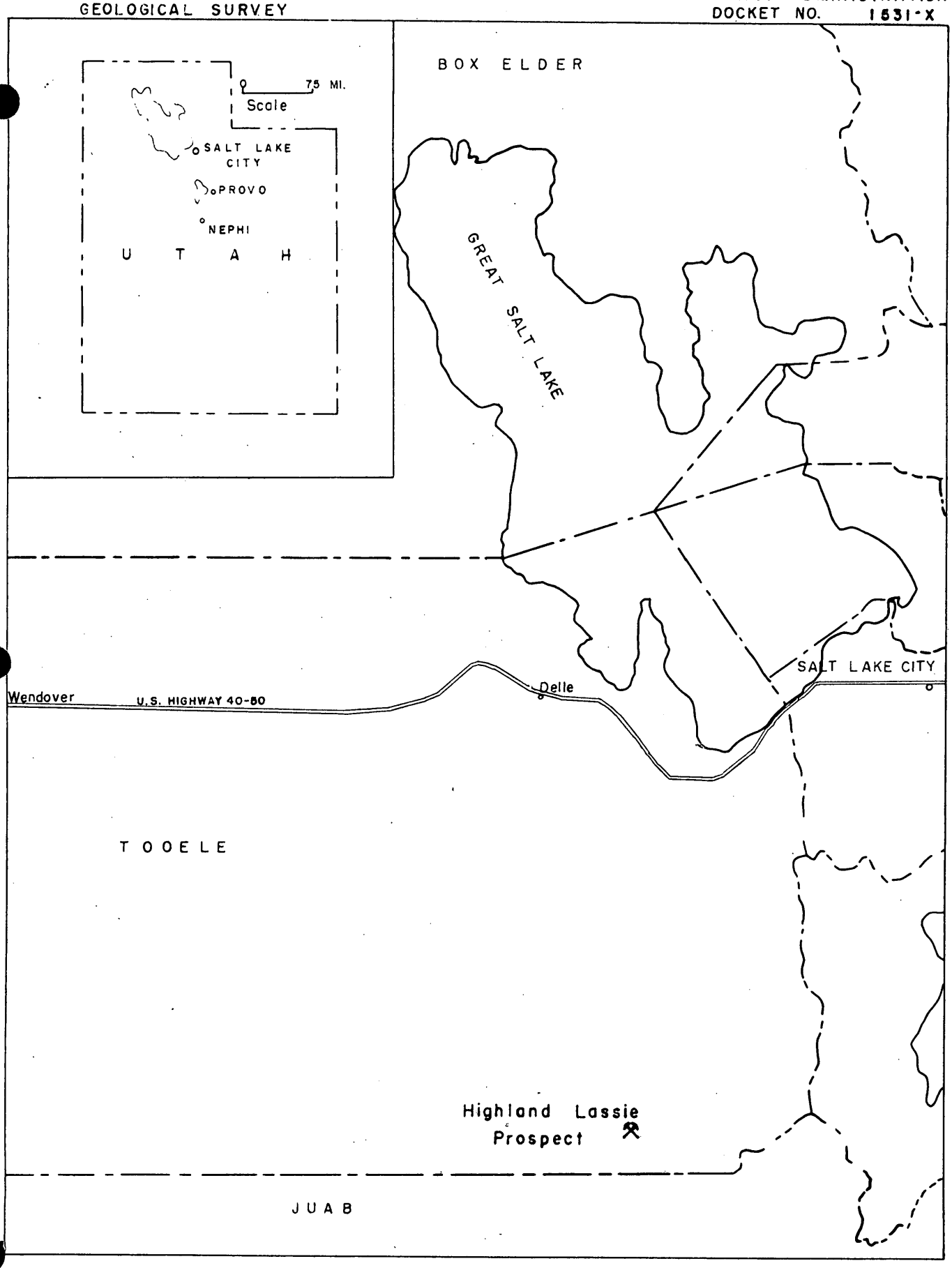


FIG. 1

INDEX MAP OF UTAH

0 8 16 24 MILES
Scale

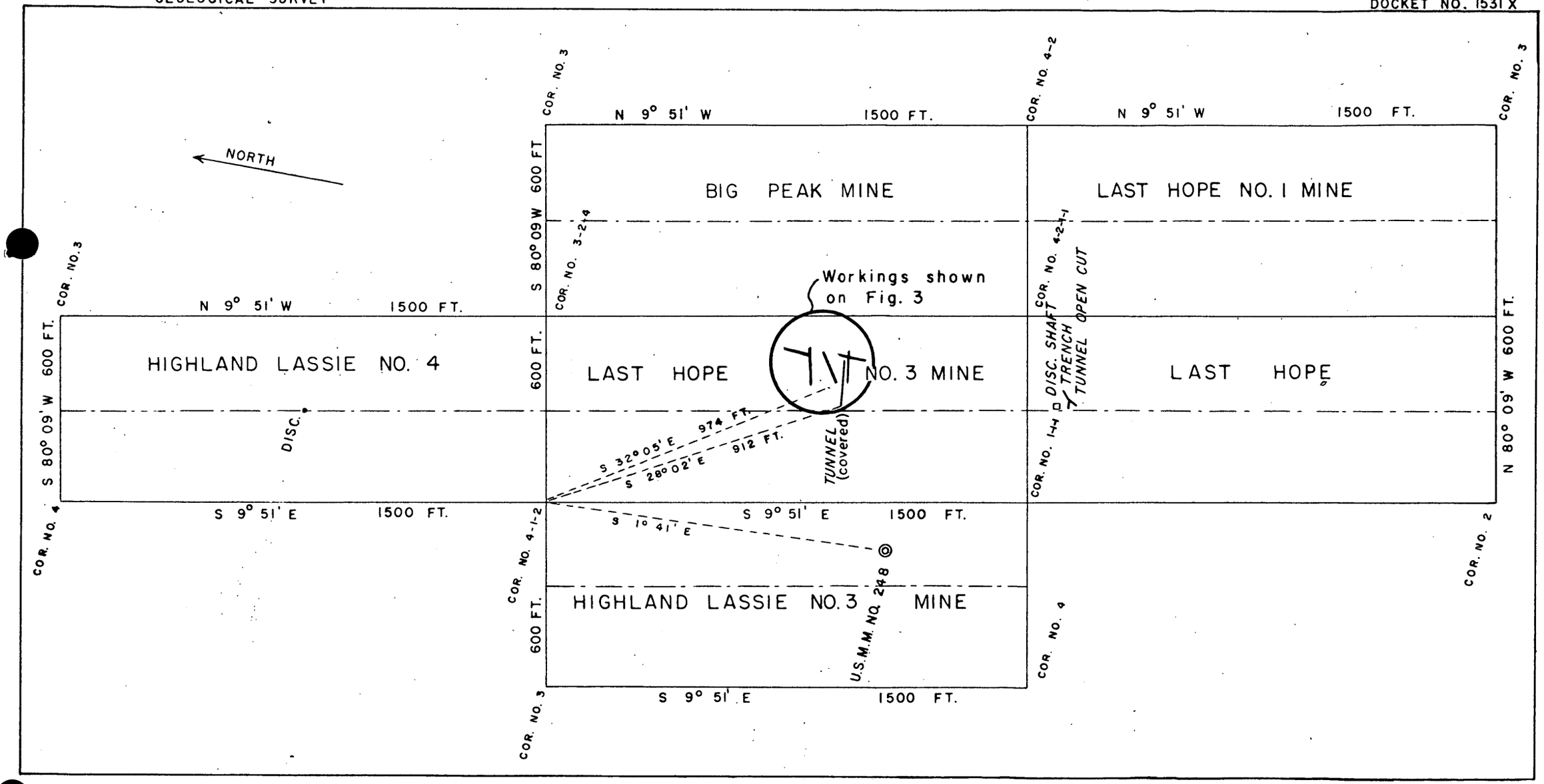
