Mining Division
Region IV

July 16, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration - Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1897, (Lead-Zinc) Chautauquan Mine, Lake County, Colorado

Enclosed are four copies of the final report on DMA-1897.

The applicant requested cancellation as he was unable to obtain landlords subordination agreements.

W. H. King
W. H. King

Donald R. Macharen
for
A. H. Koschmann

Enclosures

HMC:oc

cc: Subject
Chron.
Koschmann (2)

224 New Customhouse
Denver 2, Colorado

June 30, 1952

Memorandum

To: C. O. Mittendorf

From: Executive Officer, Field Team, Region IV

Subject: DMA Docket 1897, Emmett Irwin & Company

Enclosed is a copy of a letter from Emmett Irwin in which he states that the landowners refuse to sign the Landlord's Subordination Agreement forms. When we received this letter, we sent Mr. Irwin copies of Form MF-203, Owner's Consent to Lien, and have just been informed that the owners refuse to sign this form. Accordingly, we have cancelled Mr. Irwin's application for exploration assistance.

W. H. King

W. H. King

JFS:oc J.F.S.

cc: WMTraver
Subject
Chron.
Koschmann (2)

EMMETT IRWIN
TREASURER OF LAKE COUNTY
P. O. BOX 276
LEADVILLE, COLORADO

May 17, 1952

REGIONAL DIRECTOR'S
OFFICE
REGION IV
MAY 19 1952
BUREAU OF MINES
DENVER, COLORADO

J. H. East, Director
U.S. Bureau of Mines
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

I am enclosing herewith Landlord's Subordination Agreement forms which the landowners refused to comply with in our request for loan.

I wish to thank you for your kind consideration and the very cooperative and considerate attention of M. H. Salisbury in our request for loan.

In view of the failure of the land owners to sign the agreement please cancel our request for loan.

Yours very truly

Emmett Irwin

Emmett Irwin and Company
Chautauquan and Yalu lease
113 West 9th Street
Leadville, Colorado

Copy of this letter forwarded to C. O. Mittendorf 6-30-52. O.C.

M.N. TRAVER JR. CHIEF COLO. BRANCH MINING DIV. 12 MAY 1952
BLDG. 20 DENVER FEDERAL CENTER
M. H. SALSBURY BOX 602 LEADVILLE COLO.

YALU & CHAUTAUQUAN LODES
DMA 1897
EMMET IRWIN & CO LEADVILLE COLO

MR. IRWIN WAS CONTACTED THIS MORNING AND STATES THAT HE IS UNABLE TO OBTAIN THE NECESSARY SUB-ORDINATION AGREEMENTS AND WISHES TO CANCEL THE LOAN APPLICATION.

HE PROMISED TO WRITE MR. EAST TO THAT EFFECT TODAY.

M. H. SALSBURY

W.H.K.

Mining Division
Date Rec'd.
MAY 14 1952
BUREAU OF MINES
Denver, Colorado

W. N. TRAVER JR. CHIEF COLO. BRANCH MINING DIV. 12 MAY 1952
BLDG. 20 DENVER FEDERAL CENTER DENVER COLO
M. H. SALSBURY BOX 602 LEADVILLE COLO.

RECENT EQUIPMENT PURCHASES AT HAYDEN MINE
CADWELL MINING CO DMA X 627 CONTRACT I-DMA-E34

THE TRUCK PURCHASED RECENTLY IS A 1936 FORD HALF TON TRUCK WITH STAKE BODY. TRUCK IS USABLE BUT IN POOR CONDITION.

THE BLOWER IS A SMALL 100 BLOWER DRIVEN BY A 5 H.P LOUIS ALLIS INDUCTION MOTOR SERIAL # 308981 BU. THE NAME PLATE ON THE BLOWER IS MISSING.

M. H. SALSBURY

WAR

Mining Division
Date Rec'd.
MAY 1 - 1952
BUREAU OF MINES
Denver, Colorado

WM. N. TRAVER JR. CHIEF MINING DIVISION COLO. BRANCH 12 MAY 1952
BLDG. 20 DENVER FEDERAL CENTER
M. H. SALSBURY BOX 602 LEADVILLE COLO

D.M.A. CONTRACT FOR DOCKET 1191
JOHN L. & FRED A. JOYCE
NEWTON & FLAGSTAFF CLAIMS
LEADVILLE COLO

JOYCE BROTHERS RECEIVED THEIR CONTRACT LAST FRIDAY. FRED JOYCE TOLD ME THIS MORNING THAT HE EXPECTED TO BE STARTED BY THE FIRST OF JUNE. A CHECK OF SNOW CONDITIONS THIS MORNING SHOWS A LOT LEFT ON THE HILLSIDE AROUND THE FLAGSTAFF SHAFT BUT 2 MORE WEEKS SHOULD SEE IT PRETTY WELL GONE.

M. H. SALSBURY

WAK

Mining Division
Date Rec'd.
MAY 1 1952
BUREAU OF MINES
Denver, Colorado

DMA Form 3b.

DEFENSE MINERALS ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMA Docket No. 1897

Change: From		To	
I 1	☐	I 1	☐
I 2	☐	I 2	☐
I 3	☐	I 3	☒
I 4	☐	I 4	☐
I 5	☐	I 5	☐
I 6	☐	I 6	☐
III 1	☐	III 1	☒
III 2	☐	III 2	☐
III 3	☐	III 3	☐
III 4	☐	III 4	☐

Add:

II 7 $7,500

II 8 $6,200

II 8a % 50

Initials of person preparing sheet H.D.H.

Date sheet prepared 11/6/51

1897

Exhibit A

Exploration Project

The proposed work consists of rehabilitating the incline winze and sinking it approximately 200 feet

The estimated working time is 4 months

The following costs are estimated:

Labor and Supervision	4500.00
Rental of Equipment	640.00
Supplies	1060.00
Total	6200.00

Fixtures and Improvements

None

Operating Equipment

To be rented:

Hoist and compressor, $80 per month	320.00
Air hoist for wings $20 per month	80.00
Drill and equipment $60 " "	240.00

Total estimated rental $640.00

To be purchased:

None

To be furnished by operator:

None

Labor and Supervision

Three miners @ $15 per day	$4200.00
Compensation and insurance	$300.00
	$4500.00

Supplies

Explosives	325.00
Electric power	200.00
12-pound rail, 225 feet @	124.50
2-inch pipe 225 feet @	99.00
Drill steel, bits	50.00
Fuel, repairs, small tools, incidentals	161.50
Timber	100.00
Total	1060.00

MF-200
(June 1951)

Docket No. DMA 1897
Commodity Lead-Zinc

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this ..... day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Emmett Irwin and Company

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of ....., County of ..... described as follows: [3] .....

with respect to which the Operator represents and undertakes: [4]

(~~a) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached~~): .....

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] Lead-Zinc; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 162 days from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Any additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute currently its agreed pro rata share, are listed in Exhibit "A" attached hereto. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro rata share.

6. *Operating equipment.* Any operating equipment to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or depreciation, as the case may be, is listed under appropriate headings in Exhibit "A" attached hereto. As to equipment purchased for the project, the Government will contribute its agreed pro rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* An itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project is set forth in Exhibit "A" attached hereto.

9. *Rehabilitation and repairs.* A statement of the cost of any necessary rehabilitation or repairs to put existing facilities, buildings, installations, and fixtures into useful and operable condition and which are to be allowed as costs of the project is included in Exhibit "A."

10. *Allowable costs of the project.* The costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, analytical work, accounting, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in this contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, taxes, or any other indirect costs not expressly allowed by these provisions, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

12. *Progress reports.* The Operator shall provide the Government with monthly reports of work performed under the contract upon forms to be provided by the Government. Each monthly progress report shall bear the certification of the Operator and shall constitute the Operator's invoice of costs incurred on the project during the period covered by the report.

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 50 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $ 3100, which is 50 percent of the agreed estimated total cost of this project, $ 6200.

14. *Final reports by Operator.* Upon completion of the project or termination of this contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

15. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

16. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

17. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

(Operator)

By ----------

By ----------

U. S. GOVERNMENT PRINTING OFFICE 16—64066-2

REGIONAL DIRECTOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

~~25 NEW CUSTOMHOUSE~~
~~DENVER, COLORADO~~

Mining Division
Date Rec'd.

JUN 27 1952

BUREAU OF MINES
Denver, Colorado

LEADVILLE DRAINAGE TUNNEL
JUNE 26, 1952

MEMORANDUM

TO: W. H. KING

FROM: M. H. SALSBURY

SUBJECT: CANCELLATION OF CONTRACT ON YALU & CHAUTAUQUAN LODES
DMA 1897 EMMET IRWIN & CO.

MR. IRWIN NOTIFIED ME YESTERDAY THAT HE WAS UNABLE TO GET THE SUBORDINATION AGREEMENTS FOR THE ABOVE CONTRACT, EITHER OLD OR NEW FORMS, SIGNED AND WAS GOING TO WRITE YOU TO THAT EFFECT.

M. H. Salsbury
M. H. SALSBURY

CC: W. M. TRAVER JR
CC: FILE

6/27/52

To: ~~King~~ W.H.K.

For: Alaus J.T.S.

Memo from Salsbury re: cancellation of contract, DMA ~~1896~~ 1897, Emmet Irwin & Co.

WMT/dd

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
January 15, 1952

Memorandum

To: Acting Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division

Subject: Landlord Subordination Agreements, Dockets DMA 1191X and DMA 1897

Please find enclosed a copy of Salsbury's memorandum on the above subject, dated January 12, 1952.

I believe his queries should be answered at the Region level and the copy is forwarded to you for that purpose.

W. M. Traver, Jr.

enclosure

cc WHKing
1191X
1897
DMA Chron.

January 12, 1952

Memorandum

To: W. M. Traver, Jr.
Chief, Colo. Branch, Mining Division

From: M. H. Salsbury

Subject: DMA Landlord Subordination Agreements

In following two DMEA applications in Leadville, DMA Docket 1191X, Newton & Flagstaff, and DMA Docket 1897, Yalu & Chatauquan, I find that the applicants are having difficulty in getting the owners to sign subordination agreements.

