DMA F[redacted]m 1[redacted]

DEFENSE MINERALS ADMINISTRATION
Control Slip Lead-Zinc.

CONTROLLED DOCUMENT

DMA Docket No. 1063 - [redacted]

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

Tax Amortization

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

Routing Slip

To:	Director, Supply Div.	Date	9/20/51
To:	Tom Lyon	Date	9-27-51
To:	P.E. Div.	Date	12/11/51
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
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To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

INT. PUB. SEC. WASH. D.C. 98868

DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 1063

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

Loan

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

Routing Slip

To:	SUPPLY DIVISION	Date	AUG 15 1951
To:	Reports & Records	Date	Aug 16, 1951
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

DMA Form 2

DEFENSE MINERALS ADMINISTRATION
Status Change Notice

DMA Docket No. 1063

To: Reports and Records Branch Colorado Standard Lead Zinc Mines, Inc.

From: LEAD ZINC BRANCH

Date: JUL 6 1951

The following action has been taken this date on the above Controlled Document.

Forwarded to _____

Type of request changed to:

_____

Denied ☐ Withdrawn ☐

Approved in amount of $ _____

Other action, specify:

On hand - to be considered for mining loan

FILE COPY
Surname:

Moulds

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

MAR 11 1952

Mr. R. R. Wilson, Vice President
Colorado Standard Lead Mines, Inc.
313 Balboa Building
Santa Barbara, California

Re: Docket No. DMA 1063

Dear Mr. Wilson:

A review of the Defense Minerals Exploration Administration files indicates that on December 20, 1951, a letter was sent to you, requesting information on your application for a defense exploration project.

Since a reply has not been received, we naturally assume that you are no longer interested in this type of assistance. Your application is, therefore, considered closed, and we are removing it from our active file.

Sincerely yours,

D. E. Moulds mch

D. E. Moulds, Chief
Base Metals Division
Defense Minerals Exploration
Administration

S.N.
3-11-52

DEMoulds/hmj
3-10-52
cc to: Adm. R. File
Docket File Copy
Mr. Moulds
Mr. Bishop
Mr. McKnight
Region IV

2/20

Received call from Sen. Johnson's office. Told them we were awaiting info from Appel.

DE Reynolds
(meh)

FILE COPY
SURNAME:

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

DEC 21 1951

Mr. R. R. Wilson, Vice President
Colorado Standard Lead Mines, Inc.
313 Balboa Building
Santa Barbara, California

Re: Docket No. DMA 1063

Dear Mr. Wilson:

With reference to your letter of December 3, 1951, until we receive the information that was requested in our letter to you of November 20, 1951, and as required on Form MF-103, we cannot take any action on your application for an Exploration Project under the provisions of Mineral Order-5.

The Defense Minerals Exploration Administration is concerned only with Government aid in financing the cost of projects for exploration for unknown or undeveloped sources of strategic or critical metals or minerals. Requests for financial assistance for production and development are to be taken up directly with the Defense Materials Procurement Agency, General Services Building, Washington, D. C.

For your information we are enclosing a copy of MO-5 and a Press Release of May 14, 1951, which refers to the Exploration Program.

Sincerely yours,

Signed

D. E. Moulds, Acting Chief
Base Metals Division
Defense Minerals Exploration
Administration

Enclosures-2

JWAlt/DEMoulds/mp/meh
12/20/51
cc to: Adm. Reading File
Mails and Files
Docket
Mr. Mittendorf
Mr. Moulds
Mr. Alt

Region III (2)

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA 5, 9320

SANTA BARBARA OFFICE
313 BALBOA BLDG.

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 7 1951
Defense Minerals Administration,
Production Expansion Division.

DEC 5 9 00 AM '51

COLORADO STANDARD LEAD ZINC MINES, INC.

December 3, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 7 1951

Mr. C. O. Mithendorf, Acting Administrator
Defense Minerals Administration
United States Department of the Interior
Washington, D. C.

RECEIVED
DEC 6 - 1951

Dear Sir: Re: Docket DMA-1063

This will acknowledge your letter of November 20, 1951. The application for cooperation of D.M.A. in carrying out an increased or stepped up development program was for a $75,000.00 appropriation, and not $150,000.00 as you stated in your letter. Our application was made about seven months ago and was accompanied by complete reports, maps and data which showed full justification for the proposed program of development, equipment and operation in the opinions of seasoned mine operators and experienced mining engineers whose reports were forwarded to Washington as supporting evidence. We have been unable to understand the reasons for the attitude of D.M.A. officials to our applications as we understood that the reason for setting up the D.M.A. was to cooperate with the mining industry in securing an increased production of strategic metals including lead and zinc, which are still in short supply. To date, over a period of seven months, we have had absolutely no cooperation, only continued delays and inaction.

In the meantime we have proceeded with our program, expending about $300,000 in rehabilitating, equipping and developing the mine and modernizing the 100 ton mill, which does not include the purchase price for the properties. We expect to bring the mine into production early in December, 1951, but have been working under the handicap of shortage of funds for a really active development program.

The mine has in our considered opinion sufficient proven ore to repay the Company's investment, including the $75,000.00 applied for, as a straight salvage proposition. Hence our earlier application to D.M.A. for a guarantee of a private loan up to $350,000.00 (not a direct D.M.A. loan) to keep the tax department off our backs until the mine could be further developed and more fully proven.

It will take all of our available funds, assisted by bank loans, to finance the first two months operation until returns are received from

the smelter. The Company then expects to be in a position shortly thereafter to provide its one-half of the necessary amount required for active development, say $5,000.00 per month. If D.M.A. will provide a similar amount, we could rapidly develop the two mines, Ute and Ule, and step up production. The Company should have reasonable freedom to concentrate the new development work on the section of the mine which shows up best during the next two months, instead of being tied down to a tightly fixed program.

We do not, of course, want to go to the expense and trouble of sending additional maps etc. to D.M.A. unless we have some definite indication of a favorable decision.

Yours very truly

COLORADO STANDARD LEAD ZINC MINES, INC.

R. R. Wilson

R. R. WILSON, Vice-President and
Managing Director

RRW:h

cc: JBK
EJS
CBW
WBT & HLT

DHS 1045

Colorado Attorney General's Office
[illegible]
of Dec. 31, 1971. Open Cases
[illegible] Pending.

Pending For Information.

On Nov. 20 we sent

him the MF-103's and

they were never filled out.

FILE COPY
SURNAME: 350

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

NOV 20 1951

Lyons (ETM)
McKnight
Johnson
Mittendorf

In reply please refer
to Docket DMA-1063

Mr. R. R. Wilson, Vice-President
Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building
Santa Barbara, California

Dear Mr. Wilson:

Review of your application for an exploration loan of $150,000 on a participating basis has indicated that more information will be required. We suggest that you resubmit four copies of Form MF-103 under docket number DMA-1063. All information requested should be given in as great detail as possible, especially that referring to the description of the exploration work and the itemized costs of the project. Maps and sections showing the location and extent of the proposed exploration work also should be submitted.

We are enclosing five copies of Form MF-103 for your convenience.

Very truly yours,

C. O. Mittendorf (fw)

Acting Administrator

11-20

Enclosures
EJLyons:emp
G 11-13-51
Copies to: H. C. Miller, Region III (2)
Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. M. Bishop

Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

FILE COPY
SURNAME:

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

[illegible] - [illegible] [illegible]
[illegible] activities
Interior 1952 [illegible] (500)

McKnight (by cmo)
Johnson
Bishop
T. Fyon
[illegible]

November 9, 1951

Colorado [illegible] Lead Line Mines Inc.
Mr. [illegible] Gilleon, Vice President
[illegible] Balboa Building
Santa Barbara, California

Courtesy [illegible] Fyon [illegible] letter [illegible] collection under [illegible] information

Signed letter forwarded November eighth.

(signed) FRANK E. JOHNSON (fw)

Acting Administrator

G-JOHNSONfwe
11/9/51

cc: Administrator
Docket File DMA 1063
Tom Fyon
McKnight
Bishop
G-Johnson

Audits
Mr. Fayo

BE

FILE COPY
SURNAME:

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

NOV 8 1951

DMA-1063
Exploration loan request
for $150,000 dated May 31, 1951

Johnson

A. E. C.

Mr. [illegible] Allison, Vice President
The Colorado Standard Lead Zinc Mines, Inc.
313 Calhoun Building
Santa Barbara, California

Dear Mr. Allison:

We have for acknowledgment your letter of October 17, 1951 relative to your application dated May 31 for $150,000 loan for exploration purposes.

Mr. [illegible] Waterhouse of the Requirements Division discussed this project with us during September.

Further investigation reveals that this application was apparently overlooked as it was deemed to be a part of your application for a loan of $95,000 which under date of August 17, 1951 was denied.

We are now in the process of studying your application and in the event we may require additional information we will contact you.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

D. J. Hikes
11/1/51

D. J. 11-8

cc: Administrator
[illegible] Sperker Requirements Division
Docket File DMA-1063
Bishop
Kennight
Mr. JOHNSON

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA 5-3520

SANTA BARBARA OFFICE
313 BALBOA BLDG.

COLORADO STANDARD LEAD ZINC MINES, INC.

October 17, 1951

Mr. Tom Lyon, Director
Supply Division
Defense Minerals Administration
Washington, D. C.

DMA-1063 TA-7718
Serial No. M.S. 2641
Lead and Zinc Oper. Colo.

Dear Mr. Lyon:

Re: Our Application No. MF-103 for
Exploration Loan - Dated May 31, 1951

In connection with our application for $75,000 loan for exploratory purposes with regard to our properties, kindly advise us if it is necessary to duplicate all of the detailed information which was heretofore submitted to you in connection with our application for Government guarantee of loan, submitted on your Form No. NSRB-146.

Would you also kindly advise us as to the status of the application No. MF-103. In your letter to us of September 17 you suggested making a new application, and we shall appreciate hearing from you as to whether or not you now think this is advisable.

Yours very truly

COLORADO STANDARD LEAD ZINC MINES, INC.

R. R. Wilson

R. R. WILSON, Vice-President and
Managing Director

RRW: h

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.
OCT 22 8 41 AM '51

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA 5-3520

SANTA BARBARA OFFICE
313 BALBOA BLDG.

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

OCT 5 3 50 PM '51

COLORADO STANDARD LEAD ZINC MINES, INC.

October 1, 1951

OFFICIAL FILE COPY

To	Init.	Date
340	A.J	10-8-51
210		

Mr. Tom Lyon, Director
Supply Division
Defense Minerals Administration
Washington, D. C.

DMA-1063 TA-7718
Serial No. M.S. 2641
Lead and Zinc Oper. - Colo.

Dear Mr. Lyon:

Thank you for your letter of September 17 regarding our application for necessity certificate and other matters. Our Company has since that time been assigned the serial number as shown above.

We have written to Mr. F. B. Speaker, at your suggestion, and enclose copy of that letter herewith.

We have also received a communication from Mr. H. D. Waterhouse of the Requirements Division, advising that our Application No. MF-103, dated May 31, 1951 for Exploration Loan has been referred to Mr. G. E. Johnson of the Lead-Zinc Branch of the DMA.