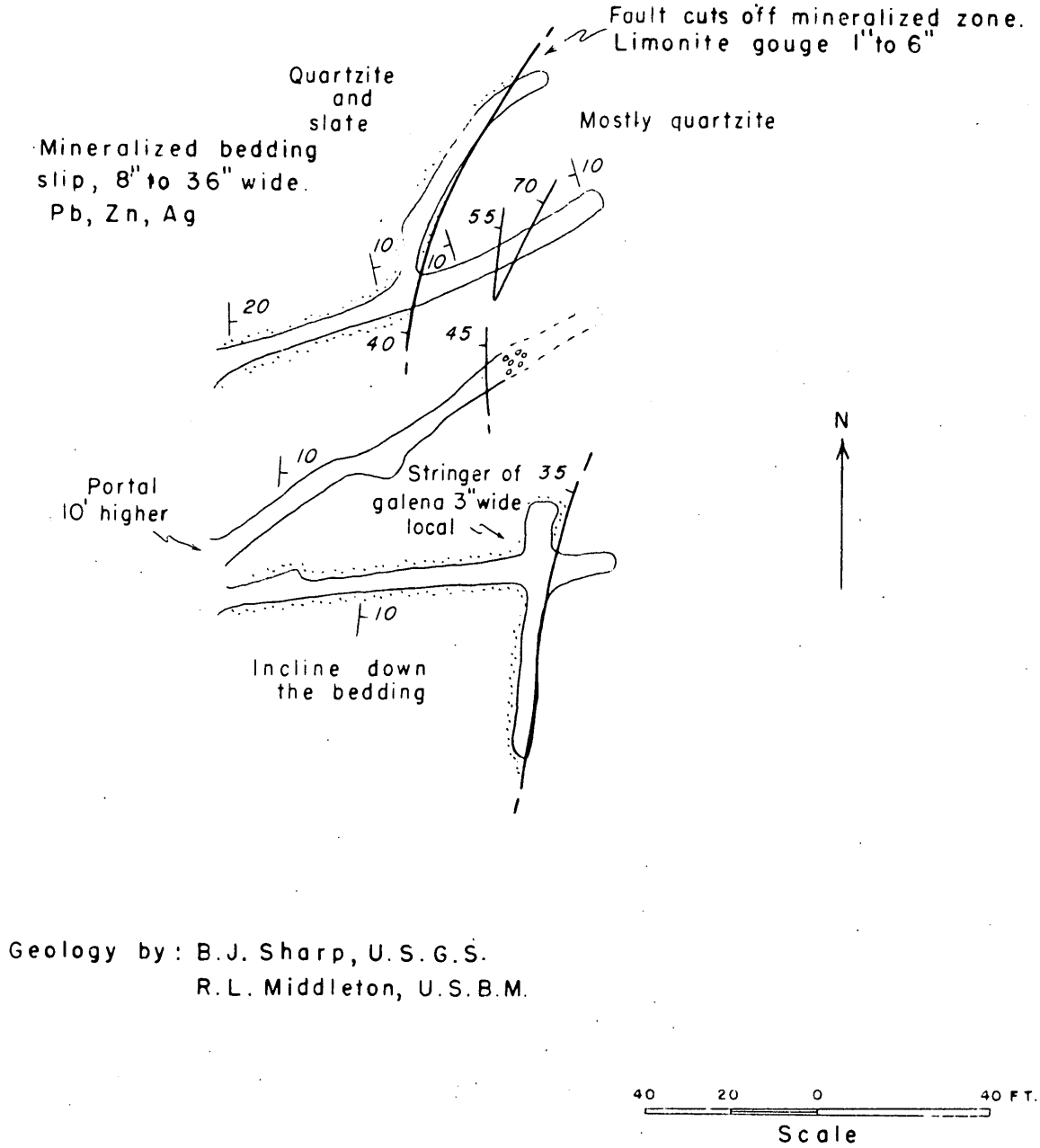


FIG. 2 CLAIM MAP OF HIGHLAND LASSIE AND LAST HOPE LEAD-ZINC PROSPECT, ERICKSON MINING DISTRICT, TOOELE COUNTY, UTAH

0 500 1000 FEET
Scale



Geology by: B.J. Sharp, U.S.G.S.
R.L. Middleton, U.S.B.M.