While I assume this is a matter for the applicant to take care of, I am wondering whether a DMA office ever takes a hand if requested.

Apparently the sticking point is the 10 year lien on any project which might encounter ore which, for some reason, the applicant (a lessee) does not wish to mine but which might be declared an ore discovery by the Government and thus constitute an encumbrance on the owner if he wishes to deal with another lessee.

If a helping hand by this office is wanted, I would be glad to cooperate.

Very truly yours,

/s/ M. H. Salsbury

M. H. Salsbury

C
O
P
Y

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

224 New Customhouse
Denver 2, Colorado

January 11, 1952

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 1897, Final Report, Emmett Irwin & Co.; applicant, Chautauquan Mine (Lead-Zinc), California Mining District, Lake County, Colorado.

The subject docket report has been approved by us and an exploration loan of $6,200 is being processed.

Your copies of the report and the brochure are being held here until the execution of the exploration project docket

W. H. King
W. H. King for
J. H. East, Jr.

A. H. Koschmann
A. H. Koschmann

cc: WMTraver w/copy of final report
Mining Div. w/copy of final report
AHKoschmann w/copy of final report
DMA Final Report

WMT/dd

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
December 26, 1951

Memorandum

To: M. H. Salsbury
Leadville Tunnel Project
Box 602, Leadville, Colorado

From: Chief, Colorado Branch, Mining Division

Subject: DMA 1897, Emmett Irwin and Company contract.

Please find enclosed a copy of the memorandum dated December 18, 1951, from the chief of the Mining Division, Region IV, concerning requirements for completion of the above contract.

Will you please contact Mr. Irwin and obtain a copy of the leases, clarification of signatures on the lease, and, after these items are cleared, obtain the subordination agreements required.

W. M. Traver, Jr.

enclosures

cc PTAllsman
DMA 1897
DMA Chron.

WMT/dd

W. H. K.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMA files.

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
December 26, 1951

Mining Division
Date Rec'd.
DEC 27 1951
BUREAU OF MINES
Denver, Colorado

Memorandum

To: M. H. Salsbury
Leadville Tunnel Project
Box 602, Leadville, Colorado

From: Chief, Colorado Branch, Mining Division

Subject: DMA 1897, Emmett Irwin and Company contract.

Please find enclosed a copy of the memorandum dated December 18, 1951, from the chief of the Mining Division, Region IV, concerning requirements for completion of the above contract.

Will you please contact Mr. Irwin and obtain a copy of the leases, clarification of signatures on the lease, and, after these items are cleared, obtain the subordination agreements required.

W. M. Traver, Jr.

enclosures

cc PTAllsman
DMA 1897
DMA Chron.

Mining Division
Region IV

December 18, 1951

Memorandum

To: W. M. Traver, Jr.

From: Chief, Mining Division, Region IV

Subject: Docket 1897, Emmett Irwin & Company Contract

The above contract cannot be completed until we receive a copy of the new lease on the Yalu, Virginius and Jessie Clark Lodes. We will also require a copy of the lease from the Resurrection Mining Company to Fred H. Rice and Charles A. Hopkins or the New Monarch Lease, whichever is correct.

We have a copy of an "Addition to Mining Sublease" dated November 1, 1949, between the New Monarch Lease and Emmett Irwin and Company. This addition is signed by Fred H. Rice and Charles A. Hopkins, grantors, and Emmett Irwin and three other individuals, grantees. The signatures of the grantors and grantees are not the same as the parties mentioned in paragraph one of the sublease.

We also have a copy of a lease on the Chautauquan Mining Claim which is signed by Emmett Irwin, lessee. We will require Landlord's Subordination Agreements from the New Monarch Mining Company, the New Monarch Lease, and the U. G. Crispell estate, the owners of the Chautauquan Lode. The application is signed by Emmett Irwin and Company, Emmett Irwin, Manager. The Chautauquan Lode Lease is signed by Emmett Irwin, and the addition to the mining sublease on the Yalu is signed by Emmett Irwin and three other individuals. We need to know if the applicant is operating as an individual, a corporation, or a partnership, and the signatures should be identical on all the leases or the leases should be endorsed to the applicant.

We are enclosing 18 copies of Form MF-202, Landlord's Subordination Agreement. When the above information is received, we can complete processing of this contract.

W. H. K.

P. T. Allmann

Enclosures
JFS:ld
cc: DMA docket, chron.
Koschmann

Mining Division
Region IV

November 6, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1677, Merritt Irwin and Co., applicant; Chautauqua Mine (Lead-Zinc), California Mining District, Lake County, Colorado

The application of the subject docket was for an exploration loan of $7,500.

The proposed exploration consisted of the following three projects: (1) To clean out and enlarge the incline winze and continue it downward 200 feet toward a junction with the Minnie Lemma vein, (2) to drive a cross-cut eastward to explore the east side of the Minnie Lemma Mine and (3) in the event that the inclined winze develops sufficient ore, to drive a lateral from the bottom of the shaft through which to mine the ore body.

The future productivity of the mine is dependent on development below the ground level, with an expected decrease in the degree of oxidation.

The field team proposes that only Project 1 should be considered at an estimated cost of $6,500.

They recommended approval of this loan, with which we concur.

A contract will be prepared subject to extension of the present leases.

Paul T. Allmann

WDM:oj
cc: DMA Subject, Chron.
AHKoschmann

[illegible] New Customhouse
Denver 2, Colorado

November 6, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 1897, Final Report, Kenneth Irwin & Co.; Applicant, Chemungum Mine (lead-zinc), California Mining District, Lake County, Colorado

The subject docket report has been approved by us and an exploration loan of $6,200 is being processed.

Your copies of the report and the brochure are being held here until the conclusion of the exploration project contract.

J. H. East, Jr.

A. H. Koschmann

WDM:oj
cc: DMA Subject and chron.
AHKoschmann
cc: WMTraver w/copy of final report
Mining Div. wcopy of final report
Koschmann w/copy of final report
DMA Final Report

Mining Division
Region IV

October 9, 1951

Memorandum

To: J. H. East, Jr., Executive Officer, DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: DMA Docket 1879, Manganese & Minerals, Garfield County, Utah

A limited amount of bulldozing followed by a limited amount of diamond drilling if bulldozing is successful will be recommended.

From the telephone description it appears the deposits are low grade, small and widely scattered.

Since both bulldozing and drilling can be contracted, no significant amount of equipment will be needed.

P. T. Allmann

PTA:lh

cc: DMA subject, chron.
Koenhemann

dd

Building 20, Denver Federal Center

M. H. Salsbury

Sept. 10, 1951

W. M. Traver, Jr.

DMA Docket 1897, Emmett Irwin & Company, Chautauquan No. 12882 and Yalu No. 9487 Claims, California Mining District, Lake County, Colorado.

We are sending you today via Mr. W. H. King the brochure on the above docket for your inspection.

pse
WMT
J.F.S.

W. M. Traver, Jr.

enclosure

cc PTAllsman
DMA 1897
DMA Chron.

Mining Division
Date Rec'd.
SEP 11 1951
BUREAU OF MINES
Denver, Colorado

August 31, 1951

Memorandum

To: W. M. Traver, Jr. (with brochure)

(Through Chief, Mining Division, Region IV)

A. H. Koschmann

From: DMA Field Team, Region IV

Subject: DMA Docket 1597, Barnett Irwin & Company, Chautauqua No. 12882 and Twin No. 9487 Claims, California Mining District, Lake County, Colorado (Lead-Zinc)

Enclosed is the brochure on the above application for an exploration loan estimated to cost $7,500.

A field examination is required. If the report is favorable, please obtain sufficient information to complete a contract.

J. H. East, Jr.

A. H. Koschmann

Enclosure

1d

cc: DMA
Koschmann

Form MF-103
(April 1951)

U. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. dma-1897

Date received 7/30/51

Participation

Defense Minerals Administration

JUL 30 1951
LAWSON F. STROBEL
Executive Secretary

Emmett Irwin and Company
Chautauquan #12882
Yalu #9487
113 West 9th Street
Leadville, Colorado

Name and address of applicant

Date June 26, 1951

FILL IN THIS BLOCK

Date of application June 26, 1951

Estimated cost $7,500.00

Mineral or metal Lead-zinc, gold-silver

Percentage of Government participation 50%

Location of mine Evans Gulch
California Mining District
Lake County, Colorado

Date of filing MF-100

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Partnership

*2. If a partnership, state names and addresses of partners.

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.

*5. Are you the owner or the lessee of the property? Lessee

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None

7. If lessee, attach a copy of the lease and state if it is in good standing. Lease in good standing

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. CHAUTAUQUAN #12882, YALU #9487

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. SAME

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. NONE

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. LEADVILLE - 3 MI TO SMELTER - 2 MI TO MILL - ~~#0~~ D.&R.G.R.R. 2 MI

*13. State source and quantity of water available for operations and its sufficiency at all seasons. EVANS (SOUTH) GULCH State amount of power to be used, rate per hour or other cost, and source. ELECTRIC POWER $15.60/MO. MIN.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. ENGINE ROOM, ELEC. HOIST, COMPRESSOR, PIPE, RAILS, HEAD FRAME, BINS.

15. State in detail how the ore could be shipped and how and where milled. TO A.S.&R.CO. BY TRUCK. - TO MILL - SAME

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations. MINE STOPPED OPERATION DUE TO POOR MARKET

(*b*) State briefly the known history and production of adjoining and neighboring properties. - NOTE.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information: MINE NOW SHUT DOWN

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? LEAD-ZINC

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. 8 MONTHS

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each. 1, ENGINEER 2 MINERS

(*b*) Supervisors, by numbers and positions, with salaries of each. NONE

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings. NONE

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings. NONE

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each. EQUIPMENT RENTED $90.00/MONTH

(*f*) Cost of rental for equipment which the operator proposes to rent. $90.00/MONTH

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work. $25.00/MONTH

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each. $50.00/MO. EXPLOSIVES & ETC

(*i*) Cost of power, water, utilities, and any other items not provided for above. NONE

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Emmett Irwin Company (Name of company) By Emmett Irwin (Signature of authorized official)

June 29, 1951 (Date) Manager (Title)

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.