We shall be grateful if there is anything you might be able to do to help expedite a decision with regard to our application No. MF-103. Thank you for your cooperation.

Yours very truly

COLORADO STANDARD LEAD ZINC MINES, INC.

R. R. Wilson

R. R. WILSON, Vice-President and
Managing Director

cc: Mr. H. D. Waterhouse
Mr. J. B. Kassebaum
Mr. Ernest J. Stanley

OCT 16 1951

COLORADO STANDARD LEAD ZINC MINES, INC.

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA OFFICE
313 BALBOA BLDG.
SANTA BARBARA 5-3520

October 1, 1951

Mr. F. B. Speaker, Requirements Division
Defense Minerals Administration
Room 2465 New Interior Building
Washington 25, D. C.

DMA-1063 TA-7718
Serial No. M.S. 2641
Lead and Zinc Oper. - Colo.

Dear Mr. Speaker:

At the suggestion of Mr. Tom Lyon, Director Supply Division, Defense Minerals Administration, we are writing you regarding aid to our company in obtaining machinery and equipment needed for the modernization of our mill.

On September 14 we forwarded a detailed description of purchase orders, prices and suppliers to the Lead-Zinc Branch of Defense Minerals Administration. In particular we wish to confirm extension of allotment symbols to the Denver Equipment Company at Denver, Colorado, who are supplying the major portion of the machinery and equipment needed for the project.

Detailed information regarding our modernization and rehabilitation program for both the mine and the mill has been forwarded to the Lead-Zinc Branch of the Defense Minerals Administration, together with our engineers reports and other pertinent data, but if you desire further information, we shall be glad to forward it to you.

Mr. H. D. Waterhouse of the Requirements Division wrote to us on September 12 regarding assignment of serial number and processing our other applications, and we are therefore forwarding him a copy of this letter for his information.

Yours very truly

COLORADO STANDARD LEAD ZINC MINES, INC.

R. R. Wilson

R. R. WILSON, Vice-President and
Managing Director

cc: Mr. H. D. Waterhouse
Mr. Tom Lyon
Mr. J. B. Kassebaum
Mr. Ernest J. Stanley

FILE COPY
SURNAME:

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

Herres
Johnson
TPBillings
Broken
for McKnight
Mote

July 3, 1951

DMA 1063 - TA 7718
Re: ~~Necessity Certificate~~
(Colorado)

Mr. Ridgeway R. Wilson, Vice President
Colorado Standard Lead Zinc Mines Inc.
313 Balboa Building
Santa Barbara, California

Dear Mr. Wilson:

In order to complete the processing of your application for a Necessity Certificate, additional information will be required. We believe you can furnish the necessary information by filling out the enclosed Form 1-701 to better identify your facilities to be certified.

We note that on page 1 of your detail sheet, Appendix A, accompanying your form NSRB-140, you have included under a cost of $50,000 the following: No. 1- Mining claims; No. 2- Buildings and other Fixed Installations and; No. 3- Equipment. It is necessary that you so separate these three headings as to estimate their respective costs as best you can. Also, on page 5, question 14, Form 140, you list, (1) a larger bin- 500 ton capactiy for storage of crude ore, (2) sorting belt, (3) Symons cone crusher and, (4) additional flotation cells. Please show whether this large bin is in addition to an existing bin or is a replacement of it, and its estimated cost. In case it is a replacement of the existing bin, state the condidtion of existing bin, as to its obsolescence, percentage of depreciation and scrap value. Also state the estimated costs of items (2), (3), and (4) including their installations costs.

On your form NSRB-140 you failed to show on page 1, in the space provided, the total cost of facilities sought to be certified, this will be required and is provided for on page 1 of the enclosed form 1-701.

We are enclosing six copies of Form 1-701 with instructions for you to fill out and return to this office. Please give this your prompt attention so that we can expedite the completion of your application.

Enclosure:
TPBILLINGS:jb

Otto Herres

cc: Strobel
Mote
McKnight, Herres, Johnson, Files

OTTO HERRES, Chief
Lead-Zinc Branch

FILE COPY
SURNAME:

Herres
Brokaw
Mote

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

June 27, 1951

DMA-1063X
TA-7718

Mr. R. R. Wilson, Vice President
Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building
Santa Barbara, California

Dear Mr. Wilson:

I have your letter of June 25 referring to your application for Government assistance - DMA-1063X TA-7718.

My experience thus far has been that considerable time is required to obtain approval of TA applications from the various Government agencies concerned. Under the circumstances probably it would be well for you to make whatever use you can of your serialization number obtained from DMA Requirements Division until such time as a certificate of necessity is available under your request.

In case I can be of further assistance to you in this connection, kindly let me know.

Very truly yours,

Otto Herres

OTTO HERRES, Chief
Lead-Zinc Branch

OHERRES:ks

cc: Strobel
Mote
McKnight
Herres
Files

DMA 1063

556

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA 5-3520

SANTA BARBARA OFFICE
BALBOA BLDG.

Herres

Air Mail

COLORADO STANDARD LEAD ZINC MINES, INC.

June 25, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 27 1951
LANDON F. STROBEL
Executive Secretary

Mr. Otto Herres, Chief
Lead-Zinc Branch
Defense Minerals Administration
United States Department of the Interior
Washington 25, D. C.

Dear Sir: Reference: DMA-1063X
TA-7718

On May 25 we forwarded the required copies of Form MF-100 to your office, receipt of which has been acknowledged by Mr. Landon F. Strobel, Executive Secretary. It is understood that the information supplied therein is needed by the DMA to assist mines and mills in obtaining machinery, equipment and supplies for operating purposes under systems of priorities and allocations.

We will appreciate receiving at the earliest possible date whatever numbers or identification is necessary to quote our sources of supply. We are having difficulty obtaining supplies without priority numbers, and find that certain equipment being ordered for the rehabilitation and equipment of our mine and mill requires a priority rating.

Yours very truly

COLORADO STANDARD LEAD ZINC MINES, INC.

R. R. Wilson by JH

R. R. WILSON, Vice-President and
Managing Director

h

FILE COPY
SURNAME:

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

June 20, 1951

Mr. Ridgeway R. Wilson
Vice President & Managing Director
Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building
Santa Barbara, California

Subject: DMA-1063X TA-7718
Re: Necessity Certificate
Ute, Ule, Hidden Treasure,
and California

My dear Mr. Wilson:

Receipt is acknowledged of the application of May 31, 1951 for the Colorado Standard Lead Zinc Mines, Inc. for a necessity certificate pursuant to Provision of Sec. 124A (Amortization Deduction) of the Internal Revenue Code.

The application was assigned Docket Number DMA-1063X and was referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on June 11, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1063X.TA-7718.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
>Files
Herres
Lyon

dma 106

COLORADO STANDARD LEAD ZINC MINES, INC.

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA OFFICE
313 BALBOA BLDG.
SANTA BARBARA 5-3520

Form Mf-103 APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEF NSE PRODUCTION ACT OF 1950

Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building
Santa Barbara, California

May 31, 1951

Date of Application: May 31, 1951

Estimated cost: $150,000

Mineral or metal: Zinc and Lead concentrates

Percentage of Government participation: 50% ($75,000)

Location of Mine: Lake City, Colorado
(Development program in areas adjacent to Ute and Ule shafts)

Date of filing MF-100 : May 25, 1951

DMA Docket Number: DMA-1063
TA-7718

Note questions dealing with the applicant and property have been covered in Form MF-100 filed on May 25 and Form NSRB-146 filed on May 25, 1951.

The Exploration: Areas adjacent to the Ute and Ule Shafts described in reports and data submitted May 25, 1951. See geological and engineers reports submitted.

Requirements and Costs: $150,000 total cost; 50% requested from Government, 50% to be supplied by Colorado Standard Lead Zinc Mines, Inc.

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.

May 31, 1951

COLORADO STANDARD LEAD ZINC MINES, INC.

By P. R. Wilson
Vice-President and Managing Director

JUN 12 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 4 - 1951
LYNDON L. SPRAGUE
Executive Secretary

dma 1063X

COLORADO STANDARD LEAD ZINC MINES, INC.

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA OFFICE
313 BALBOA BLDG.
SANTA BARBARA 5-3520

Form Mf-103 APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEF NSE PRODUCTION ACT OF 1950

Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building
Santa Barbara, California

May 31, 1951

Date of Application: May 31, 1951

Estimated cost: $150,000

Mineral or metal: Zinc and Lead concentrates

Percentage of Government participation: 50% ($75,000)

Location of Mine: Lake City, Colorado
(Development program in areas adjacent to Ute and Ule shafts)

Date of filing MF-100 : May 25, 1951

DMA Docket Number: DMA-1063
TA-7718

Note questions dealing with the applicant and property have been covered in Form MF-100 filed on May 25 and Form NSRB-146 filed on May 25, 1951.

The Exploration: Areas adjacent to the Ute and Ule Shafts described in reports and data submitted May 25, 1951. See geological and engineers reports submitted.

Requirements and Costs: $150,000 total cost; 50% requested from Government, 50% to be supplied by Colorado Standard Lead Zinc Mines, Inc.

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.

May 31, 1951

COLORADO STANDARD LEAD ZINC MINES, INC.

By R. R. Wilson
Vice-President and Managing Director

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 4 - 1951
LANDON E. SIMONSEN
Executive Secretary

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA 5-3520

SANTA BARBARA OFFICE
313 BALBOA BLDG.

Herres

Air Mail

Register No 26462

COLORADO STANDARD LEAD ZINC MINES, INC.

May 31, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
Postmarked May 31, 1951
JUN 4 - 1951
LANDON F. STROBEL
Executive Secretary

Mr. Otto Herres, Chief
Lead-Zinc Branch
Defense Minerals Administration
United States Department of the Interior
Washington 25, D.C.

Dear Mr. Herres:

Reference: DMA-1063
TA-7718

Enclosed are two copies Form MF-100 and memorandum copies of "Application for aid for an Exploration Project Pursuant to Mineral Order 5, under Defense Production Act of 1950".

Will you please see that this application is processed along with our other applications on Form MF-100 and Form NSRB-146 which were mailed to you on May 25, 1951?

Please advise if further information or data is desired.

Yours very truly

COLORADO STANDARD LEAD ZINC MINES, INC.

R. R. Wilson

R. R. ~~WILSON, Vice~~-President and
Managing Director

RRW:h
enclosures

cc: JBK
EJS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 4 - 1951
LAUREN F. SIMBEL
Executive Secretary

COLORADO STANDARD LEAD ZINC MINES INC.

MINE OFFICE
LAKE CITY, COLORADO

SANTA BARBARA OFFICE
313 BALBOA BLDG.
SANTA BARBARA 5-3520

Lmd 1063

QUESTIONAIRE

May 25, 1951

1. Colorado Standard Lead Zinc Mines, Inc.
Head Office: 313 Balboa Building, Santa Barbara, California
Mine Office: Lake City, Colorado

2. Zinc and lead concentrates to be produced
By-product: silver

3. A consolidation of Ute, Ule, Hidden Treasure and California Mines and properties:
Main adit Ute Mine is a drift, also a vertical shaft 450' deep.
Ule shaft inclined depth approximately 600'. Present adit California mine drift- winzes later.
Several thousand feet of drifts, shafts etc.
Present mill capacity 75 tons per day.