FIG. 3 DETAILED MAP OF THE HIGHLAND LASSIE OR LAST HOPE LEAD-ZINC PROSPECT, ERICKSON MINING DISTRICT, TOOELE COUNTY, UTAH

HIGHLAND LASSIE MINE
TOOELE COUNTY, UTAH
LEAD-ZINC
UMA-1531X

Engineering Report

By R. L. Middleton
Mining Engineer
U. S. Bureau of Mines

HIGHLAND LASSIE MINE
TOOELE COUNTY, UTAH

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Engineering report	
Introduction	1
Location, topography, and physical features	1
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Present status	2
Project proposal	3
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ILLUSTRATIONS

Fig. 1 Location map, Highland Lassie mine, Tooele County, Utah

INTRODUCTION

A preliminary examination of the Highland Lassie mine was made September 12, 1951, by Byron Sharp of the U. S. Geological Survey and R. L. Middleton of the U. S. Bureau of Mines. The field team was accompanied to the property by L. E. Kramer, managing partner. The examination was made regarding DMA Docket 15311X which asks approval of a $10,000 exploratory project loan with Government participation of $5,000.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Highland Lassie property is in sec. 33, T. 10 S., R. 8 W., S.L.B.M., Erickson mining district, Tooele County, Utah, 70 miles southwest of Tooele. The property, at an elevation of 5,200 feet, lies on the west slope of the Simpson Mountains above and east of Sixmile Spring. The Simpson Mountains rise abruptly from the alluvial valley and beach terrace remnants of Lake Bonneville. Topography is very steep, and many of the mountain slopes are covered with loose talus. A few stunted juniper trees supply a limited quantity of small mine timbers. Sixmile Spring, adjacent to the property, affords an adequate culinary water supply.

HISTORY AND PRODUCTION

The Highland Lassie property was located and patented in the early 1900's. There is no record of ore production previous to 1935. During 1935 and 1936 lessees mined approximately 25 tons of good-grade, argentiferous galena ore. In 1946 L. E. Kramer purchased the Highland Lassie claims from Tooele County and obtained a tax title. During the next year the mine produced approximately 12-1/2 tons of ore, the average

metal content of which was 15.5 percent lead, 2.89 ounces silver, and 12.1 percent zinc.

OWNERSHIP AND EXTENT

The Highland Lassie property consists of 6 patented lode mining claims and is owned by a partnership with L. E. Kramer as managing partner.

DESCRIPTION OF THE DEPOSIT

Rocks in the immediate area of the Highland Lassie mine are Cambrian quartzite and interbedded shales. The mineralization occurs as a lenticular, bedded fissure with a north strike and 20° east dip between a quartzite footwall and chloritic shale hanging wall. The vein material, which varies from 2" to 36" in thickness, is broken and oxidized to a soft brownish-black earthy material. Clay gangue within the vein indicates post-mineral faulting along the bedding plane, and the faulting has shattered the vein sufficiently to allow complete oxidation. The vein is composed of quartz, iron oxide, manganese oxide, pyrite, chalcopyrite, and galena. A sample chipped 36" across the widest portion of the vein assayed 15.3 percent lead, 19.2 percent zinc, and 2.0 ounces of silver per ton.

MINABLE ORE RESERVES

A few tons of highly oxidized lead, zinc, and silver-bearing ore constitute the minable ore reserves in the Highland Lassie mine.

PRESENT STATUS

The Highland Lassie mine is developed by three short inclined adits (fig. 2., U. S. Geological Survey report). These adits, driven east from the mineralized outcrop down the 20° dip of the bedded fissure,

encountered a normal post-mineral fault. Continuation of the fissure east of the fault has not been found. Approximately 37 tons of lead-zinc ores has been mined along the intersection of the bedded fissure and the fault. Since 1947, no mining has been done on the property.