*Same as footnote on page 1.

See attached sheet

The Applicant

1. Is applicant an individual, partnership, or corporation?

   a. partnership

2, If a partnership, state name and addresses of partners?

   a. Emmett Irwin, 113 West 9th St.,Leadville, Colorado
   William Schuck, Delaware Hotel, Leadville, Colorado
   Austin Schuck, 135 East 8th St., Leadville, Colorado
   Clarence Motzer, 143 West 7th St., Leadville, Colorado
   Harry Yukon, 405 Walnut Street, Kansas City, Missouri

3. If corporation, and etc.

4. Describe the mining and general business experience of (a) applicant and (b) the person or persons who will manage the project.

   a. Emmett Irwin, 2 years Mechanical Engineering, University of Colorado, 7 years mining experience tunnel, shaft, and ore stoping. Deputy County Assessor 8, years. County Treasurer 5 years.

   William Schuck, 10 years mining experience, 10 years manager Delaware Hotel.

   Clarence Motzer, 2 years college, 10 years mining experience, Assayer and Chemist 7 years.

5. Are you the owner or lessee of the property?

   a. Lessee:

   10 year lease on Chautauquan #12882
   Lease expires November 1, 1951 on Yalu 9487
   New lease to issue on that date.

6. If owner, state what claims,liens or encumbrances if any are against the property?

   a. None

7. If lessee, attach copy of lease and state if in good standing?

   a. see lease attached hereto. Lease in good standing

8. Furnish current financial statement, showing assets and liabilities and a profit and loss statement.

   a. See statement attached hereto.

9. How much money is applicant prepared to invest in proposed project?

   a. $3,750.00 in cash and labor.

10. Chautauquan # 12882 and Yalu #9487 lode mining claims, California Mining District, Lake County, Colorado

11. Yalu #9487, vertical limits: from horizontal plane located at elevation 11,043.325 to horizontal plane located at an elevation of 11,072.325. Elevations based on Resurrection Company and Platt and Kleff Surveys. North of coordinate 15900 North, South of Coordinate 16200, North West of coordinate 17000 West to the New Monarch Mining Company West property lines said area being part of Yalu, U. S. Survey 9489 AM, Yalu #2, U.S. Survey No. 10382, Virginius, U.S. Survey No. 511 and Jessie Clark, U. S. Survey No. 949 (Description from mining sublease; however, proposed work will be only on the Yalu #9487 and Chautauquan #12882).

12. Same

13. Water available at all seasons, rental @ $25.00 per month from Leadville Water Company watershed.

14. The mine is in excellent condition the shaft has been repaired from surface down to the two hundred foot level. There is a good head-frame, engine-room, electric hoist and two-drill electric compressor installed and in operating condition. Three mine cars, rails and air line to two headings. New thirty tons capacity ore bins on surface. Good road into the mine. Operations can start in one day.

15. The ore can be shipped by truck on good county roads to the Resurrection Mill, three and one-half miles and to the A. S. and R. Co. Smelter, four and one-half miles. A fifty ton lot can be handled in one day.

16. From Emmons Report, Professional Paper, 148: "There has been little opportunity for observation of formations on the west side of the vein (Winnie Luema vein). It is known ath the formation cut by the Blue Ribbon and Chautauquan shafts are Cambrian quartzite and White limestone dipping eastward, but there has been no opportunity to examine the two properties in detail. On theeast side of the vein the rocks in the Winnie mine have a much steeper dip than on the west side, apparently having been dragged upward in the fault movement". "The vein ranges 4 to 40 ft. in thickness,consists of gouge material, resembling decomposed porphry criss-crossed by small veins and bordered by larger veins of high grade ore." "From table" Ores average .25 Au, 2.7 to 9.4 Ag, .8 to 4.6 Pb. 5.0 to21.9 zinc." Local mining engineers and geologists have examined the mine and think we have a very good prospect in developement along the peerless shales. See map sketch attached.

17. The mine is not now in production, but two lots shipped gave the following results:

	Au.	Ag.	Pb.	Cu.	Insol.	Fe	Zn.	Sulphur
Lot 1.	0.04	2.75	11.05	0.15	33.3	17.85	8.4	7.55
Lot 2.	0.04	2.25	8.75	0.0	38.6	17.2	6.1	5.15

A blanket vein of sulphide assays:

0.14	3.8	12.4		29.4	23.9	4.7	1.1
0.08	3.1	11.1				17.4	
0.03	3.9	19.3				13.7	

We have not been able to ship this ore, although the vein is three feet wide, because the non-sulphides are too high to ship to the mill and the zinc penalty is too great to ship to the Smelter. This is the ore body we wish to follow down in the peerless shales in order to get a straight sulphide product.

18. If milling could reduce the ores of non-sulphides, we have 2000 tons of ore "in sight"

19. The Chautauquan #12882 shipped high grade lead zinc ore during World War I. Neither the Chautauquan or the Yalu has operated to any extent since 1926 when the metal market was very low. Argall's report shows large bodies and pillars of ore left that can be mined at a profit under the present market.

20. Principally lead-zinc.

21. As shown on the enclosed sketch, we estimate 10 months would complete our three phases of prospecting.

(Over)

22. Answered by foregoing questions.

23. Three men at $250.00 each, 8 months $6,000.00
Hoist and compressor rent 8 months 900.00
Powder, fuse, caps carbide, rails and pipe 600.00
$7,500.00

100 ft. of work per month.

24. Upon receipt of granted loan application, we will start to work immediately, we have men who will start to work and barring unforseen calamities, the work will be completed and proven in 8months and not more than 10 months.

Respectfully submitted

Emmett Dawson

dma-1897

Emmett Irwin and Company
Chautauquan Lease.

In the past twelve months operation $1,971. 50 has been paid for mining expenses except labor.

Labor furnished by Patterson and Company and Maki Brothers on a "Split Check" basis.

Mining operation consists of a shaft and drifts, air line to two headings in mine. Surface plant ready for operation two drill compressor, electric hoist, electric power into the mine.

Machinery rented from Custom Machine Works, Leadville, Colorado at $90.00 per month.

Work operations before closing was in the Peerless Shales where a blanket deposit of lead-zinc ore was found three feet wide and opened for eighty feet. This ore was too high in non-sulphides to ship to the local mill, and zinc too high to ship to the local smelter, due to zinc penalty.

Under the loan, we wish to follow the bedding of the Peerless Shales down to a lower horizon in order to get away from the non-sulphide containing ore.

The mine is open for inspection at any time, we have kept the electric power turned on and all outstanding bills are paid except a small bill at the Western Hardware Store that will be paid in full this month.

Each partner in the enterprise has assets in excess of $5,000.00 each and are capable of meeting monthly expenses.

If ore is encountered in the incline in the Peerless Shale bedding of commercial value, we have included in our request for loan, repair of the lower portion (100ft.) of the shaft and a drift from the bottom of the shaft to the ore contact.

Yours very truly

Emmett Irwin

ADDITION TO MINING SUBLEASE

This Addition to a certain sublease dated November 1, 1949 by and between the New Monarch Lease, whose address is Leadville, Colorado, hereinafter called the Grantor and Emmett Irwin and Company, whose address is 113 West 9th Street, Leadville, Colorado, hereinafter called the Grantee.

That Whereas, the Grantor and Grantee have heretofore and under date of November 1, 1949 entered into a Mining Sublease wherein the Grantor demised certain premises under certain conditions and hereby further demises, subject to those certain conditions, the following premises, to-wit:

North of coordinate 15900 North
South of coordiante 16200 North
West of coordiante 17000 East and
extending west to New Monarch Mining
Company west property lines. Said
area being part of the Yalu, U. S.
Survey No. 9489 AM, Yalu #2, U. S.
Survey No. 10382, Virginius, U. S.
Survey No. 511 and Jessie Clark, U. S.
Survey No.549, lode mining claims.
Vertical limits: From a horizontal
plane located at an elevation 11,043.25
feet to a horizontal plane located at
an elevation of 11,072.325 feet. Said
elevations based on Platt and Kleff and
Resurrection Mining Company Surveys.
Coordinates based on Resurrection Mining
Company Surveys.

That Whereas, at the expiration of the original term of sublease November 1, 1951 and in consideration of the Grantor being awarded an extension of his certain lease dated March 1, 1937 and in effect after November 1, 1951; then, the Grantee may at his option if this lease shall be in effect and the Grantee shall not be in default and shall be diligently complying with all the provisions required by that certain sublease dated November 1, 1949, the Grantee shall be awarded the same period of sublease as awarded the Grantor by the original lessor (New Monarch Mining Company) its successors or assigns, subject to any amendments, modifications or additions which the Grantor may be subject.

In Witness Whereof the parties hereto have executed this addition in triplicate and made it a part thereto of that certain sublease dated November 1, 1949, this 30th day of April, A. D. 1950

GRANTORS	GRANTEES
Fred H Rice	Emmett Irwin
Charles A. Hopkins	William C. Schuck
	Charles Schuck
	Clarence C. Motzer

No. 90-A. MINING LEASE (Long Form).—The Bradford-Robinson Ptg. Co., Mfrs. of Robinson's Legal Blanks, 1824 Stout St., Denver.

This Agreement of Lease, Made and entered into this 20th day of September, A. D. 19 48, by and between U. Grant Crispell, Estate, c/o Mrs. U. G. Crispell, 1036 North Fayette Street, Jacksonville, Illinois of Jacksonville, Illinois, hereinafter called the lessor, and Emmett Irwin, 113 West 9th Street Leadville, Colorado, of Lake County, Colorado hereinafter called lessee;

WITNESSETH, That the said lessor for and in consideration of the rents, royalties, covenants and agreements hereinafter expressed to be paid, kept and performed by the said lessee, has leased, let and demised and by these presents does lease, let and demise unto the said lessee the following described mining property and premises, situate in the California Mining District, Lake County, State of Colorado, to-wit:

The Chataquan Lode Mining Claim, United States Survey Number 12882, located in Section 21, Township 9 South of Range 79 West of the 6th P. M. containing 1.474 acres of land, more or less. All Dumps thereon.