4. Nearest towns: Lake City, Colorado - 3½ miles
Gunnison, Colorado - approx. 55 miles
Galena Mining District, Hinsdale, County, Colorado.

5. (a) Colorado Standard Lead Zinc Mines, Inc. is owned 50% by The Lucky Tiger-Combination Gold Mining Company and 50% by Ridgeway R. Wilson and Associates, both successful, seasoned and experienced mining organizations. The Lucky Tiger Company successfully operated in Mexico for twenty-five years. Wilson, (see biography below) a fully qualified Mining and Professional Engineer, a United States citizen, has operated in British Columbia, Canada for over thirty-five years.

(b) The mine will be managed by experienced mine operators, under direction of Ridgeway R. Wilson, Managing Director and Vice-President; following is portion of biography taken from WHO'S WHO IN CANADA, International Press Limited:

"Wilson, Ridgeway R., B.Sc. -- Consulting Mining Engineer, Suite 213-602 West Hastings Street, Vancouver, B.C.; Mining Engineer in charge of exploration and development, Pacific Northwest /Ventures Ltd. & Associated Companies (St. Eugene Mining Corporation Ltd.)/; President: Wilson Mining Corporation Limited, N.P.L.; Silver Standard Mines, Limited, N.P.L.; Managing Director, Ingenika Mines Ltd. Born Carnegie, Penn., U.S.A., Jan. 26, 1890, son of W. R. and the late Emma (White) Wilson, both British racial origin. Educated United States; Canada; England and South Africa; Queen's University, Kingston, Ont. (B.Sc., 1913; mining and metallurgy). Had considerable experience at Cobalt and other Northern Ontario camps. With Lake Superior Iron & Steel Co.; with Crow's

West Pass Coal Co., Fernie, B.C.; resident Manager, Granby Consolidated Mining, Smelting and Power Company Limited; Mining Engineer: Trites, Wood, Wilson Syndicate, which developed the Premier Gold Mine; W. R. Wilson & Sons, and active in developing other mining properties, including the Eastall Mine, St. Eugene Mine, etc. Has contributed several articles and papers for American and Canadian Institutes of Mining and Metallurgical Engineers. Member, Finance Committee, School Board, Oak Bay, Victoria, B.C., for some years. . . Member: American Institute of Mining and Metallurgical Engineers, Canadian Institute of Mining and Metallurgy (former member of Council and Executive Committee); Association of Professional Engineers, British Columbia...." Also member Advisory Committee B. C. Research Council (Mining and Metallurgy).

President: J. B. Kanzebaum - also President of The Lucky Tiger-Combination Gold Mining Company, Kansas City, Missouri

Chief Engineer: Ernest J. Stanley - Mining Engineer and former manager for many years for Lucky Tiger Company in Mexico

Mine Superintendent: William W. Harritt - experienced superintendent and mine operator, formerly with Lucky Tiger Company

Other officers and directors are:

C. M. Blackmar, Director and Vice-President, Attorney at Law, Kansas City, Mo.

Carleton B. Wood, Director, Attorney at Law, Santa Barbara, California.

Ernest J. Stanley, Treasurer (seeabove).

F. C. Miller, Director and Assistant Treasurer, also Treasurer of The Lucky Tiger-Combination Gold Mining Company.

J. H. Herring, Secretary, Santa Barbara, California, graduate of The University of Texas in Business Administration and experienced office administrator.

6. Original discovery about 1870, followed by intermittent operation of three mines, Ute, Ule, Hidden Treasure. No effort made to save zinc concentrates in early days, zinc was then of no value and under penalty at lead smelters.

Ute and Ule Mine

TONS	Av. Recovery per ton
304,000	Au. 0.01 oz.
	Ag. 3.00 oz.
	Pb. 12.0 %
	Zn 3.0 %

Hidden Treasure Mine

TONS	Av. Recovery per ton
112,000	Au. 0.01 oz.
	Ag. 4.4 oz.
	Pb. 12.0 %
	Zn. 2.5 %

6. (Cont.)

Note: No effort made to save zinc in early days and general practice was not to assay for zinc. Old assay maps do not include zinc assays which must have been quite large judging by our sampling of developed and available ore.

(c) See accompanying copies of reports by consulting engineers, Walker and Walker, Pueblo, Colorado and Glenville A. Collins, Santa Barbara, California.

7. Production: See Par. 6 for production to date:
No production 1948, 1949, 1950. Mine required rehabilitation and modernization of mine and mill equipment.

8. Gross value of production at 1951 metal prices would be: 416,000 tons @ $50.00 per ton, or about $20,000,000.00 (Twenty million dollars).

Check samplings of ore developed and indicated in winze below No. 5 Ute Level 12,000 to 15,000 tons, averaging about 24% combined lead and zinc.

A substantial tonnage (perhaps 25,000 tons) of ore of somewhat lower grade believed to remain in old stopes in Ute and Hidden Treasure Mines.

A substantial tonnage of ore with high zinc content also reported to have been left in the old Ule Mine. Reason for closing down and abandoning the Ule Mine was stated to be on account of a high zinc and lower lead content of ore and low price of lead. Zinc was then of no value, and under penalties at the lead smelters.

See accompanying reports by Engineers Walker and Walker and G. A. Collins for assay maps and estimates of tonnage available for mining.

Ore or Mineral Reserve:

	Estimated tons	Metal content	Gross Value
(Measured	8,000	24% Combined	
Indicated	7,000	lead and zinc	$85 per ton
	15,000		

Recoverable Unit Value per ton	Estimated Cost of Production
$55.00 (after deducting freight and treatment charges)	$30.00 per ton

9. Access Roads: Hinsdale and Gunnison County maintains roads to Lake City, 3½ miles, and Gunnison, 45 miles, but roads should be improved for heavy hauling of concentrates. Program underway to widen narrow right-of-way into good truck road; program to be completed this year.

10. Climate: Elevation mine about 9,000 feet, snowfall light, area free from snow slides; climate good, permitting year round operation of mine without difficulty.

11. Water supply: Available for hydroelectric plant and mill from Henson Creek; sufficient water for power plant available 8 months in the year when it will be necessary to operate diesel electric plant as stand-by power.

12. Power: Mine equipped with hydroelectric power plant including dam and flume; 3 water turbines, 120 h.p. each; 1 d-13000 Diesel Engine, Caterpillar; 1 D-397 Caterpillar Diesel, connected to a 480 volt generator. Area behind dam is silted and requires clearing for efficient operation and to keep silt and gravel out of the flumes and turbines.

13. (a) Mine will require about sixty (60) men. (b) Experienced men available (c) We plan to contract development and mining; company to supply all necessary equipment. Current day wage, approximately; Miners and Muckers $12.

14. Equipment and Facilities: (a) Mine was formerly equipped with 100 ton mill which requires modernization. Mine has necessary bunk houses (requiring repairs) for about 35 men; assay office, but no equipment; machine shop, partly equipped. See copy of inventory of equipment attached hereto

(b) Additional equipment and facilities necessary: Mill modernization including new crusher, rebuilding ball mill, new classifier, and new lead and zinc flotation cells.

15. Government assistance:

The Company will require:
(1) Priorities, allocation of materials, maintenance, repair and operating supplies.

(2) Government guarantee of private loans estimated total amount required: $395,000 (Three hundred ninety-five thousand dollars). A permit desired to treat the project as a salvage proposition until the loan has been paid off or reserve accumulated for that purpose.

(3) Purchase contract desired for zinc and lead concentrates for five year period.

(4) Contract to treat mine as a salvage operation until loan $395,000 has been paid off or reserve accumulated for that purpose. We are afraid of tax department making a capital levy under the guise of income or excess profits tax.

(5) We request a permit or contract for accelerated depreciation.

dma 1068

U. S. DEPARTMENT OF INTERIOR
DEFENSE MINERALS ADMINISTRATION

May 25, 1951

Form MF-100 (March 1951)

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

APPLICANT; Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building, Santa Barbara, California

1. Materials produced: (a) Lead and Zinc Concentrates

(b) Silver

2. Old names: Ute, Ule and Hidden Treasure; California Mining Lode
Present name: Colorado Standard Lead Zinc Mines
Type: Lod e mines producing lead and zinc concentrates.

(a) 2,000 linear ft. shafts

(b) Drifts and crosscuts in excess of 10,000 linear ft.
Note: Many thousand feet of drifts and crosscuts inaccessible at present.

(c) Tunnels or adits approximately 3,000 ft.

Ute and Ule shafts are flooded but area above Ute No. 6 level is not flooded and is accessible for development operations. Available information indicates that no serious pumping problem exists.
Productive capacity 125 tons per day crude ore, 25 tons to be sorted out by hand sorting and 100 tons milled.

3. (a) Approximately 55 miles south of Gunnison, Colorado
3½ miles Southwest of Lake City, Colorado

(b) Galena Mining District

(d) Hinsdeal County, Colorado

4. (a) Property is not now in operation but is being rehabilitated and being made ready for operation.

(b) Colorado Standard Lead Zinc Mines, Inc. is the owner of the property.

5. Ute, Ule and Hidden Treasure Mines had a record of production extending over many years prior to 1919 and a limited production subsequent to that date.

5. Continued:
The mine can be brought into production in approximately six months time. There is a sizable tonnage of ore existing on dumps and available for mining in the old mines.

6. Colorado Standard Lead Zinc Mines, Inc. is owned 50% by The Lucky Tiger-Combination Gold Mining Company and 50% by Ridgeway R. Wilson and Associates, both successful, seasoned and experienced mining organizations. The Lucky Tiger Company successfully operated in Mexico for twenty-five years. Wilson, a fully qualified Mining and Professional Engineer, a United States citizen, has operated in British Columbia, Canada for over thirty-five years.

The mine will be managed by experienced mine operators under direction of Ridgeway R. Wilson, Managing Director and Vice-President

7. History: Refer to reports attached. (c) We are enclosing reports by Walker and Walker, Consulting Mining Engineers of Pueblo, Colorado; Glenville A. Collins, Mining Engineer, Santa Barbara, Calif.; and T. D. Benjovsky.

8. Names and addresses of Officers and Directors:

J. B. Kassebaum, President, Kansas City, Missouri: Director: 1 share stock

Ridgeway R. Wilson, Vice-President and Managing Director: 1 share stock
Santa Barbara, California

C. M. Blackmar, Vice-President: Kansas City, Missouri: Director: 1 share stock

Carleton B. Wood, Santa Barbara, California; Director: 1 share stock

Ernest J. Stanley, Treasurer, Los Angeles, California

F. C. Miller, Assistant Treasurer; Kansas City, Missouri, Director: 1 share

J. H. Henring, Secretary; Santa Barbara, California

Stockholders: 18,000 shares owned by The Lucky Tiger Combination Gold Mining Co.
18,000 shares owned by Ridgeway R. Wilson and Associates

9. Common Stock Authorized: $250,000; Outstanding $36,005; Par Value $1.00
Number shares outstanding: 36,005

10. The mine is not now in operation but can be brought into production within six months time on basis of approximately 125 tons per day crude ore, 25 tons to be sorted out, 100 tons per day processed, provided adequate funds are available for the program.