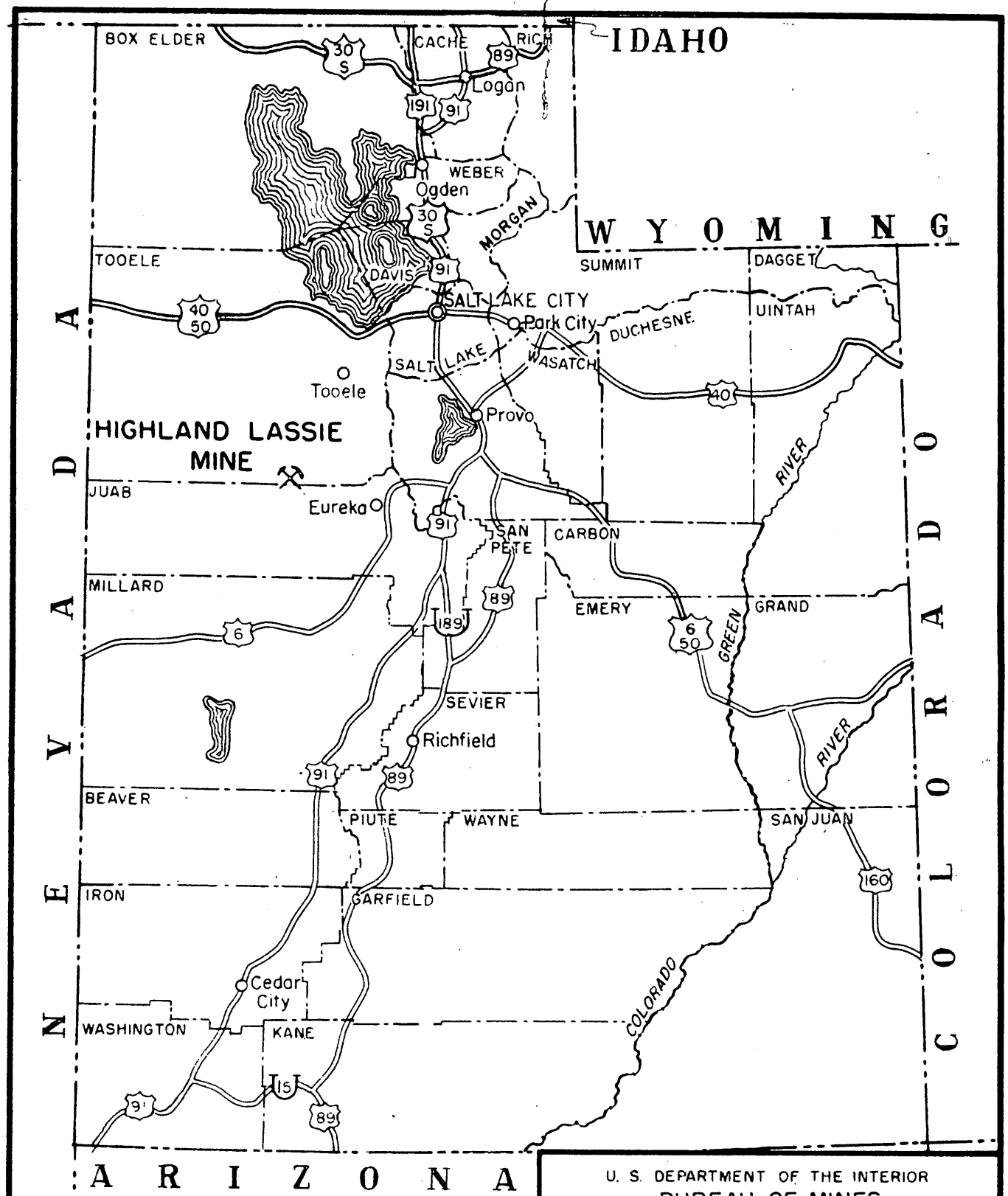
There are no mining, milling, or other facilities which could be used for the proposed exploratory project.