TO HAVE AND TO HOLD the above described premises for the purpose of mining, from the 20th day of September, A. D. 19 48, to the 20th day of September, A. D. 19 58, unless sooner forfeited or terminated through the violation of any of the covenants and conditions herein contained, with no power to assign this lease or any part thereof or to sublet the whole or any part of said leased premises without the written consent of the said lessor first had and obtained.

The said lessee in consideration of the premises has covenanted, contracted and agreed and by these presents does covenant, contract and agree to and with the said lessor, her executors, administrators and assigns:

(1) To enter upon said leased premises and to work the same in mine fashion in manner necessary to good and economical mining, so as to take out the greatest amount of ore possible, with due regard to the development and preservation of said mine or mining premises, as a workable mining property, and to the special covenants herein contained.

(2) To work and mine said premises as aforesaid, steadily and continuously during the period of this lease and in doing said work to perform at least 20 shifts of mining labor per month each and every month during the life of this lease.

(3) To repair all old timbering wherever it may become necessary, and to well and sufficiently timber said mine and mining premises at all points where proper and necessary in accordance with good and safe mining; continuing the timbering in the working shafts now upon said premises with timber of the same dimensions as heretofore used, unless it becomes necessary for safety to use larger timber, in which event timber of sufficient size for safety and permanent mining shall be used.

(4) To allow the lessor.....or.....her.....agent from time to time to enter upon and descend into all parts of said leased premises, for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination.

(5) To occupy and hold as the property of the lessor.....all cross and parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased ground by the said lessee.....or any person or persons under or in privity with.....lessor....., with privilege to said lessee.....to work and mine the same as part and parcel of said premises.

(6) To keep at all times the drifts, shafts, tunnels and other workings thoroughly drained and clear of loose rock and rubbish, unless prevented by extraordinary mining casualty.

(7) To stow no waste underground except with the consent and under the direction of the lessor.....

(8) To do no underhand stoping below the bottom of any main working level or winze and to do no stoping or breaking of ore rock within.....five.....feet of any working shaft.

(9) Not to adulterate or mix any ores broken or mined without the consent of the lessor.....; it being understood that all ores mined which are too low grade for present shipment shall remain the property of and be subject to the control and disposition of the lessor.....

(10) To make all working shafts at least four (4) feet by eight (8) feet in the clear; all drifts and tunnels at least three and one-half (3½) feet by six and one-half (6½) feet in the clear, and all winzes and raises at least three and one-half (3½) feet by seven (7) feet in the clear.

(11) It is expressly understood and agreed that the lessor.....reserve.....the property and right of property in and to all ores extracted from said premises during the period of this lease, and the said lessee.....covenant.....and agree.....to pay and allow the lessor.....as royalty upon all ores mined, shipped or sold from said leased premises in any manner during the life of this lease, as follows, to-wit:.....

Royalty checks to be paid direct to Mrs. U. G. Crispell

DUMP ORE

All Dump ore Flat 7% Royalty
7% of all Metal Reserve Premiums on Dump Ore.

Ore From Mine As Follows;

Ore	Value	$10.00	and	up	to	and	including	$15.00	10%
"	"	15.00	"	"	"	"	"	20.00	15%
"	"	20.00	"	"	"	"	"	40.00	20%
"	"	40.00	"	"	"	"	"	50.00	25%
"	"	50.00	"	"	"	"	"	75.00	30%
All ores 75.00 and over									35%

Flat 10% Royalty on all Metal Reserve Premiums on Ore taken from mine.

ORE FROM ADJOINING PROPERTY

An overriding royalty of 2% per ton to be paid to the lessor on all ore hauled through the Chataquan Shaft from adjoining property.

All settlements to be made upon the smelter, mill or sampler net assay values, deducting therefrom only the actual cost of transportation and treatment....and ore watching fees.....

To Post Notice in Conspicuous
Places on or about the Property,
That the Lessor, Mrs. U. G. Crispell
is not responsible of or for any
indebtedness incurred by the Lessee
working in or about the mine.

MINING LEASE

FROM

.....

TO

.....

STATE OF.....
County of..... } ss.

I hereby certify that this instrument was filed for record in my office, at..... o'clock.....M., on the.....day of ....., A. D. 19....., and is duly recorded in book....., page.....

.....
Recorder.

By .....
Deputy.

Fees, $.....

6-36 THE BRADFORD-ROBINSON PTG. CO., DENVER

(12) The lessee.....shall and hereby do.....assume all responsibility in case of accident to..... or any of.....employees in or about said property.

(13) All taxes assessed against said demised premises for ores mined and shipped under this lease shall be paid by the less..ee.....

(14) All bills and expenses incurred by the lessee.....or those in privity with.....lessee.....shall be promptly paid by the lessee....., and by such prompt payment said lessee.....shall prevent the filing of any and all liens of miners, mechanics or material men, against said demised premises; and, if by reason of the failure of said lessee.....to pay such bills or expenses, any lien or liens shall be filed against said premises the said lessor.....may forthwith pay off and discharge the same, and the said lessee.....hold..... bound to pay to said lessor.....all sums so advanced or paid to clear said premises from liens which my be filed as aforesaid, and the said lessor.....may also at.....her.....election declare a forfeiture of this lease.

(15) Said lessee.....further covenant.....that no person not in privity with the parties hereto shall be allowed to hold possession of said premises or any part thereof under any pretext whatever.

(16) Further, that.....lessee...will deliver to said lessor.....quiet and peaceable possession of said demised premises in good order and condition with all drifts, tunnels and other passages thoroughly drained and cleared of loose rock and rubbish and said premises ready for immediate continued working, without demand or further notice, on the.....20th.....day of.....September....., A. D. 19..58..., at noon, or at any time previous thereto, upon demand for forfeiture, and it is mutually understood that all machinery and tools which may be placed upon said premises by the said lessee.....may be removed therefrom within ten days after the termination of this lease; provided, however, that no such tools or machinery shall be so removed while the said lessee.....may be in any manner indebted to the said lessor..... under any obligation incurred under this lease.

(17) Upon the violation of any covenant or condition herein contained, this lease shall, at the option of said lessor....., expire and terminate, and the said premises with the appurtenances and all buildings and other improvements shall become forfeited to the lessor....., and the said lessor.....or.....her..... agent may thereupon, after demand in writing for possession, enter upon said premises and dispossess all persons occupying the same, with or without force, and with or without process of law, or at the option of the lessor.....the said lessee.....and all persons found occupying said premises or any part thereof may be proceeded against as guilty of unlawful detainer.

Time is of the essence of this agreement, and each and every clause of this indenture and all the covenants and conditions contained herein, expressed or implied, shall extend to the successors, heirs, executors, administrators and lawful assigns of all of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written.

Mrs. U. G. Crispell for U. G. Crispell [SEAL]
Mrs. U. G. Crispell, for U.G.Crispell,Est.
Est. —Lessor

.....[SEAL]

Emmett Irwin [SEAL]
Emmett Irwin, Lessee

.....[SEAL]

.....[SEAL]

.....[SEAL]

McKnight
O'Leary
(For Info)

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

AUG 27 1951
REGIONAL DIRECTOR'S OFFICE
REGION IV
AUG 29 1951
BUREAU OF MINES
DENVER, COLORADO

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

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. DMA-1897

Commodity Lead-zinc

Applicant Emmett Irwin and Company, 113 West 9th Street, Leadville, Colorado

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon
Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

T. P. Thayer
For Geological Survey

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA-1897

Commodity Lead-zinc

Total Amount $7,500

Govt. Participation 50%

1. Name and Address of Applicant Emmett Irwin and Company
113 West 9th Street, Leadville, Colorado

2. Location of Property Chautauquan No. 12882 and Yalu No. 9487 Claims,
California Mining District, Lake County, Colorado

3. Mineral or metal Lead-zinc Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination Needs examination, see attached statement

e) Is there an alternative and favorable project? Don't know
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? Yes for Chautauquan No. 12882. Copy of addition to Yalu No. 9487
Does the lease have sufficient time to run to cover a future

productive period? See attached statement

*question numbers are those of MF-103

4. (d) A field examination is needed to clarify the geologic probability of discovery. The applicant's sketch map shows a northwest strike for the Winnie-Luema lode. This lode, as described in Professional Paper 148, is nearly vertical and strikes northward. Presumably the applicant proposes to explore a vein located west of the Winnie Luema lode by driving an incline down dip. As shown on the sketch map the dip is northward, yet at the Chautauqua shaft (applicant quotes from Professional Paper 148) the formations dip eastward. The proposed work shown on the sketch for phases 1 and 2 parallels and includes portions of old workings. No information is given as to the need for enlargement of portions of the old drifts.

Appears [illegible]

6. Lease on Chautauquan No. 12882 expires September 1958. Sublease on Yalu No. 9487 expires November 1, 1951 and addition to this sublease, dated November 1, 1949 provides for renewal.

[illegible] Nov. 1, 1951. [illegible]
[illegible] O.T.

7. Are subordination agreements necessary? Yes

a) MF-201? No

b) MF-202 Yes

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes, Good road to mine

d) Water (question 13)* Yes. Rental at $25.00 per month

e) Power (question 13)* Yes.

Is a field check needed on any of these points? No

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? No

If not, are there sufficient data given so that you can describe the project? No If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? No

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is?