(2) 100 tons per day processed

(3) Lead and zinc concentrates

11. Estimated maximum monthly production 3,000 tons

12. See Engineers' reports

12. (b)See Accompanying Engineers' reports

(1) Ore or mineral reserve:

Measured (proved)	12,800 tons
Indicated(Probable)	28,000 tons

(2) 0.01 oz gold; 2.5 oz silver; 15.9% lead; 4.0% zinc

13. Access Roads: Hinsdale and Gunnison Counties maintain the roads to Lake City, 3½ miles, and Gunnison, 55 miles. Program underway to widen right-of-way into good truck road; program to be completed this year.

14. Water Supply: Available for hydroelectric plant and mill from Henson Creek; sufficient water for power plant available 8 months in the year when it will be necessary to operate diesel electric plant as stand-by power.

15. Power: Mine equipped with hydroelectric power plant including dam and flume; 3 water turbines, 120 h.p. each; 1 D-13000 Caterpillar Diesel Engine; 1 D-397 Caterpillar Diesel, connected to a 480 volt generator. Area behind dam is silted and requires clearing for efficient operation and to keep sand and gravel out of the flumes and turbines.

16. Labor: Approximately 30 men employed; average 5 miners, 3 muckers, 3 trammers, 4 timbermen; 5 top men, 2 hoistman, and misc.including: blacksmith, millwright, shift boss, foreman, etc. Mine will require later a total of about sixty (60) men for full scale operation, on the basis of 100 tons per day.

17. Mine was formerly equipped with 100 ton mill which requires modernization including new crusher, rebuilding ball mill, new classifier, and new lead and zinc flotation cells. Note: See list of power equipment No. 15.

Mine is equipped with pipe lines, rails and necessary equipment for active development. Mine has necessary bunk houses (requiring repairs) for about 35 men; assay office, but no equipment; machine shop, partly equipped.

18. Old mine plans indicate sizable tonnage of zinc and lead ore availabe in the old Ule Mine. Plan is to connect the Ule shaft with the Ute shaft by means of a 400 ft. crosscut tunnel and center future operations at the Ute shaft. The Ute shaft requires retimbering and equipping with electrically driven hoist and pump to handle at least 100 tons per day.

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.

COLORADO STANDARD LEAD ZINC MINES, INC. BY P. P. Wilson

May 25, 1951 Vice-President and Managing Director

dms 1063

U. S. DEPARTMENT OF INTERIOR
DEFENSE MINERALS ADMINISTRATION

May 25, 1951

Form MF-100 (March 1951)

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Santa Barbara, California

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Carleton B. Wood, Santa Barbara, California; Director: 1 share stock

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Number shares outstanding: 36,005

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(3) Lead and zinc concentrates

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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.

COLORADO STANDARD LEAD ZINC MINES, INC. BY R. R. Wilson

May 25, 1951 Vice-President ~~and~~ Managing Director

FILE COPY
SURNAME:

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

April 27, 1951

Mr. Ridgeway R. Wilson, Vice President
Colorado Standard Lead Zinc Mines, Inc.
313 Balboa Building
Santa Barbara, California

Subject: DMA-1063
TA-7718
Re: Necessity Certificate (Colorado)

My dear Mr. Wilson:

Receipt is acknowledged of the application of February 26, from the COLORADO STANDARD LEAD ZINC MINES, INC., for a necessity certificate pursuant to Provision of Sec. 124A (Amortization Deduction) of the Internal Revenue Code.

The application was assigned Docket Number 1063 and referred to Mr. Otto Herres, Chief, Lead-Zinc Branch, on April 26.

In any future correspondence relating to your application, kindly refer to DMA-1063 TA-7718.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:aec
copies to Strobel-2
Files
Mr. Lyon
Mr. Heres

Form MF-103
(April 1951)

U. S. 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 1063 X

Date received 6-4-51

Participation

COLORADO STANDARD LEAD ZINC MINES, INC.
313 Balboa Building
Santa Barbara, California

Name and address of applicant

Date May 31, 1951

FILL IN THIS BLOCK

Date of application May 31, 1951

Estimated cost $150,000

Mineral or metal zinc and lead concentrates

Percentage of Government participation 50% ($75,000)

Location of mine Lake City, Colorado
Development program in areas adjacent to Ute and Ule Shafts

Date of filing MF-100 May 25, 1951

DMA Docket Number, if available DMA-1063
TA-7718

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?
*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?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is 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. See data with MF100
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)? $75,000 to be paid by Colorado Standard Lead Zinc Mines, Inc.

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

16—64067-1

JUN 12 1951

All information below [illegible] given on Form MF-100 and NSRB-[illegible] with supporting reports.

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

    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.
*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.
*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.
*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.
15. State in detail how the ore could be shipped and how and where milled.
*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.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*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:

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

    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.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*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.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
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.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 4 - 1951
DOUGLAS W. McKAY
Secretary
Executive Secretary

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.

Colorado Standard Lead Zinc Mines, Inc.
(Name of company)

By R. R. Wilson
(Signature of authorized official)

May 31, 1951
(Date)

Vice-President and Managing Director
(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.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Form MF-103
(April 1951)

U. S. 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 1063X

Date received 6-4-51

Participation

COLORADO STANDARD LEAD ZINC MINES, INC.
313 Balboa Building
Santa Barbara, California

Name and address of applicant

Date May 31, 1951

FILL IN THIS BLOCK

Date of application May 31, 1951

Estimated cost $150,000

Mineral or metal zinc and lead concentrates

Percentage of Government participation 50% ($75,000)

Location of mine Lake City, Colorado
Development program in areas adjacent to Ute and Ule Shafts

Date of filing MF-100 May 25, 1951

DMA Docket Number, if available DMA-1063
TA-7718

INSTRUCTIONS

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THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*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.
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*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
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8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. See data with MF100
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)? $75,000 to be paid by Colorado Standard Lead Zinc Mines, Inc.

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

16—64067-1

MF-200
(April 1951)

Docket No. DMA _____
Commodity _____

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] _____

_____

_____

_____

_____

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 _____ days from the date of this contract shall commence work on a project of exploration for [5] _____; 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] _____ 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. Attached hereto, marked "Exhibit 'B'," is a detailed list of 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 its agreed pro-rata share of the cost. 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.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. 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.

RIDGEWAY R. WILSON & ASSOCIATES
MINING ENGINEERS

PRELIMINARY REPORT

on

UTE & ULE MINE

HINSDALE COUNTY COLORADO

by

GLENVILLE A. COLLINS

Mining Engineer

Santa Barbara, Calif.

July 12- 1950

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
FILED

MAY 29 1951

LANSON F. STROBEL
Executive Secretary

GENERAL CONCLUSIONS:

That the assay plan accompanying Report of Walker & Walker Mining Engineers of Denver on Ute & Ule Mine, has been checked by me as to the winze and 6th level and found to be substantially correct.

That approx. 15,389 tons of ore is adequately proven in the general area below No. 5 level and within the scope of the 6th level workings. This body of ore being of workable values as indicated by the assays shown under "Ore Body" in full detail.

Realizing the fluctuation of metal prices at this time, the ore body is shown in percent of lead and zinc, but at present prices, the tonnage would figure in excess of one million dollars.

Operating costs likewise would vary according to plan of operation, but it is my belief that this property can be operated to include all costs of mining, milling, transportation and smelting, etc. within $25.00 per ton. At this figure, there should be complete amortization of capital and a substantial profit realized.

From my observation of the Ute & Ule Property, I feel confident that other ore bodies than the one covered in this report are accessible, and embrace considerable tonnage. One instance would be the Ule vein through the so-called California tunnel which is on Ule ground. Others would be the backs of present Ute stopes and some of the area off the Hidden-Treasure shaft. These areas could easily amount to many times the tonnage shown as proven ore around the 6th level workings.

I would recommend a careful survey and sampling of the entire property now accessible, and if the results of this justify it, then the unwatering of the Ute & Ule shafts.

Another factor worthy of close study is the system of Cross-veins. There are a number of them and these have not been given sufficient consideration, but I believe are capable of considerable production. A study of other metals should also be had to include Cadmium and possibly radioactive ores.

Respectfully submitted
/s/ Glenville A. Collins

July 13, 1950

Registered Professional Mining Engineer

This report contemplates a preliminary inspection of the Ute Mine principally and the de-watering of the Ute Winze below the No. 5. main adit level in order to determine if the ore body shown in the Report of Walker & Walker Mining Engineers of Denver Colorado, is of commercial importance with lead and zinc values substantially as reported. It is contemplated that a complete report based on re-sampling the entire property should follow:

LOCATION

The Ute & Ule property is in the Galena Mining District In Hinsdale County, Colorado - 4 miles S. W. of Lake City, the county seat and about 55 miles south of Gunnison, Colorado.

BRIEF HISTORY

An extensive and detailed history of the property is given in Bulletin 478 United States Geological Survey by John D. Irving & Howland Bancroft, based on data available to 1904. Briefly summarizing the history, it was discovered in 1871. Operations started in 1876. About 1889 The Denver & Rio Grande Railroad (narrow gauge) was built into Lake City and provided cheaper transportation to various smelters and from then until 1902 the property was worked continuously. The American Smelting & Refining Company dominated the operations during a considerable portion of this period. In 1925 the property was bought by Michael Burke, who built a dam and water power plant, a 75 ton flotation mill, but who operated principally on dumps and easily accessible ores, doing little work underground.

Burke died in 1930 and in 1940 the property was bought by Base Metals Company. Later the Hidden-Treasure property was taken into the company. The Hidden-Treasure is an extension of the Ute vein system and produced heavily from about 1896 to 1904. This company has done little outside of maintaining the Ute workings and the equipment.

The Base Metals Company is dominated by A. X. Erickson, Carl L. Modesitt

and Don Oliver of Denver who have recently made an agreement with R. R. Wilson of Vancouver, B. C. at a very attractive price and terms.

The Zinc content of the ores was, throughout the years of operation, the principal handicap to operations.

The Bulletin 478 credits the Ute & Ule with an estimated production of $12,000,000 and the Hidden-Treasure with $700,000. Also of Hinsdale County between 1884 and 1908 - with Gold $1,284,906; silver $4,047,416. Copper with 802,606 pounds; lead 78,903.128 pounds; Zinc 237,409 pounds. Estimated value $7,577,750.

GEOLOGY

The district consists principally of volcanic rocks such as Rhyolites and Pyroxene Andesites - locally known as Picayune Volcanics. Bulletin 478 indicated that flow rocks have a depth of 7,400 feet and that the known veins are traceable on the surface through a vertical range of 5000 feet. The vein fissures are extremely long, the Ute and Hidden-Treasure ore shoots being almost continuous for approx. 2700 feet on the strike which is N- 30 degrees to 40 degrees E. and dipping approx. 50 to 70 degrees to the West.

The veins cut all the flow rocks, even the monzonite porphyry intrusions.

The country rock appears to have no marked effect on the ore formation.

The primary minerals are quartz, sphalerite, galena and pyrite. Secondary minerals are sericite and tetrahedrite; wherever there is pyrite, as especially noticeable in the California claim on the Ule vein, there are substantial gold values. Rhodochrosite shows up especially in the Hidden-Treasure ores.