PROJECT PROPOSAL

Mr. Kramer, operating manager, states the Highland Lassie mine partnership is prepared to invest the equivalent of approximately $5,000 in labor and equipment with a 50 percent Government participation DMA loan. He proposes an adit site be located several hundred feet below the mine workings and a crosscut driven to intersect the downward extension of the bedded fissure.

CONCLUSIONS AND RECOMMENDATIONS

Ore deposits of the south Simpson Mountain area are small, irregular, and discontinuous. The quartzite host rock is not favorable to the formation of a persistent fissure system, nor is it susceptible to large-scale replacement by mineralizing solutions. Due to these adverse conditions, it is difficult to develop minable ore reserves. The low-angle dip of the Highland Lassie bedded fissure is not favorable to crosscut development at a lower horizon. It is improbable that the location of the downward extension of the fissure could be projected closely because of the faulting. Therefore, it is recommended that the loan application be denied.



0 50 100

SCALE OF MILES

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 Proj. No.

Location Map

HIGHLAND LASSIE MINE

TOOELE COUNTY, UTAH.

ENGINEER: R. L. MIDDLETON	DATE: SEPT. 17, 1951
TRACED: SEPT., 1951; A.P.T.S.	1500-1074-E
CHECKED:	

6-303
(March 1947)

cc: P. T. Allsman
S. R. Wilson

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Salt Lake City, Utah

No. 1

Report to Mr. R. L. Middleton 1531

Chemical Laboratory Report

Date received Sept. 18, 1951

Date reported Sept. 20, 1951

Serial No.	DESCRIPTION	Lot No.	Ag	Pb	Zn
	Highland Lassie Mine, L. E. Kramer and Sons, Erickson Mining District, Tooele County, Utah				
98323	30' East incline	1a	2.0	15.3	19.2

U. S. GOVERNMENT PRINTING OFFICE 16—33553-3

Signed H. E. Peterson

NOV 8 1951

Re: [illegible] A-1531

REGIONAL DIRECTOR'S OFFICE
REGION IV
NOV 15 1951
BUREAU OF MINES
DENVER, COLORADO

[illegible] Corporation
Box [illegible]
[illegible], Mich

Gentlemen:

The field geologist's report on your property, the Highland Bessie mine in Lincoln County, Utah, has been received.

Review of the report indicates that the deposits of the Highland Bessie are small, irregular, and discontinuous, and that there is little possibility of further exploration uncovering a sufficient tonnage of ore of minable size and grade to warrant Government participation. We regret, therefore, that your application must be denied.

We wish to thank you for bringing this property to our attention.

Very truly yours,

Tom Lyons

Tom Lyons, Director
Supply Division

100M
9-7-8

RJLyons:emp
G 10-31-51

Copies to: J. H. Bass, Jr. Region IV (2)
Lead-Zinc Br.
H. T. McKnight 4204 GSA
C. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

Mailed

J. H. East, Jr. Region IV

350

BUREAU OF MINES
OFFICE DIRECTOR'S
REGION IV
NOV 15 1951
DENVER, COLORADO

NOV 8 1951

Memorandum

Re: UA-1531
L. L. Kramer and Son
Tooele, Utah
Highland Lassie mine
Tooele County, Utah
Exploration loan, $10,000
Lead-zinc

To: Reports and Records Unit
Administrative Management Div.

From: Lead-Zinc Branch

Subject: Recommendation for denial of exploration loan

The properties involved have been examined and reported on by the field team.

The applicant requested a $10,000 exploration loan on a participating basis to drive a crosscut from the Highland Lassie No. 3 claim about 500 feet lower than the present workings to explore for the downward extension of the ore.

J. H.

The country rock is chloritic quartzite with interbedded micaceous shale and slate. The rocks are cut by bedding faults which are offset by later normal faults.