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Not adequately

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? No If so, attach a draft.

e) Are the cost estimates reasonable? Don't know

f) Should more information be requested from applicant? Yes

g) Is a field examination necessary to complete Exhibit A? Yes

11. Exhibit B (question 23-d)*

a) Is it applicable? No

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed? No

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? Don't know

d) Is a field check needed? Yes. See attached statement

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? No. Salaries of Supervisors not given

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Incomplete data, see "a" of item 13.

e) Is a field check needed? Yes

12. (d) Applicant states that during the past 12 months machinery was rented from Custom Machine Works, Leadville, Colorado at $90 per month. It is not indicated if this machinery will be needed for the proposed work or if it is to be included in the rental cost of $900.00 per month for the hoist and compressor.

14. Exhibit E (question 23-c)*

a) Is it applicable? not applicable

b) Sufficient data?

c) Reasonable?

d) Field check needed? No

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? If field examination indicates approval, the applicant should be requested to supply 6 copies of leases and 6 copies of Landlord's Subordination Agreement

Reviewed by: B. Gildersleeve 8-16-51

Date 8-20-51

INT.-DUP. SEC., WASH., D.C. 99009

REGIONAL DIRECTOR'S
OFFICE
REGION IV
AUG 29 1951
BUREAU OF MINES
DENVER, COLO.

Re: DMA-1897

AUG 27 1951

Emmett Irwin and Company
113 West 9th Street
Leadville, Colorado

Gentlemen:

The Lead-Zinc Branch has reviewed your application (DMA-1897) for exploration assistance. It is being sent to Mr. J. H. East, Jr., Executive Officer, DMA Field Team, 224 New Customhouse, Denver 2, Colorado, for further information and advice.

Very truly yours,

Tom Lyon, Director
Supply Division

BGildersleeve:emp
G 8-20-51
Copies to: J. H. East, Jr. Region IV (2)
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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

November 6, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1897, Emmett Irwin and Co., applicant; Chautauquan Mine (Lead-Zinc), California Mining District, Lake County, Colorado

The application of the subject docket was for an exploration loan of $7,500.

The proposed exploration consisted of the following three projects: (1) To clean out and enlarge the incline winze and continue it downward 200 feet toward a junction with the Winnie Luema vein, (2) to drive a cross-cut eastward to explore the east side of the Winnie Luema Mine and (3) in the event that the inclined winze develops sufficient ore, to drive a lateral from the bottom of the shaft through which to mine the ore body.

The future productivity of the mine is dependent on development below the second level, with an expected decrease in the degree of oxidation.

The field team proposes that only Project 1 should be considered at an estimated cost of $6,200.

They recommended approval of this loan, with which we concur.

A contract will be prepared subject to extension of the present leases.

Paul T. Allsman

Paul T. Allsman

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
DENVER, COLORADO

Region IV

Mining Division
Date Rec'd.
NOV 2 - 1951
BUREAU OF MINES
Denver, Colorado

Building 20
Denver Federal Center
Denver 14, Colorado

November 1, 1951

Memorandum

To: Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division

Subject: DMA 1897, Chautauquan Mine (Lead-Zinc), Emmett Irwin and Company, Leadville, Lake County, Colorado

Please find enclosed the original and seven copies of the Summary, Conclusions, and Recommendations by Ogden Tweto and M. H. Salsbury and the original and seven copies of Salsbury's Engineering Report, covering the subject docket.

The examining team does not recommend the loan request as submitted by the applicant for three separate projects, but does recommend the first of the three projects at an estimated cost of $6,200.00 instead of the $7,500.00 requested for the entire program.

In the Engineering Report, Salsbury's reasoning for disallowing two of the projects is entirely valid and he presents ample justification for approving the project recommended. The possibility of the proposed exploration finding ore along a vertical fissure in the favorable Peerless shale formation appears better than average. I concur with his recommendations, subject, of course, to renewal of the sublease on the Yalu tract.

The brochure and review are also returned herewith.

W. M. Traver, Jr.

W. M. Traver, Jr.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

October 30, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1897, Chautauquan Mine, Emmett Irwin and Co., Applicant, Leadville, Colorado

Attached are 8 copies of the geologic report by Ogden Tweto covering subject docket. It is pointed out that ore in the Chautauquan mine occurs at the intersection of a mineralized fissure with the Peerless (Cambrian) formation. About 25 feet above the base of the Peerless, lead-zinc ore 2 to 24 inches thick was found, and locally replacement bodies 1 to 3 feet thick run out on the bedding for a few feet from the fissure. This ore body has been stoped above the second level and about 40 feet below the level. The ore ran 8 to 19% Pb and 4 to 17% Zn. The applicant requests a loan of $7,500 to drive an incline down along this mineralized fissure at the horizon of the favorable beds, in the Peerless formation, to its junction with the Winnie-Luema vein. The incline will be about 200 feet long and cost about $6,200. Tweto recommends that a loan of $6,200 be granted.

The applicant also includes in his plans proposals for driving from the shaft to the incline, if ore is found, and for doing some prospecting east of the Winnie-Luema vein. Tweto does not recommend these two projects.

I concur with Tweto's recommendations.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Attachments (8)

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINIATION BY FIELD TEAM
REGION IV

DMA-1897, Chautauquan Mine (Lead-Zinc)

Emmett Irwin and Company, Applicant

Leadville, Lake County, Colorado

Lead-Zinc

Ogden Tweto, Geologist
U. S. Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

October 31, 1951

CHAUTAUQUAN MINE (LEAD-ZINC)
EMMETT IRWIN AND COMPANY, APPLICANT
LEADVILLE, LAKE COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By Ogden Tweto
Geologist
U. S. Geological Survey

and

M. H. Salsbury
Mining Engineer
Bureau of Mines

CHAUTAUQUAN MINE (LEAD-ZINC)
EMMETT IRWIN AND COMPANY, APPLICANT
LEADVILLE, LAKE COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By Ogden Tweto and M. H. Salsbury

The main ore shoot in the Chautauquan mine is localized at the intersection of a small vertical fissure striking N. 45° E. with a zone of "favorable beds" a few feet thick in the Beerless formation. The beds dip 20° - 30° east-northeast and the ore shoot has been worked in an incline stope down to the second bottom level of the Chautauquan shaft. The applicant has requested a loan of $7,500.00 (Government participation $3,750.00) to carry out three proposals, only one of which is recommended.

The recommended proposal is to drive an incline below the second level along the downward projection of the ore shoot mined above the level or along the vertical fissure and parallel to the bedding. This is a logical proposal. The incline should be driven downward and northeastward to the intersection of the fissure zone with the Winnie Luema vein a distance of 200 to 210 feet.

The mine is fully equipped with a small headframe, hoist house, 10-horsepower hoist, compressor, buckets and mine cars. The only further equipment needed for driving the proposed incline is an air hoist and mounted drilling equipment. These can be rented locally as are the surface hoist and compressor now in use.

The Bureau of Mines estimate of the cost of the proposed work is $6,200.00.

The ore is lead-zinc ore consisting of partly oxidized pyrite, galena, and sphalerite. The partial oxidation has reduced the value of the ore produced in the past but the ore body nevertheless could be worked. It is unlikely that completely unoxidized ore will be found in the proposed incline, but there should be at least a gradual reduction in oxidation and the value of the ore may increase correspondingly.

It is recommended that an exploration loan of $6,200.00 (Government participation $3,100.00) be granted to drive the incline subject to the renewal of the sublease on the Yalu to be granted November 1, 1951.

CHAUTAUQUAN MINE (LEAD-ZINC)
EMMETT IRWIN AND COMPANY, APPLICANT
LEADVILLE, LAKE COUNTY, COLORADO

Engineering Report

By M. H. Salsbury
Mining Engineer
Bureau of Mines

CHAUTAUQUAN MINE (LEAD-ZINC)
EMMETT IRWIN AND COMPANY, APPLICANT
LEADVILLE, LAKE COUNTY, COLORADO

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CHAUTAUQUAN MINE (LEAD-ZINC)
EMMETT IRWIN AND COMPANY, APPLICANT
LEADVILLE, LAKE COUNTY, COLORADO

ENGINEERING REPORT

By

M. H. Salsbury

INTRODUCTION

On October 11-12, an engineer of the Bureau of Mines examined the Chautauquan mine in the east part of Leadville Mining District to check the mine workings and equipment.

The Chautauquan shaft is located at the east end of the Chautauquan claim, survey number 12882, but part of the workings and the proposed project are on the Yalu claim, survey number 9487, of different ownership.

The lessees of the property, Emmett Irwin and Company, have applied for a loan of $7,500.00 (Government participation $3,750.00) to explore an intersection of a vertical northeast striking fissure and a certain bed in the Peerless formation (transition shale). Two other prospects are also included.

The shaft is equipped with a small headframe, 10-horsepower electric hoist, one drill, single stage compressor, mine cars, buckets, small tools, et cetera.

ACKNOWLEDGMENTS

Data for this report was obtained by personal examination, consultation with Emmett Irwin, one of the lessees, and by reference to Professional Paper 148 of the U. S. Geological Survey and to Report of Investigations 4518 of the U. S. Bureau of Mines. Neither

of the publications mention the Chautauquan shaft. Report of Investigation 4518 gives an account of an examination of neighboring shafts, the Silver Spoon to the north and the New Monarch to the east, but the information was of little value for this report. Professional Paper 148, U. S. Geological Survey covers this area on page 311 and following.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Chautauquan shaft is on the north slope of Little Ellen Hill, a spur of Breece Hill. It is four miles from Leadville (fig. 1), the Resurrection Mill and the Arkansas Valley smelter of the American Smelting and Refining Company.

The climate is characterized by cool summers, and long severe winters with heavy snowfall.

The mine is reached by a county highway up Big Evans Gulch and a ½-mile connecting road. Roads to operating mines in this area are kept open by county road crews and operation throughout the winter is possible.

The Chautauquan workings are west of the Winnie Luema vein.

HISTORY AND PRODUCTION

The ore shoots of the Winnie Luema vein and associated blanket deposits to the east have been mined extensively through various shafts for over fifty years. Emmons, on page 311 of Professional Paper 148, U. S. Geological Survey, says "The Winnie Luema vein is the longest, most thoroughly explored, and most productive single vein in the Leadville district".