It is presumed by Irving (Bulletin 478) that the Mineral age is late Miocene or early Pliocene.

Henson Creek at the tunnel location flows S. 70 degrees to 80 degrees W. and does not appear to be a fault line. There is a major fault parallelling Henson Creek and about 1-1/2 miles Southerly near the head of Alpine Gulch

and which dips about 70 degrees Southwesterly.

Photograph herewith shows the scarp in the distance taken from Hidden-Treasure shaft.

GENERAL DESCRIPTION

The Ute & Ule mines are substantially parallel veins. The Ule shaft, reported to be over 500 feet deep is close to the portal of the No. 5 cross-cut tunnel to the Ute. Being full of water nothing was done for the benefit of this report except to examine the surface outcrop across the hill and into the California property where some leasers are operating in a small way through a Cross-cut tunnel belonging to the Ule property.

The Hidden-Treasure vein is a continuation of the Ute vein at higher elevation as shown by the mine maps and not now readily accessible. It is believed however, that it would not be difficult to make some of the Hidden-Treasure lower workings and shaft safe for inspection and sampling.

For the purpose of this preliminary report the Ute will be the principal basis of discussion. The Ute vein is accessible through the No. 5 Cross-Cut tunnel which is roughly 1200 feet to the intersection and from close to this intersection the vein makes ore and has been stoped above this level most of the distance to the Hidden-Treasure shaft. These stopes are generally open and accessible. The ground is very solid and well-timbered and at least one raise has safe ladders to the back of the stope something over 100 feet. It would not be difficult to carry this raise through to the adit level above for a second exit when operations are undertaken.

Some of the backs of these stopes appear to be still in ore but no sampling was undertaken by me as it would require preparations beyond the purpose of this report.

From this No. 5 level and several hundred feet beyond the intersection is a winze. This winze is 110 feet deep on the vein with a dip of approx. 70 degrees.

From the bottom of the winze there is a North drift about 230 feet and South 231 feet. The winze was filled with water and had not been un-watered for many years. For the purpose of this examination the winze was un-watered and made accessible. Apparently the ground makes very little water and I would roughly estimate not over 5 gallons per minute.

The No. 5 tunnel is caved by a fallen slab at a point 185 feet beyond the winze. One can get over this cave by going through the stope above, but in its present condition is dangerous to pass. It could be easily cleaned up however.

The winze and drifts on the No. 6 level are all driven in ore and the description and sampling of same will be discussed separately.

The surface plant is quite extensive and consists principally of a Mill, Hydro-electric power plant, shops and sundry buildings and equipment which are generally in good condition and all described following:-

MILL

Building - frame of heavy mill construction.

Course Ore bin on tunnel level - 18' x 18' x 30' with 4 feeder gates

Belt Feeder to gyratory crusher (No. 8 Telsmith) No. 591

50 H.P. on gyratory crusher.

Heavy chain blocks over crusher.

Feeder to elevator and elevated into main mill bin.

2 - stave tanks at top of mill 1 - 12' x 12'; 1-6' x 10'

Sundry supply of chemicals and reagents.

1 - laboratory flotation machine.

1 - Fairbanks scale 100 lbs.

3 - reagent samplers and feeders.

1 - platform Fairbanks scale.

1 - Marcy Mill 5' x 6' with 50 H.P. A.C. motor belted.

1 - Dorr double drag classifier

1 - Conditioner

1 - Ton 4" balls.

1 - Belt feeder from bin

1 - Ingersol-Rand horiz. Compressor - 6" x 12" Class E. R. 1 #54268 belted to a 10 H.P. G.E. Motor 60 cycle 440 volt 3 phase. 900 r.p.m.

1 - Conditioner 5' x 6' with impeller and V-belted to motor.

2 - Sets of Ruth Flotation Units of 12 cells each size 22 No. 291, each cell is V-belted to separate motor

1- Wilfley concentrating table with separate motor drive

2 - Cone classifiers - about 5' x 6'

1- United Filter #3483 - (4 leaves).

3 - Concentrate bins and loading platform.

3 - Centrifugal pumps and motor drives

Mill is well-piped, wired, and heated.

MINE

No. 5 Level equipped with 5" air line in good condition

ON UTE DUMP.

1 - steam double drum hoist

1 - electric, 2 drum hoist with scraper bucket to haul in dump.

POWER PLANT

3 - Water wheels by James Leffel & Co. Springfield Ohio all in tandem and belted to countershaft with governor - also belted to

1 - G.E. Generator # 4313920 Form P.B. 900 r.p.m. 60 cycle, 3 phase, 480 Volts. 180 K.W. type A.T. 13 P.F. .8

1 - Belted exciter G.E. Model 49 A 2 Type C.D. 75 60 Amp - 1150 r.p.m. 7½ K.W. 125. V. Compound wound.

1 - Large Switchboard with watt-hour meter

Turbine shaft belted to large countershaft with clutch to compressor

with 24" belt and idler to flywheel of compressor about 30" face x 16 ft. diameter. Also belted to 2 large triplex pumps - 1 - Gould 6" x 8"
1 - Aldrich 4" x 5"

2 - Receivers 4' x 16 ft.

3 - H. R. T. 72" x 13' boilers by Hendry & Bolthoff of Denver. 3 stacks 30" x 100 ft.

2 - large boiler feed pumps.

Main Compressor is cross-compound Corliss about 2200 cu. ft.

1 - Fraser & Chalmers - side crank steam engine with 16' fly wheel

Tools - vises - benches etc. for entire plant - Building of stone masonry and heavy timber trussed roof.

1 - Blacksmith shop - built of concrete.

1 - I.R. drill sharpener

1 - Forge Case oil type.

1 - Grinder, 2-wheel type.

1 - 18" lathe 5' long

5 - Stoper drills

2 - Jack hammers

1 - Gas engine belted to 18" saw and track approach for timber framing.

1 - drill press and plenty of hand tools.

1 - Countershaft to drive all tools and 10 H.P. motor for power.

OUTSIDE

3 - Shaft buckets - 1 - de-watering type

13 - Ore cars

1 - Fuse house

1 - large assay office (no equipment)

2 - barns

3 - large bunk houses

2 - dwellings

1 - change house

1 - garage

1 - storage battery Locomotive (inside mine)

900 ft. of flume - steel construction on timber trestle (flume about 5' dia.) Approx. - 70 ft. of flume immediately below the dam is out. A small break at the spillway needs repairs.

A second dam 80 ft. high is located approx. ½ mile downstream and capable of further power development.

CLIMATE

The property is at approx. 8500 ft. elevation. The summer season is quite warm with cool nights and should extend from May to October. The winters would not materially hamper operations once started. The property being mostly on the South slope is fairly free of snow early in the season.

LABOUR

Lake City has been identified with mining for a great many years but with most operations now down, miners have drifted elsewhere except for a few and for leasers. There are numerous other camps not far away such as Creede, Ouray, Durango, etc., and I believe there would be no trouble in obtaining plenty of good miners and labour. There are plenty of good living conditions at Lake City.

TRANSPORTATION

The old D. & R. G. Railroad has long since been removed and made into a highway. The main road is to Gunnison 52 miles which is always maintained and accessible. Gunnison is served by the railroad for freight and has a paved highway both East to Pueblo to West to Grand Junction. It also has an Airfield and is served twice daily by the Frontier Air Lines to Denver & Grand Junction.

ORE BODY & WINZE

For the purpose of this report the area below and around the Winze between

the 5th level and 6th level of the Ute is the principal consideration. This winze 110 ft. deep is sunk on a dip of approx. 70 degrees Westerly. Ore is continuous in the winze and on the floor of No. 5 level near the winze. The map and assays attached show both the values and widths as given in Walker & Walker's report as well as those taken by me.

For the purpose of this report samples we cut the full width of the vein in most instances and assayed by G. S. Eldridge & Co. Ltd of Vancouver, B.C. for silver, lead and zinc. The silver values which are quite low have been ignored in making up the assay map attached hereto. All lead and zinc percentages have been reduced to inch percent and then properly averaged. I have used 9 cu. ft. per ton of ore in place.

The following breakdown shows the detailed calculations:-

BLOCK 1 SOUTH BETWEEN 5 & 6 LEVELS - 100 FT. Long from south face

#5 Level No. by Walker Sample Report	Width Ft.	Width Inches	% Pb	Width " x % Pb	% Zn	Width " x % Zn
	3.1	37.2	7.9	279		
	1.7	20.4	28.5	581		
	4.0	48.0	12.5	600		
	3.0	36.0	9.5	342	No Zn assays in Walker's report.	
	3.0	36.0	4.5	162		
	2.0	24.0	34.0	816		
	2.9	34.8	17.5	695		
	3.3	39.6	24.5	970		
	1.8	21.6	22.5	486		
	3.4	40.8	28.0	1142		
	1.5	18.0	27.6	496		
	1.7	20.4	4.3	88		
	1.4	16.8	10.4	175		
		393.6		6832		

Average width $\frac{393.6}{13} = 30.2"$

Average %Pb $\frac{6832}{393.6} = 17.4\%$

#6 Level by G.A. Collins						
S 1 F	12	28.5	342.0	10.9	131.
S 1	20	3.7	74.0	6.2	124.
S 2	12	2.2	26.4	2.7	32.4
S 3	6	22.0	132.0	9.4	56.4
S 4	8	8.5	68.0	14.8	108.2
S 5	12	20.1	241.0	13.8	165.
	70		883.4		617.0

Average width $\frac{70}{6}$ = 11.5"

Average % Pb $\frac{883.4}{70}$ = 12.6%

Average % Zn $\frac{617.0}{70}$ = 8.94%

Average width between 6th level & 5th level 20.9" or 1.7 ft.

Average Values in Pb - 15%

Value in Zn. taken only by Collins on 6th level and used for block 8.94%.

Block 1 - South face - 2080 tons averaging Pb - 15%

Zn - 8.94%

BLOCK 2 SOUTH BETWEEN 5 & 6 LEVELS - 60 Ft. long from winze south

#5 Level by Walker Report	No. Sample	Width Ft.	Width Inches	%Pb	Width " x % Pb	% Zn	Width " x % Zn
		3.8	45.6	9.0	410		
		3.6	43.2	23.5	1012		
		2.6	31.2	46.5	1450		
		2.6	31.2	4.5	141	No Zn assays in Walker's report.	
		4.1	49.2	35.5	1745		
			200.4		4758		

Average width $\frac{200.4}{5}$ = 40"

Average % Pb $\frac{4758}{200.4}$ = 23.8%

#6 Level by G.A. Collins						
	S11	64	7.0	448	12.6	805
	S12	41	15.9	652	3.4	139
	S13	37	19.5	720	8.7	321
	S14	22	38.0	835	6.6	145
		158		2655		1410

Average width $\frac{158}{4}$ = 39.5"

Average % Pb $\frac{2655}{158}$ = 16.8%

Average % Zn $\frac{1410}{158}$ = 8.9%

Winze between 5th level and 6th level from samples by G. A. Collins

W 1/2	61	13.6	830	1.4	116
W1	46	27.0	1240	5.4	248
W2	36	14.2	512	6.9	279
W3	30	14.5	435	7.9	237
W4	38	14.4	546	6.6	250
W5	24	18.4	441	7.5	180
W6	18	23.0	414	7.0	126
W7	24	18.6	446	4.3	106
W7½	36	19.8	712	5.2	187
W8	22	38.0	835	6.6	145
	335		6410		1874
	10		335		335

Average width 33.5"

Average Pb 19.1%

Average Zn 5.6%

Averaging Walker's 5th level samples with Collins winze and 6th level samples gives Pb - 17.6%

Averaging Collins winze and 6th levels samples for Zn gives agerage of 7% Zn.