In the Highland Lassie mine mineralization occurs in a bedding fault which strikes N-S and dips 10° to 20° E. The vein varies from 2 to 36 inches in thickness and contains quartz, iron and manganese oxides, pyrite, chalcopyrite, galena, and carbonates of lead and zinc.

Workings of the Highland Lassie consist of three short inclined adits which were driven east from the outcrop down the dip of the mineralized bedding fault. About 70 ft. from the portal a normal fault striking N 35° E and dipping 45° W cuts off the mineralized zone. The amount of displacement could not be determined.

Reserves consist of a few tons of highly oxidized lead, zinc, and silver-bearing ore.

No record of production previous to 1935 is available. In 1935 and 1936 about 25 tons of good grade lead-silver ore was mined. In 1947 about 12½ tons of ore averaging 15.5% Pb, 12.1% Zn, and 2.09 oz. Ag were produced. No mining has been done since that time.

Mailed

Because of the cross faulting and the low dip of the bedding fault, the proposed exploration has little assurance of intersecting the mineralized zone. In addition, the deposits are small, irregular, and discontinuous and there are no indications of the possible existence of extensive replacement or fissure deposits of minable size and grade. The field team, therefore, recommends that the application be denied. The Lead-Zinc Branch concurs with this recommendation.

Attached hereto are:

3 Forms [illegible]-103 with attached exhibits.
3 " [illegible]-100
Letter of July 2 from applicant with additional information.
Letter of transmittal from Tom Lyon to field team.
1 Field team report.

G. E. Johnson, Acting Chief
Lead-Zinc Branch

Approved:

Director, Supply Division

EJLyons:emp
G 10-31-51
Copies to: J. H. East, Jr. Region IV (2)
Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

[illegible] Mar Centenhaus
Denver 2, Colorado

October 26, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: Final Report, DMA Docket 1531-L, L. E. Kramer and Sons applicant, Highland Lucania Lead-Zinc Mine, Tooele County, Utah

Enclosed herewith are the original and two copies of the report on the subject docket.

We concur with the evaluations and recommendations of the examining team that the exploration loan of $10,000 be denied.

The hearings is enclosed.

J. H. East, Jr.

A. H. Koschmann

Enclosure

WDM:oj
cc: DMA subject, chron.
AHKoschmann

Mining Division
Region IV

October 24, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1531X, L. E. Kramer and Sons applicant, Highland Lassie Lead-Zinc Mine, Pierce County, Wash

The application of the subject docket was for an exploration loan of $10,000.

The purpose of this loan was to explore the downward extension of exploited ore bodies by means of an adit and crosscut.

Ore reserves are limited to a few tons and the geologic probability for discovery of additional reserves are unfavorable.

The examining team recommends denial of the loan, with which we concur.

Paul T. Allemann

WDM:oj
cc: DMA subject, chron.
AHKoschmann

Mining Division
Region IV

August 27, 1951

Memorandum

To: S. R. Wilson

From: Chief, Mining Division, Region IV

Subject: DMA Docket 1531X, L. K. Kramer and Sons, Highland Lassie or Last Hope, Lead-Zinc Prospect, Erickson Mining District, Tooele County, Utah

Enclosed is additional information on the above application which should be placed with the brochure sent to you under date of August 2, 1951.

P. T. Allmann

Attachment

Copy to: Mc Millan
Koschmann (2)
Subj
Chron

Mining Division
Date Rec'd.
AUG 24 1951
BUREAU OF MINES
SOUTHWEST EXPERIMENT STATION
Box 4097, Denver, Colorado
UNIVERSITY STATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

TUCSON, ARIZONA

August 22, 1951

Memorandum

To : Paul T. Allsman, Denver, Colorado

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject: DMA Docket Material, Last Hope-Big Peak-Highland Lassie Claims, Utah

Attached is DMA Docket material, probably part of an exploration loan application, for a property in Utah. We found this material included with our Arizona DMA Docket 1273.