Most of the development and mining has been done on the vein itself and on the east side. The Chautauquan is the only shaft near

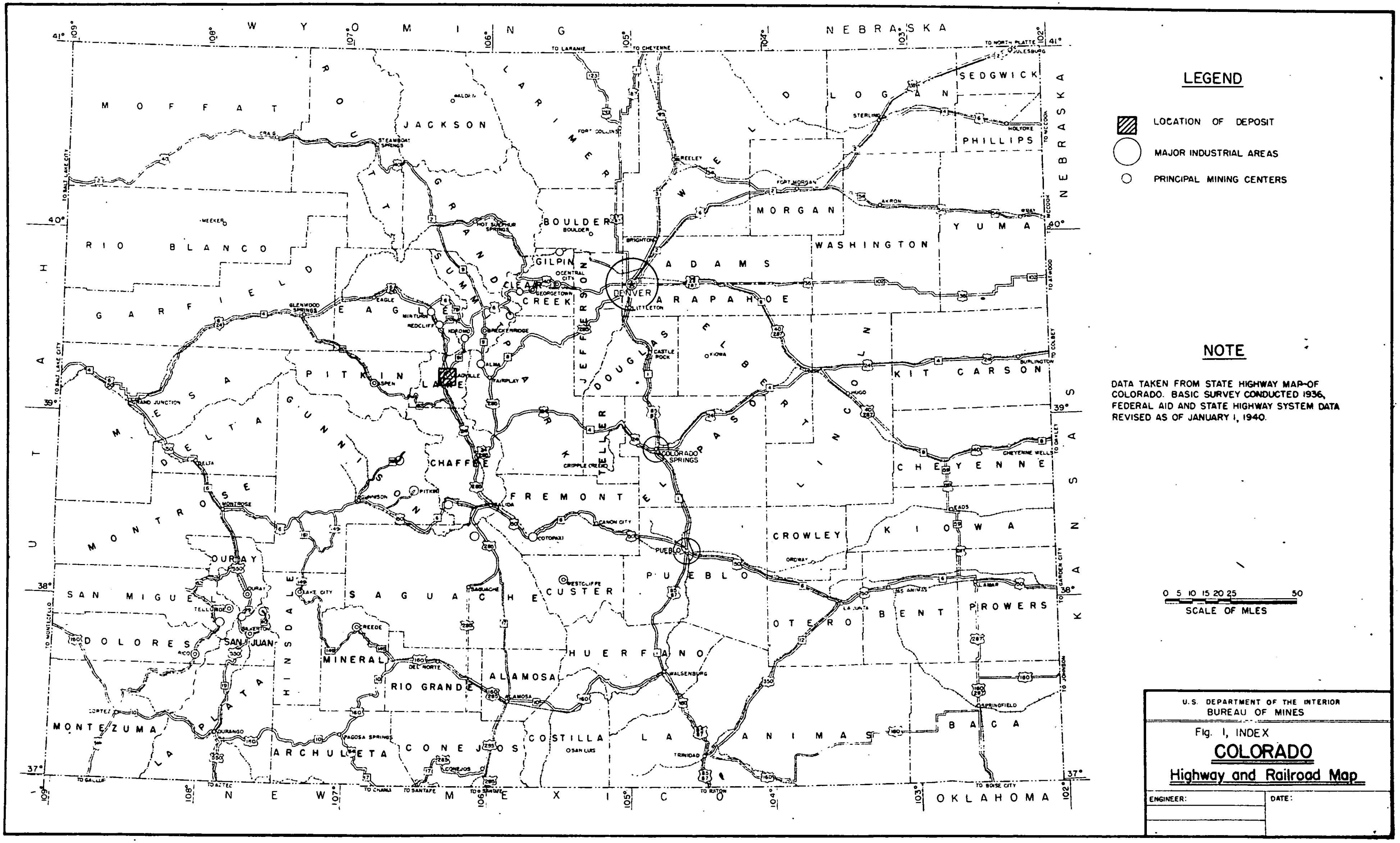


FIG. I-LOCATION MAP, EMMETT IRWIN & CO., CHAUTAUQUAN-YALU, LAKE COUNTY COLORADO D.M.A.-1897

the vein on the west side in this particular area and development through it is limited.

The total production of the area is not available but is large. The records of the Statistics Branch, Economics Division, Region IV, Bureau of Mines show for the Chautauquan shaft, from 1923 to 1950, a production of 236 tons with a content of 18.3 ounces gold, 932 ounces silver, and 62,580 pounds lead. The zinc content is given on four shipments only where it averages 10 percent. These were all smelter shipments and the zinc content incurred a penalty if too high. All ore from this area is more or less oxidized and is direct smelting ore.

Records of the production from the Yalu claim are included in totals of the New Monarch group and are not separable. In any case, the production from Yalu ground is negligible outside of the Winnie Luema vein production.

The Chautauquan shaft has been operated at various times for brief periods since 1900. The present lessee first worked here in 1941 for a short time and began the present operation in 1949. From this last work, three lots of low-grade ore from prospect raises on the northeast vertical fissure above the second level have been shipped to the American Smelting and Refining Company's Arkansas Valley smelter with results as shown in the appended tabulation.

This is partially oxidized lead-zinc combination ore not amenable to selective flotation, and must be shipped direct to the smelter. The proposed development is expected to produce a better grade ore than the above shipments.

TABULATION OF SMELTER SHIPMENTS BY EMMETT IRWIN AND COMPANY

FROM THE YALU CLAIM THROUGH THE CHAUTAUQUAN SHAFT,

LEADVILLE MINING DISTRICT

Date	Mine Lot	Smelter Lot	Dry Wgt. Tons	Ounces/ton Au.	Ounces/ton Ag.	Percent Pb.	Percent Insol.	Percent Fe.	Percent S.	Percent Zn.	Gross Value Per ton	Treatment Charges and Penalties: Base Charge	Lead Deficit	Zinc Penalty	Sulfur Penalty	Total Charges	Net Return Per ton
December 1949	1	5744	8.924	.04	2.75	11.05	33.3	17.85	7.55	8.4	$20.04	$8.00	$ .895	$.120	$1.137	$10.152	$9.89
March 1950	2	6737	29.254	.04	2.25	8.75	38.6	17.2	5.15	6.1	13.49	8.00	1.125	-	.537	9.66	3.83
August 1950	3	8292	20.634	.0175	1.575	5.15	48.9	17.25	2.93	4.2	9.72	8.00	1.485	-	-	9.49	.23

NOTES: Gold paid for when over .03 ounce

90 percent of lead content paid for

Silver content less 1 ounce paid for

Penalty assessed for lead content of less than 12 percent

Penalty assessed for zinc content of over 8 percent

Penalty assessed for excess sulfur over 3 percent

OWNERSHIP AND EXTENT

The Chautauquan claim, survey number 12882, 1.474 acres is owned by Mrs. U. G. Crispell, 1036 North Fayette Street, Jacksonville, Ill. The applicant has a lease on the entire claim expiring September 20, 1958. The royalties are from 10 percent up to $15.00 of net ore value, after smelter and/or mill charges and hauling, to 35 percent of net ore value over $75.00 per ton. In addition, an overriding royalty of 2 percent is charged on ore from other properties hoisted through the Chautauquan shaft.

The Yalu claim, survey number 9487, is part of the property of the New Monarch Mining Company. The applicant has a sublease from the New Monarch Lease, Fred H. Rice and Associates, who hold a lease on the ground expiring November 1, 1951. The applicant's sublease will expire the same date. A renewal for five years is promised by the owners, in which case the sublease held by the applicant will run to November 1, 1956.

The sublease covers a block some 300 x 300 feet, from elevation 10,923 feet to elevation 11,072, as defined in Resurrection Mining Company and Platt and Kleff surveys.

The royalties on Yalu ore are from 10 percent up to $10.00 of net ore value to 35 percent over $75.00 of net ore value with an overriding royalty to the New Monarch Lease of 2½-percent up to $20.00 ore and 5 percent over $20.00 ore.

The lease blocks cover the proposed development adequately and are shown on figure 2.

Copies of the lease are attached to the application.