This #2 block 110 ft. x 60 ft. x 3.27 ft. gives 2398 tons from samples taken on 3 sides for Pb and on two sides for Zn.

BLOCK 3 NORTH BETWEEN 5 & 6 LEVELS for 150 ft. from winze North.

#5 Level by Walker Report	No. Sample	Width Ft.	Width Inches	% Pb	Width " x % Pb	% Zn	Width " x % Zn
		2.5	30.	24.1	723		
		2.0	24.	33.0	792		
		1.5	18	47.5	850		
		2.7	32.4	17.3	561	No Zn assays in Walker's report	
		2.5	30.	22.0	660		
		2.0	24.	20.2	485		
		2.8	33.6	20.0	672		
		2.0	24.	34.5	826		
		1.5	18	45.8	825		
		2.0	24	27.5	660		
		1.7	20.4	31.0	633		
		3.3	39.6	18.5	734		
		1.2	14.4	6.03	87		
			331.4		8508		

Average width $\frac{331.4}{13}$ = 25.4"

Average % Pb $\frac{8508}{331.4}$ = 25.7%

#6 Level by G.A. Collins	N5	42	0.2	8	0.0	0
	N6	40	29.7	1190	6.5	260
	N7	53	18.4	975	7.1	376
	N8	62	14.2	880	10.2	631
	N9	39	10.7	417	12.3	480
	N10	35	15.7	546	8.9	312
	N11	40	10.5	420	12.2	489
	N12	48	17.9	860	3.2	153
	N13	35	0.0	0	0.2	7
	N14	42	6.2	260	0.6	25
	N15	31	17.2	534	11.7	361
	N16	22	30.9	680	4.4	97
	N17	25	5.2	130	2.6	65
	N18	47	12.6	592	4.8	225
	N19	42	26.3	1105	3.7	155
	N20	32	29.0	927	3.1	97
		635		9524		3734
		16		635		635

Average 39.7" Pb = 15% Zn = 5.9%

Averaging Walker's 5th level for Pb: Collins Winze and 6th level samples gives average of 20.3% Pb.

Averaging Collins winze and 6th level samples for Zn = 5.95%

This block #3 North 110 ft. x 150 ft. x 2.7 ft. gives 4950 tons from samples of Pb 3 sides and Zn 2 sides.

In addition to the above I believe it is safe to consider as proven ore the downward continuation of each ore block shown of 75 ft. This would add:

#1 South face block 75' below 6th level	950 tons
#2 South winze block 75' below 6th level	1635 tons
#3 North winze block 75' below 6th level	3376 tons
Total below 6th level	5961 tons

To Summarize Ore blocks & % Pb & Zn

Block 1 - South face	2,080 tons	Pb. 15%	Zn 8.94%
Block 1 - South fact 75' below 6th level	950 tons	Pb. 15%	Zn 8.94%
Total ---	3,030 tons		
Block 2 - South Winze	2,398 tons	Pb. 17.6	Zn 7.0%
Block 2 - South winze 75' below 6th level	1,635 tons	Pb. 17.6	Zn 7.0%
Total ---	4,033 tons		
Block 3 - North winze	4,950 tons	Pb. 20.3%	Zn 5.95%
Block 3 - North winze 75' below 6th level	3,376 tons	Pb. 20.3%	Zn 5.95%
Total ---	8,326 tons	- Grand Total	15,389 Tons

From my examination of the property and area, I see no reason not to expect the Ore to continue in depth for several hundred feet and maintain comparable percentages of lead and Zinc.

DISCUSSION:

MILL

Regarding the mill I would suggest that consideration be given to adding a Symons Cone crusher between the Ball Mill and the Gyratory Crusher. This will greatly increase the Ball Mill capacity.

Would also suggest modern type jig following the Symons Crusher, by which considerable course concentrate could be sloughed off without grinding. Various combinations in this connection could be worked out by mill tests and probably thereby the mill capacity increased to over 100 Tons per day at little cost.

MILL TAILINGS

There is a limited area for tailing disposal at the present mill location. These could be flumed downstream to a flat that could take 15 or 20 thousand tons. Meantime several temporary expedients could be used, such as raising the present tailing pond about 15 ft. and filling the area below the Compressor plant building.

CUSTOM MILL

In event the mines of the district warranted it a custom mill could be built in Lake City. There is an excellent site at the lower end of town shown in photograph where ample tailing room is available and adequate water supply.

POWER

The re-conditioning of the water power would be quite simple by restoration of the broken flume and dam repair. Possibly some of the trestle will need repairs. Probably the plant would be adequate for some time, but could be supplemented temporarily by use of diesel engine and later more water power could be developed by the use of the lower dam which has possibilities for around 2,000 K.W. or more depending on the length of penstock and head.

Diesel Oil at Lake City is available in tank truck lots at approx. 17¢ per U. S. gallon.

SMELTER & MILL SETTLEMENTS

There is a 300-ton custom mill at Ouray, operated by the American Zinc Lead & Smelting Company, Mr. Marvin Kay, Mgr. Their charges for a recent truck shipment from the California mine which is a continuation of the Ule vein. Their charges were $4.50 per ton for milling with settlements for lead at $1.10 a unit; zinc at 40¢; silver at 64¢, and gold at $23.00. Any copper goes with the zinc.

An up to the minute basis of Smelter settlements is not readily available at this writing, but the data is being developed and can be attached hereto shortly. Meantime as a general outline, will say that the American Zinc have a lead plant at Leadville, Colorado. That the treatment costs are from $5. to $8. a ton. That freight and trucking rate from mine to Leadville is $9.00 a ton. They pay for 95% of lead and about 80% of the silver. No Zinc pay at Leadville.

At Amarillo, Texas, the smelter settlement is approx. $5.50 freight rate with a charge of $31.00 a ton on Zinc Concentrates, with a settlement bases on 95% of Zinc value.

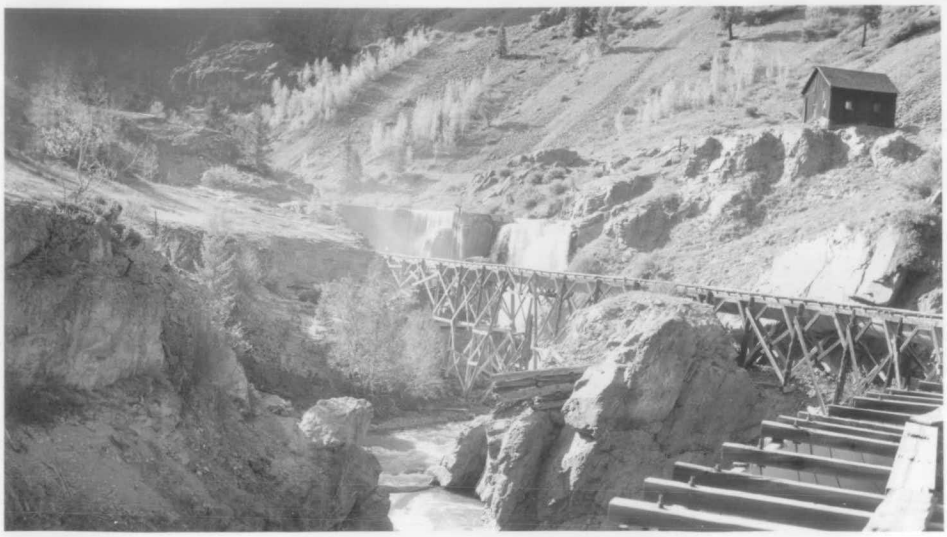
At Midvale, Utah, the International Smelting, also the Anaconda, have plants and take Zinc ores. From Lake City, the concentrates are hauled to Montrose, Colo. where a standard gauge railroad (D & R.G.) is available going to Utah. The haul to Montrose is $4.50 a ton by truck.

There is a plant at Coffeyville, Kansas, which buys ores carrying both lead and zinc for treatment.

Showing fault line South.

Lower dam and road from Hidden-Treasure dump.

Dam and flume showing break.



Flume near dam.

72A

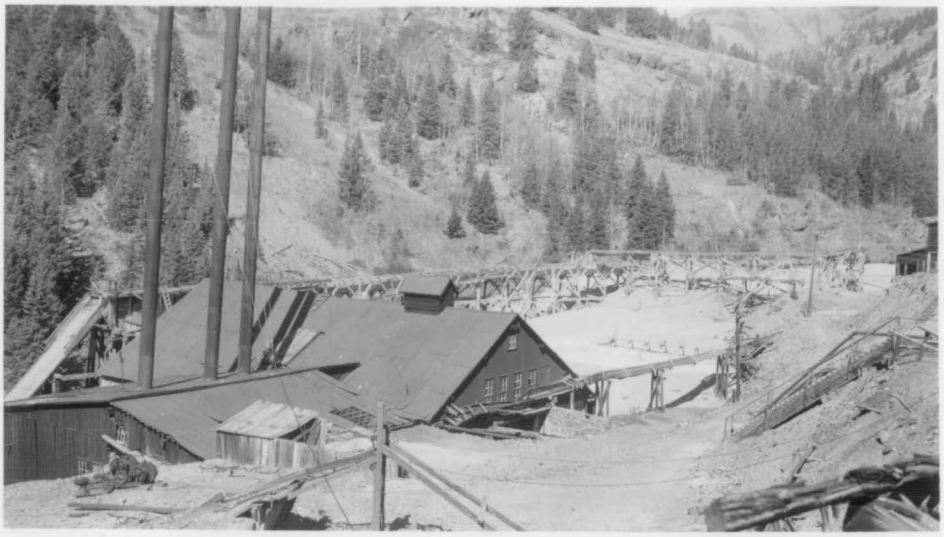
72A

Henson Creek
From Dam Upstream

Power flume.

72B

72A



Power house & Mill Tailings looking West.

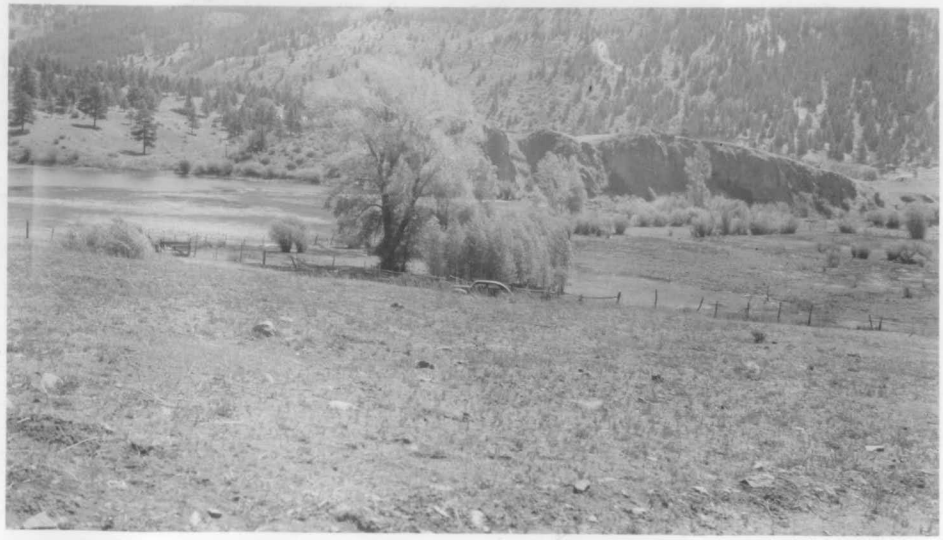
Power House looking East.