Walter R. Storms

Walter R. Storms

CC P. T. Allsman
DMA 1273
DF

FOR VICTORY
BUY UNITED STATES SAVINGS BONDS AND STAMPS

August 2, 1951

Memorandum

To: S. R. Wilson

(Through Chief, Mining Division)

Ralph Roberts (with brochure)

From: DMA Field Team, Region IV

Subject: DMA Docket 1531X, L. R. Kramer and Sons, Highland Lassie or Last Hope, Lead-Zinc Prospect, Erickson Mining District, Tooele County, Utah

Enclosed is the subject brochure with application for an exploration project at an estimated cost of $10,000.

The data submitted by the applicant was too meagre for a review by the Commodity Branch in Washington. The enclosed letter from the Coordinating Committee requests advice which will probably entail a geological examination.

F. T. Allmann, Alternate

A. M. Koschmann

Enclosure

bd

cc: DMA

July 23, 1951

Re: DMA 1531X
L.E. Kramer and Sons
Prospect in Erickson
Mining District
Tooele County, Utah
Lead, Zinc
Exploration loan

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

Subject docket is referred to field for advice. Original application was too meager, and additional information supplied in letter of July 2 doesn't add very much. This additional information suggests, however, that proposed exploration tunnel is planned on no better geologic evidence than lining it up with a mine on the opposite side of the mountain. The claim, Lost Hope No. 3, from which production was made in 1940 is described on p. 456 of U.S.G.S. Professional Paper 111, Ore Deposits of Utah, and the general outlook for the camp is discussed on the succeeding page. These discussions, and general geologic description of district on earlier pages, show that the structures and other geologic features controlling ore deposition in the district are small and localized, hence, the proposed plan to start a new tunnel down the hill, 1000 feet northwest of the productive tunnels, would appear to have little merit unless applicant has valid evidence not submitted in his application.

It will be left to the field team to ascertain what bearing the discussion of conditions at Ophir, as presented in letter of July 2, has on this application. There was nothing in the inquiry sent to the applicant that explains this reply.

Very truly yours,

Chairman
Coordinating Committee

for Bureau of Mines

for Geological Survey

ETMcKnight:emp G 7-23-51
Copies to: Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Reports & Records
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

July 23, 1951

Re: DMA-1531X

L. E. Kramer and Sons
Box 456
Tooele, Utah

Gentlemen:

Your application (Docket DMA-1531X) for an exploration loan under the provisions of the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration. Before final decision can be taken on your request it will be necessary to obtain additional information on your property. Your application, therefore, has been referred to Mr. J. H. East, Jr., Executive Officer, DMA Field Team, 224 New Customhouse, Denver 2, Colorado, with the request that the needed information be supplied to us.

Very truly yours,

Tom Lyon, Director
Supply Division

ETMcKnight:emp
G 7-23-51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
Directors r. files 4214 GSA
R. H. Mote
Reports & Records
Br. r. file 4214 GSA
Files

JUN 12 1951

June 21, 1951

Re: DMA-15312

L. E. Kramer and Sons
Box 456
Tooele, Utah

Gentlemen:

Your application, for an exploration loan on your mining property in the Erickson Mining District, has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration.

Before a contract can be written, it will be necessary for us to have answers to many of the questions listed on Form DF-103 that were omitted in your application. These questions are checked in the attached copy of the form. The answers can be given on sheets of paper that can be attached to the application that we already have. They should be submitted in quadruplicate.

It is particularly important that the answers to questions 21 and 23 be given in sufficient detail so that a specific amount of work can be described in the contract to be drawn up and specific items of expense can be listed in the contract. This is the only way in which we can get information to be enclosed as Exhibits A, B, C, D, and E, of the exploration project contract, a copy of which is enclosed for your reference.

Very truly yours,

Otto Herres

Otto Herres, Chief
Lead-Zinc Branch

ETMcKnight:emp
G G 6/21/51

Copies to: J. H. East, Jr.
Enclosures Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files