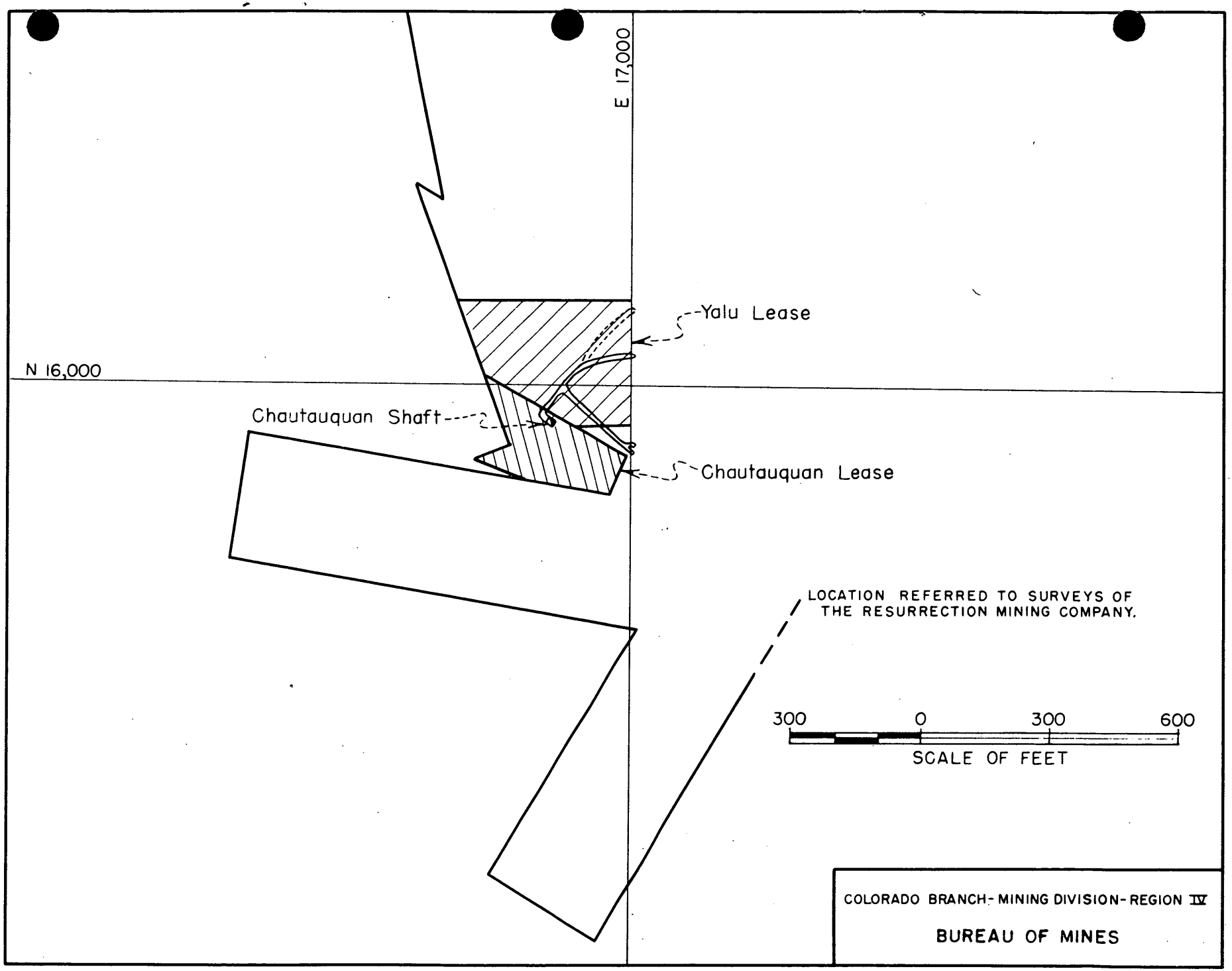


FIG. 2- EMMETT IRWIN & CO., CHAUTAUQUAN-YALU, LAKE COUNTY COLO. D.M.A.-1897

DESCRIPTION OF THE DEPOSITS

The geology and ore deposits are covered in the accompanying Geological Report. Two geological sketches are included.

MINABLE ORE RESERVES

The property has no known ore reserves.

PRESENT STATUS

Exploration and Development

The area covered by the lease is developed by the Chautauquan shaft, collar elevation 11,203, 246 feet in depth with three levels, at 125, 186, and 206 feet, respectively, below the collar. The shaft is in good condition except for the sump where the cribbing is in poor repair.

There are several small stopes reported in the Chautauquan shaft workings all above the second level only one of which is accessible. This is a long narrow replacement deposit of partially oxidized lead-zinc ore just above the second level about 120 feet long, 15 feet wide, and up to 4 feet thick. It is in a favorable bed of the Peerless (transition) shale along a northeast striking vertical fissure and has been mined out except for some remnants of ore along the stope margins which give some idea of the character of the ore but probably not of the grade. The shale strikes S. 30° E. and dips about 28° to the northeast. The Peerless shale - Manitou limestone contact is a short distance above.

A small incline some 40 feet deep was sunk on the dip of the bedding and along the northeast striking fissure to explore the downward continuation of the flat stope just described. This goes

below the second level and is on Yalu ground. It is reported to have a good lead streak in the face but unfortunately has been filled in and the streak cannot be sampled. Obviously the winze did not open up ore which could be mined profitably at the time it was sunk. However, it was a good prospect and should have been carried further.

There are two crosscuts on the second level both of which are driven east to the Winnie Luema vein and break into old filled stopes. This is the only stoping on Yalu ground which is exposed in Chautauquan workings.

The present lessee has driven two short prospect raises on the same northeast striking fissure zone which made the ore in the Peerless formation described above. They are approaching the Manitou limestone contact but have not found commercial ore such as that represented by settlement records. This work is above the incline winze.

The lessee is now engaged in investigating the remnants of ore on the margins of the stope described above on Chautauquan ground.

Mining and Milling Equipment and Other Facilities

The mining equipment is comprised of a small headframe, hoist house, 10-horsepower hoist, electric-driven compressor, buckets, and mine cars. All are on the property and being used in present operations.

A mill or mill equipment is not needed as past production has not been amenable to beneficiation and was shipped direct to the local smelter.

PROPOSED EXPLORATION AND DEVELOPMENT PROGRAM

The applicant proposes three projects:

(1) To clean out and enlarge the incline winze and continue it downward toward a junction with the Winnie Luema vein some 200 feet to explore the possibility of a flat stope similar to the one above the second level.

(2) To drive a North Crosscut eastward to explore the east side of the Winnie Luema vein.

(3) In the event the incline winze opens up sufficient ore, to drive a lateral from the bottom of the shaft through which to mine the ore body.

ESTIMATED COST OF PROJECT

Because only one of the above proposals, the first, will be recommended, the cost of it alone is estimated.

The applicant's estimate of $7,500.00 for the three proposals is low but is more than would be needed for the first one. The time estimate of ten months is high for the one project.

The Bureau engineer's estimate for the cost of the inclined winze, expected to require a maximum of four months time to complete, is as follows:

<u>Equipment</u> (to be rented locally)

Hoist and compressor rental (already installed) Four months at $80.00 per month	$320.00
Air hoist for winze Four months at $20.00 per month	80.00
Drilling machine and equipment Four months at $60.00 per month	240.00

Power	
Electric power for hoist and air compressor Four months at $50.00 per month	$ 200.00
Supplies	
Twelve pound track and 2-inch drain and air line for 225 feet of incline	223.50
Drill steel, detachable bits, and sharpening	75.00
Explosives	400.00
Labor	
Three men (1 man on surface, 2 underground), including taxes and insurance at $45.00 per day Four 25-day months	4,500.00
Miscellaneous expenses	
Fuel, repairs, small tools, incidentals	161.50
Total	$6,200.00

The rental costs used above are somewhat lower than accepted rental rates, but are actual rentals which are current in the Leadville district. The hoist, compressor, mine cars, and buckets are in place and the only additional equipment needed is the drilling equipment and air hoist for the winze. The time estimate of four months is ample for the winze work and includes cleaning out and enlarging the old winze which, it is believed, will cost about as much per foot as the new work.

PROPOSED FINANCING

The applicant, a five-party partnership, proposes to furnish the capital needed for their share personally.

CONCLUSIONS

The success of the first proposal, that is to open up an ore shoot along the northeast striking vertical fissure between the bottom of the incline winze and the Winnie Luema vein, would contribute to needed lead production. It is not likely that recovery of the zinc content can be made unless the character of the ore changes radically. It is not likely that the sulfide content will increase enough to permit concentration by selective flotation. A lead content of 15 percent or better in an ore body of reasonable size would make possible a profitable operation.

While there is a possibility that there is some ore left at the junction of the vertical fissure and the Winnie Luema vein, it is more likely that this possibility has been already explored from other workings on the Winnie Luema. It is possible that ore of too low grade for former operators to mine profitably has been left.

The second proposal to explore east of the Winnie Luema vein through the North Crosscut on the second level has no definite objective and the area has been prospected from other workings. For this reason and because the possible cost cannot be estimated, this proposal is not recommended. The third proposal, to drive a lateral from the bottom of the Chautauquan shaft to reach the bottom of the proposed incline winze if any ore is found, is unnecessary so far as possibilities indicate. Moreover, it comes under the head of development rather than exploration and therefore is not recommended.

A long narrow ore body along the incline, which is the type expected, can be mined as well through the incline itself as through a new level.

It is likely that some ore will be produced while driving the incline.

The local partners in the enterprise have a good practical mining background and are well able to direct the operation.

RECOMMENDATIONS

It is recommended that a loan be approved for $6,200.00 (Government participation $3,100.00) for the purpose of driving an incline downward along the intersection of a northeast striking vertical fissure system and a certain bed of the Pearless (transition) shale some 220 feet, including clean up and enlargement of an old winze, to a junction with the Winnie Luema vein. (See maps attached to the Geological Report.) This should be subject to the renewal of the sublease on Yalu ground which is due November 1, 1951.

CHAUTAUQUAN MINE (LEAD-ZINC)

EMMETT IRWIN AND CO., APPLICANT

LEADVILLE, COLORADO

DMA DOCKET 1897

Geologic Report

By Ogden Tweto
U. S. Geological Survey
Denver, Colorado

CHAUTAUQUAN MINE (LEAD-ZINC)
EMMETT IRWIN AND CO., APPLICANT
LEADVILLE, COLORADO

INTRODUCTION

The Chautauquan mine is on the north slope of Breece Hill, in the eastern part of the Leadville district, Colorado. It lies just a short distance west of the highly productive Winnie-Luema vein, and the workings connect with some of those of the Winnie-Luema group of mines. The shaft is on the Chautauquan claim, but the workings are principally on the Yalu claim, a property under different ownership. Emmett Irwin and Co. has a long-term lease on the entire Chautauquan claim, and a block-sublease on parts of the Yalu and adjoining claims owned by the New Monarch Mining Company. By terms of this sublease and the "addition to sublease" (see papers accompanying application), the applicant is entitled to work a block between elevations 10923 and 11072 feet, with horizontal dimensions defined by coordinates of the Resurrection Mining Company and the property line of the New Monarch Mining Company. The sublease and "addition" expire November 1, 1951, but by terms of the "addition," provision is made for renewal for the length of the Rice lease on the New Monarch ground. The Rice lease also expires November 1, 1951; thus in effect, the Emmett Irwin sublease on the Yalu expires at that time. Irwin, however, says that Rice has already made arrangements for a five-year renewal of his (Rice) lease, and thus the Irwin lease would be extended until 1956. Such action is not likely to be actually accomplished until November 1, 1951, and thus, until that time, Irwin and Co. has only

a temporary lease. The question is of direct concern to the present application because all the proposed work is to be done on the Yalu ground. I have checked the proposed exploratory work, with respect to the lease boundaries, on maps of the Resurrection Mining Company; the proposed work will be entirely within the lease block.