Power House of Masonry

Mill looking Easterly

Mill from Flume level

Suggested Mill Site near Lake City



Same as above showing tailing area

New Motel at Lake City

Main Street of Lake City

Street in Lake City

RIDGEWAY R. WILSON & ASSOCIATES
MINING ENGINEERS

GEOLOGY AND ORE DEPOSITS

of the

UTE-AND-ULE MINE,

HINSDALE COUNTY

COLORADO.

by

WALKER & WALKER

October 1, 1948

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAY 2 3 1951
LANDON H. GILMER
Executive Secretary

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EXHIBITS.
(All omitted in this Copy)

A. Claim Map.
B. Diagrammatic Plan of vein system.
C. Diagrammatic Northeast-Southwest Longitudinal Section Along the Ute-and-Ulm Orebody.
D. Plan and Sections of Workings, 100 scale.
E. Plan of Workings, 50 Scale.
F. Assay Map.

NAME: UTE-AND-ULE MINE.

LOCATION: The Ute-and Ule (pronounced "Ulay") Mine, - which also embraces the adjoining, formerly separate Hidden Treasure Mine, - is situated along Henson Creek, in the San Juan Mountains, in the Calena Mining District, Hinsdale County, Colorado, about three miles west of the small town of Lake City, which is the county seat.

OWNERSHIP: The property is owned by Carl L. Modesitt, A.X. Erickson and Don B. Oliver.

CLAIMS: The property comprises the following patented lode mining claims and mill-sites: (See Exhibit "A")

U.S. Surv.No.	Name.	U.S.Surv.No.	Name.
15157	Albany	13781	McCarthy
1212	Auric	13985	McCarthy No. 3
1212	Bushnell	13781	McCombe
13193	Crystal	15157	McCombe No. 2
12265	Cutter	15157	Otis
12575	Don Quixote	13479	Protector
1366	Equator	12265	Regulator
	(6/7 interest)	12231	Saxon
12265	Free Lance	15157	Steele
14988	Hard Tack	148	Ute
14988	Hard to Beat	147A	Ule
13479	Invincible	1220	Ule Extension
342	Hidden Treasure	15157	Windsor
12265	Leadville	14988	Winner
12265	Mab	12265	Yankee Doodle
12265	Mayor of Leadville	2590	Ute Mill-site
12265	Maid of Henson	147B	Ule Mill-site
15157	Metropole	1366	Equator Mill-site

Unpatented Claims:

2663A	Annie	John J. Crook Placer
382	Monitor	New Year No. 1,2 and 3.

HISTORY: The veins of the Ute-and-Ule Mine were discovered in 1871, at which time, however, this area was part of the Southern Ute Reservation, and hence no work could be done until 1874, when it was purchased from the Utes and thrown open to settlement and mining entry. Operations were commenced on the property in 1876, and continued in a small way until 1883, when they were suspended, pending more favorable transportation conditions, which were essential in view of the fact that lead was the principal metal in the ore, which carried very little precious metals. The completion of the narrow-gauge Lake City branch of the Denver & Rio Grande Railroad system to Lake City in 1889, providing cheap transportation, brought about a resumption of work in that year, and from then until 1902 the property was worked continuously, - first by an English company until 1895, and thereafter by a partnership, composed of Julius Rodman (25%), and Samuel Nicholson (26%) and the American Smelting & Refining Company (49%), which bought it in that year. The English company equipped the property with a steam power plant and a gravity concentrating mill, and worked chiefly the Ule vein through the Ule shaft; but their successors worked both the Ule vein through the Ule shaft and the Ute vein through several surface tunnels, until the destruction of the surface plant of the Ule shaft by fire in 1900, after which only the Ute vein was worked until 1902, when operations were suspended. In 1917 or 1918 the American Smelting & Refining Company sank a new vertical shaft, west of the Ute workings, to a depth of approximately 350 ft. below the Ute 5th level tunnel, and drove two drifts from the bottom of this shaft. The property was purchased in 1925 by Michael Burke, who erected a concrete dam, flume

and hydroelectric power plant, and built a new 75 ton flotation mill, but did little work underground. Burke died in 1930, and the property was sold in 1940 to its present owners, who operated the mill a short time on surface dumps and a small tonnage mined from above the Ute 5th level tunnel.

Work in the Hidden Treasure mine, which occupies an extension of the Ute-and-Ule vein system to the northeast, was commenced in 1896, with the sinking of an incline shaft on one of the veins; but ore was not encountered until the following year. In 1898 the property was equipped with a hydroelectric power plant, a 100 ton gravity concentrating mill, and an aerial tramway; and from this time was worked continuously up to and including 1904, and intermittently for a couple of short periods thereafter. The property was recently purchased by the present owners of the Ute-and-Ule mine.

PRODUCTION. No complete production records of the property are available; but information obtained from several different sources indicates that the Ute-and-Ule mine has produced about 304,000 tons of ore, averaging about 0.01 oz. gold, 3.0 oz. silver, 12.0% lead and 3% zinc; and that the Hidden Treasure Mine has produced about 112,000 tons of ore, averaging about 0.01 oz. gold, 4.4 oz silver, 12.0% lead and 2.5% zinc. All but a few thousand tons, shipped as first class ore, were concentrated locally, with a reported recovery of about 65% of the silver, 80% of the lead, and none of the zinc. The lead concentrates and sorted first class ore contained about 900,000 oz. of silver and 80,000,000 lbs. of lead, of a gross value of about $3,300,000 at the average silver price of 66¢ per oz. and the average lead price of 4¢ per lb.,

then prevailing. (At current prices of 90¢ silver and 19½¢ lead, the gross value of the mine output would now be $16,400,000).

TRANSPORTATION. The property is connected with Lake City by three miles of rather narrow and crooked dirt road, all down hill from the mine, following Henson Creek. Lake City is connected by 38 miles of graded and gravelled road (Colorado Highway No. 149) with the paved National Highway No. 50 at Sapinero. From Sapinero to Eilers (the Arkansas Valley smelter near Leadville, Colo.) is 147 miles along paved highways; and from Sapinero to Montrose, the broad gauge railroad shipping point to the Salt Lake Valvey smelters, is 40 miles along paved Highway No. 50. Present trucking charges are as follows:

From Lake City to Sapinero,	38 miles;	$ 4.32 per ton.
" " " " Montrose,	78 miles:	7.72 " "
" " " "Eilers,	185 miles:	10.56 " "

The further haul from the Ute-and-Ule mine to Lake City may add 50¢ per ton to these figures. These figures can probably be improved upon to some extent, with a steady haul and a substantial tonnage.

Lake City was formerly served by a branch of the narrow-gauge Salids-Gunnison-Montrose branch of the Denver & Rio Grande Railroad system, but this Lake City branch was torn up ten years ago, and the nearest railroad shipping point is now Sapinero. The freight rates from Sapinero to Eilers, Colorado, and to Midvale, Utah, and from Montrose, Colorado, to Midvale, Utah, are as follows:

Valuation	Sapinero to Eilers, Colo.	Sapinero to Midvale, Utah.	Montrose to Midvale, Utah
$10	$ 4.02	$ 6.48	$ 6.12
15	4.02	6.84	6.48
20	4.02	7.20	6.48
30	4.20	7.56	7.56
35	4.20	7.96	7.81
40	4.20	7.96	7.81
50	4.20	8.35	7.81
60	4.20	9.01	7.81
70	4.20	9.67	8.47
80	4.20	10.33	9.13
90	4.20	10.99	9.79
100	4.20	11.65	9.79

A truck haul from the mine to Sapinero, and railroad transportation thence to Eilers, Colorado, would be the cheapest; but this would involve two transfers en route, - one at Sapinero from truck to narrow-gauge railroad car, and one at Salida, Colorado, from narrow-gauge railroad car to broad gauge railroad car, - so that a through truck haul from the mine to Eilers, Colorado, although somewhat more expensive, might prove the most satisfactory.

POWER. The mine is equipped with a hydroelectric plant, powered by water from Henson Creek, which is conveyed by a flume to the power house, where it actuates three turbines, which in turn drive an electric generator and a belt-driven air compressor. There is also a steam plant, now obsolete. Henson Creek is a large permanent stream, probably capable of generating 500 H.P. continuously throughout the year, from the two existing concrete dams. There are no electric power lines in the vicinity; and, on account of the high inbound transportation cost on fuel oil, diesel power would be relatively expensive.

WATER. The rock formations are very tight, and make little water. The lowest cross-cut tunnel (Ute No. 5 level) is nearly

dry, and the Ule shaft is reported to make only 50 gallons per minute on the average. Abundant water for mill and domestic requirements can be obtained from Henson Creek.

TIMBER. Abundant timber, suitable for mine purposes, grown in the San Juan Mountains, and can be purchased at reasonable prices from the Forestry Service and the local lumber mills..

LABOR. Only a small amount of labor is available locally, and labor would have to be imported for an operation of any considerable size.

CLIMATE. The elevation of the mine is about 9,200 ft. above sea-level. The summers are short and cool, and the winters are long and rigorous, but the snow-fall is never enough to interfere with mine operations, or with the transportation of mine products out and mine supplies in.

TOPOGRAPHY. The topography is mountainous and rugged, - the surrounding mountains rising to elevations of from 12,000 to 14,000 ft.

DEVELOPMENT. As shown on the accompanying Exhibit "D" "Plan and Section of Workings, 100 scale", in rear pocket, the property is developed as follows:

(1) By the Ule shaft, an incline following the Ule vein downwards on its northwesterly dip of about 60° to a vertical depth of about 575 ft. below the collar. From this shaft nine levels have

been driven to a maximum distance of 1300 ft. southwesterly and 1200 ft. northeasterly. Some of the levels, since being driven, have been destroyed or made inaccessible by stoping out the floor pillars. Complete maps of the levels and stopes are not available. The shaft and levels are under water, but the ground is firm, and they may still be accessible in large part if dewatered.

(2) By four cross-cut tunnels (Nos. 1, 2, 3 and 5) to and drifts along the Ute vein; together with one intermediate tunnel (No. 4) and one lower level (No. 6), which is connected with the No. 5 level by a winze. The usefulness of all the levels above No. 5 has been destroyed by stoping; but the No. 5 level is in good shape, is equipped with track and air line, and is well suited for a main transportation level or exploration level to the northeast.