GEOLOGY

The output from the Chautauquan mine has come almost entirely from the second level, and principally from the portion of the level that is on the Yalu claim. Most of the workings on this level are in thin-bedded dolomite, shale, and dolomitic sandstone of the (Cambrian) Peerless formation, generally known as "transition shale" at Leadville. These beds dip 20°-30° NE (Figure 1). Sawatch quartzite, beneath the Peerless beds, is exposed for a few feet near the shaft, and Manitou dolomite ("White limestone" of Leadville usage) is exposed in the drift that runs southeastward to the Winnie-Luema vein. From a point opposite the shaft, the drift runs northeastward along a small fissure that dips 75°-85° NW. The fissure is only weakly mineralized at most places, but where it intersects a bedding zone a few feet thick about 25 feet above the base of the Peerless, it contains 2 to 24 inches of lead-zinc ore, and at places replacement bodies 1 to 3 feet thick run out on the bedding for a few feet from the fissure. The fissure at this horizon in the Peerless has been rather extensively stoped above the second level and was followed below the level for about 40 feet on the slope by a small "gopher-hole" exploratory incline, now inaccessible. As shown by the sample data accompanying the application, this ore runs 8 to 19% Pb, 4 to 17% Zn, about 3 ounces Ag, and contains a little gold and copper.

The applicant has requested a loan of $7,500 (Government participation 50%, or $3,750) to drive an incline down along the fissure at the horizon of the favorable beds in the Peerless (Figure 2). Considering the productivity of this structure, i.e., the intersection of the fissure with the favorable bedding zone, above the level, and the presence, according to the operators, of 16 inches of ore on the fissure in the gopher hole below the level, this seems a good prospect. The incline should logically be continued downward and northeastward along the fissure zone to the junction with the Winnie-Luema vein, a distance of about 200 feet. The fissure on which the incline would start may peter out before the Winnie-Luema vein is reached, but as shown in the northeastern part of the level, other, overlapping fissures will doubtless take its place, and the fissure zone as a whole may be expected to continue northeastward to the Winnie-Luema. There is a possibility that minor ore-bearing veins will be found in the footwall of the Winnie-Luema vein; such veins have been worked at several places in the Winnie-Luema mines, but there is no information available to appraise this possibility in the vicinity of the proposed incline.

The applicant has predicated his request in large part on the desirability of reaching unoxidized, as contrasted to partly oxidized, sulfide ore. If the proposal had to be judged solely on the basis of this question, it would have to be denied. The change from oxidized to unoxidized ore takes place gradually in this area through a transition zone of variable but rather considerable vertical extent. Oxidized ore has been mined at places on the Winnie-Luema vein at lower depths than the proposed Chautauquan incline will reach, but on the other hand,

sulfide ore has been found at other places on this same vein at depths shallower than the second level of the Chartauquan. It is uncertain, if not unlikely, that the depth to be gained by the proposed incline will be sufficient to reach completely fresh sulfide ore, and even more unlikely that the incline will reveal any sharp boundary surface below which the sulfide ore is completely fresh.

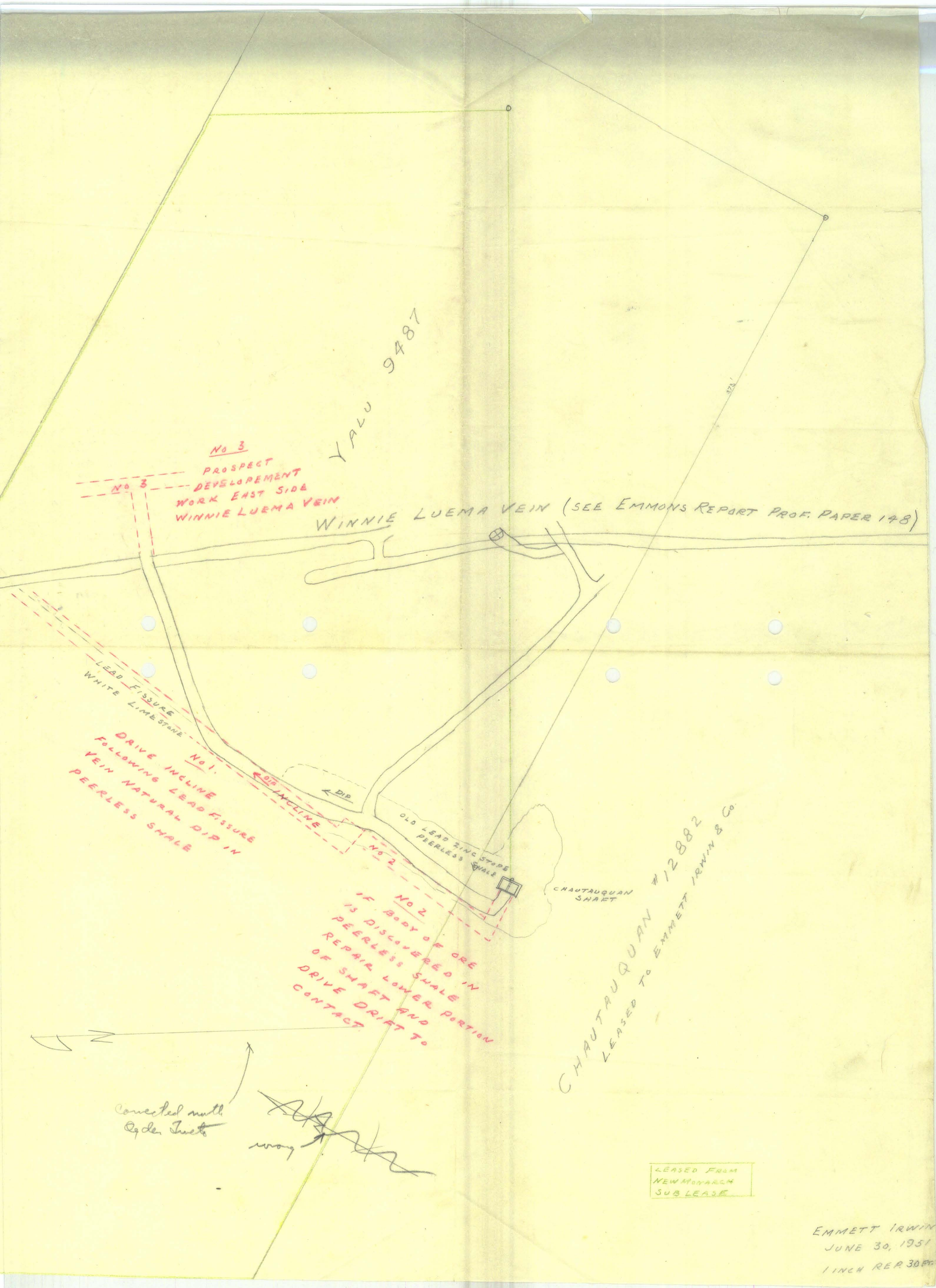
The applicant's emphasis of the oxidation question seems to me a mis-statement of the problem. Future productivity and profitable operation of the mine depend primarily on continuation of the ore shoot below the second level. The degree of oxidation is only a modifying factor. The ore mined from the stope above the level was partly oxidized and was thus reduced in value, but it was worked profitably, and at a time when metal prices were considerably lower than at present. The small stope 80 to 120 feet northeast of the shaft crosscut was worked recently by the present operators, with a small profit. The ore, as exposed at the edges of the stope, appears to be mostly sulfides--galena, pyrite, and sphalerite--but contains too much and too many soluble salts to be amenable to flotation. It therefore must be shipped direct to the smelter, with the inevitable zinc penalty. Thus the value of the ore to the operator has been reduced by reason of the partial oxidation, but the ore was nevertheless worked down to the second level. It follows that if the ore goes down at all, it should be workable below the level at today's high metal prices, particularly as the degree of oxidation should gradually diminish downward, and there is a good possibility that ore may be reached that, although still somewhat oxidized and thus possibly subject to some penalty, may be amenable to flotation. It is also possible

that with decreasing oxidation, rough sorting to remove part of the zinc will be practicable.

RECOMMENDATIONS

The proposed incline to be driven from the second level down along the fissure at the horizon of the "favorable beds" in the Peerless formation is a good prospect and is herewith recommended. The incline will be 200 to 210 feet long, and as shown in the Engineering Report, is estimated to cost $6200. The applicant also included in his plans proposals for driving from the shaft to the incline, if ore was found, and for doing some prospecting east of the Winnie Luema vein. These two projects are not recommended; the first depends entirely on the outcome of the incline; the second is too indefinite.

It is recommended that a loan of $6200 (Government participation 50%, or $3100) be granted to sink an incline 200 to 210 feet long, along the fissure and parallel to the bedding of the Peerless formation, as described above and illustrated in Figures 1 and 2.


YALU
No 3
PROSPECT
DEVELOPEMENT
WORK EAST SIDE
WINNIE LUEMA VEIN
No 3
WINNIE LUEMA VEIN (SEE EMMONS REPORT PROF. PAPER 148)
LEAD FISSURE
WHITE LIMESTONE
No 1.
DRIVE INCLINE
FOLLOWING LEAD FISSURE
VEIN NATURAL DIP IN
PEERLESS SHALE
DIP
DIP
INCLINE
No 2
OLD LEAD ZINC STOPE
PEERLESS SHALE
CHAUTAUQUAN
SHAFT
No 2
IF BODY OF ORE
IS DISCOVERED IN
PEERLESS SHALE
REPAIR LOWER PORTION
OF SHAFT AND
DRIVE DRIFT TO
CONTACT
CHAUTAUQUAN #12882
LEASED TO EMMETT IRWIN & Co.
N
Corrected north
Ogden Tracts
wrong
LEASED FROM
NEW MONARCH
SUBLEASE
EMMETT IRWIN
JUNE 30, 1951
1 INCH REP. 30 FT.