(3) By the vertical, three compartment Ute shaft, sunk in the hanging-wall of the vein system to a depth of 450 ft., from the bottom of which a level has been driven. The timbering of this shaft is probably gone, but the ground is firm, and it is probably that the shaft could be reclaimed.

(4) By the Hidden Treasure shaft, - an incline following the Ute vein downwards on its northwesterly dip of about 60° to a vertical depth of 850 ft. below its collar. From this shaft eight levels have been driven to a maximum distance of about 1200 ft. northeasterly. The collar of this shaft is now caved, some of the levels have been destroyed by stoping out the floor pillars, and the 6th and 7th levels, which can be reached by a raise from the end of the Ute 5th level, are the only ones now accessible.

EQUIPMENT.

35 ton flotation mill.

Housed in a mill building, concrete and stone foundations, frame structure, in good condition.

1 - jaw crusher
1 - No. 8 Telsmith gyratory crusher, No. 591
1 - Marcy ball mill.
1 - Classifier.
24 - Ruth flotation cells, size 22, No. 291
1 - zinc or lead flotation cell.
1 - Wilfley table.
1 - United filter.
1 - Agitator tank.
Reagent feeders.
1 - Ingersoll-Rand 12" x 6" compressor, No. 54268, single stage.
1 - 5,000 gal. wood stave tank.
1 - 1,000 gal. wood stave tank.
All units separately motor driven.

Power Plant.

Housed in power plant building, concrete and stone foundation, frame structure, in good condition.

1 - Ingersoll-Sargent, 2-stage compressor, estimated 4,000 cu. ft. per minute capacity
1 - Large General Electric A.C. Generator, No. 4313920
1 - General Electric Starting motor.
1 - Governor.
3 - James Leffel & Co. turbines.
1 - Large air receiver.
Miscellaneous small equipment, etc.

Surplus equipment.

3 - Hendrie & Belthoff horizontal boilers, approx. 150 H.P. each.
1 - Horizontal pump injector, Knowles special 10 x 5 x 10.
1 - Small injector pump.
1 - Fraser & Chalmers single stage compressor, No. 1272
1 - Goulds gear driven pump, 6" x 8", No. 35200
1 - Aldrich triplex gear driven pump, 4" x 5", No. 675

Miscellaneous buildings.

1 - Boarding house, fully equipped, steam heat, 20 men capacity
1 - Assay office, not equipped.

GEOLOGY. The formations, which the vein system of the Ute-and-Ule mine traverses, consist wholly of igneous rocks, - lava flows and beds of tuff, breccia and agglomerate, intruded by dikes, sills and plugs, all of Tertiary age, and forming a part of the vast volcanic complex of the San Juan Mountains. In this area, this complex of igneous rocks attains a maximum thickness of over 8,000 ft., and rests on pre-Cambrian granite. In the vicinity of the Ute-and-Ule mine it is subdivided as follows, from the top down:

1. Eureka Rhyolite; comprising a succession of rhyolite flows, separated by thin bands of tuff, attaining a maximum thickness of about 1,000 ft. in this vicinity. So far as at present known, none of the ore-bodies of the Ute-and-Ule mine extend upwards into this formation.

2. Picayune Volcanic Group; comprising a succession of lava flows, tuffs and breccias, of andesite, dacite, quartz latite and some rhyolite, varying in total thickness from 1,000 to 3,000 ft. in this area. All of the ore-bodies previously stoped in the Ute-and-Ule mine have occurred in this formation.

3. San Juan Formation; comprising a succession of bedded tuffs, agglomerates and breccias, of andesitic composition; not exposed in the vicinity, but probably varying from a few hundred feet to some 2,000 ft. in thickness. In neighboring districts this formation has proved very favorable for mineralization.

The Picayune Volcanic Group, which constitutes the country rock of the Ute-and-Ule mine, is traversed by two intersecting series of pre-mineral fissure veins. As shown on Exhibit "D", "Diagrammatic

Plan of Vein System", one series strikes about No. 15° E. and the other about No. 45° E., so that, where they intersect, there is an angle of about 30° between them, and they enclose lozenge-shaped blocks. The mineralizing solutions have utilized both series of veins simultaneously, travelling in a zigzag manner, now along one or more veins of one series, then along one or more veins of the other, transferring from one to the other at vein intersections, and moving in the general direction of the mean of these two fissure systems, or about No. 30° E. The mineralizing solutions seem also to have travelled upwards at a flat angle, - about 10° to 15° from the horizontal, - in a northeasterly direction away from their source, which is believed to lie about a mile southwesterly from the Ute-and-Ule mine, as shown on Exhibit "C", "Diagrammatic Northeast-Southwest Longitudinal Section Along The Ute-And-Ule Orebody". There is a strong ring-fault in this direction and at this distance, marking the rim of a large caldera, several miles across, in which the formations have been dropped a thousand feet or more below the formations enclosing it. It seems probable that the mineralizing solutions ascended from their deep source along this ring-fault to where the San Juan Formation overlay the Pre-Cambrian granite, from which point they travelled northeasterly along the fissure system, gradually ascending from the San Juan Formation into the Picayune Volcanic Group, in which latter the ore-bodies of the Ute-and-Ule mine are found. The mineralized zone thus formed is probably a prism 200 to 300 ft. wide, embracing several fissures at any one point; about 1,000 ft. in vertical dimension; and more than two miles in length, since it has been explored in the Ute-and-Ule mine for nearly

a mile along strike. The individual veins, comprising the vein system, all dip westerly at angles varying from 50° to 70° and are essentially small tight fissures, probably averaging, before mineralization, only a few inches in width, with displacements of but a few feet. They have been mineralized largely by replacement of the wallrock, forming veins which range in width from a few inches up to a number of feet, - probably averaging, where previously stoped, between three and four feet. While mineralization is continuous along the mineralized zone, it is not always commercially continuous. The best ore occurs, as might be expected, at vein intersections, forming short ore shoots, which rake steeply across the course of the ore zone, like pickets in a picket fence. The analogy is not wholly accurate, because in the upper half of the ore zone, in which probably about 75% of the ore has been deposited, the vein intervals between the intersections are also commercial in some cases, forming ore-shoots whose long axis in nearly horizontal.

The vein minerals consist, in the order of abundance, of galena, sphalerite (of the yellow variety, commonly called "rosin jack"), pyrite and argentiferous tetrahedrite (freibergite), in a gangue of quartz, with rhodochrosite and barite present in very subordinate amount. The galena and sphalerite are coarsely crystallized, and occur in masses of considerable size. There appears to be somewhat of a vertical zoning along the ore zone, - galena and tetrahedrite, rhodochrosite and barite, being somewhat more abundant in the upper part than in the lower; and there appears to be a similar horizontal zoning, - the minerals above named being somewhat more abundant to the northeast, away from the source, than to the southwest, towards the source.

In spite of the small quantity of gold and silver present, the ore appears to be of epithermal type, in view of the approximately 3 or 4 to 1 ratio of lead to zinc, the scarcity of pyrite, and the presence of zinc in the form of sphalerite ("rosin jack") rather than as marmatite ("black jack"), which latter mineral is the one usually present in mesothermal and hypothermal ore deposits.

MINING. The commercial portions of the veins in the Ute-and-Ule ore zone are narrow, as a whole, - ranging from 1 ft. to 5 ft. in width, with a probable average of about 3 ft. The veins dip at from 50° to 70° and have firm walls. In view of these conditions, shrinkage is indicated as the cheapest and best mining method to pursue. Where the veins are less than 3 ft. in width, it will be necessary to figure on breaking enough wall rock for a minimum stoping width of 3 ft. On the above basis, an output of 5 tons of ore per man-shift should be attained.

METALLURGY. The oxidized portions of the Ute-and-Ule ore zone seem to have been mined out, so that, for all subsequent operations, the ore should be wholly sulphide. The metallic sulphides occur in large crystals and aggregates, and conditions seem exceptionally favorable for the treatment of the ore by differential flotation, producing lead concentrates to be shipped by Eilers, Colorado (Arkansas Valley smelter), and zinc concentrates to be shipped to the zinc refinery at Amarillo, Texas.

On the basis of the character and grade of ore previously mined from the property, - but increasing the zinc content, and decreasing the silver assay a little, to adjust to greater depth, - mill products

of the following weight and assay are indicated:

	Weight Tons.	Gold oz.	Silver oz.	Lead %	Zinc %
Heads.	1.000	0.01	2.5	12.0	4.0
Lead Concts.	0.154	0.04	11.4	70.0	2.6
Zinc Concts.	0.056	0.02	4.5	1.1	50.0
Tailings.	0.790	0.004	0.6	0.8	1.0

Distribution.

	Gold	Silver	Lead	Zinc
Lead Concts.	60%	70%	90%	10%
Zinc Concts.	10%	10%	5%	70%
Tailings.	30%	20%	5%	20%
Heads.	100%	100%	100%	100%

ECONOMICS. On the basis of lead and zinc concentrates of the weight and grade above indicated; of current lead smelting rates at the Arkansas Valley Plant at Eilers, Colorado, and zinc refining rates at the zinc refinery at Amarillo, Texas; of current trucking and freight rates on the lead and zinc concentrates from the mine to Eilers, Colorado, and Amarillo, Texas, respectively; and of assumed lead and zinc prices of 15¢ per lb. and 12¢ per lb., respectively; a net operating profit per ton of ore of the grade above shown is indicated, as follows:

Lead Concentrates.

Gold:	0.04 oz. @ $31.81925:	$ 1.27	
Silver:	11.4 oz @ 95% @ 90¢:	9.75	
Lead:	70.0 % - 1.5% : 68.5% : 1370# @ 90% : 1233# @ (15¢ - 1.91¢ : 13.09¢):	161.40	
			$172.42
Treatment:	$8.00 - $5.00:	$ 3.00	
Sulphur:	10.5% - 3.0% : 7.5% @ 25¢:	1.88	
			4.88
			$167.54
Hauling: Mine to Eilers, Colorado, @ $11.06 per wet ton (5% H_2O):			11.64
Net smelting returns per ton:			$155.90

Zinc Concentrates.

Gold:	0.02 oz.		
Silver:	4.5 oz. @ 65% @ 90¢:	$ 2.63	
Zinc:	50.0 % : 1000# @ 82% @ (12.0¢ - .29¢ : 11.71¢):	96.02	
			$ 98.65
Treatment:			31.00
			$ 67.65
Hauling: Mine to Sapinero, Colo:		$ 4.82	
Freight: Sapinero to Amarillo, Texas:		5.25	
		$10.07	
$10.07 per wet ton (5% H_2O):			10.95
Net refining returns per ton:			$ 56.70

Lead Concts: 0.154 ton @ $155.90:	$ 24.01
Zinc Concts: 0.056 ton @ 56.70:	3.18
Net lead smelter and zinc refinery returns per ton:	$ 27.19
Mining, Milling and Overhead costs per ton (estimated):	12.00
Net Operating Profit per ton:	$ 15.19

On this basis, with $15.19 per ton indicated profit on ore containing 12.0% lead and 4% zinc, with $2.60 in gold and silver, the cut-off point of no profit would be on ore of about half this grade, containing 6.0% lead, 2.0% zinc and $1.30 in gold and silver, or the equivalent, with one unit of zinc being worth about 40% as much as a unit of lead. Inasmuch as, during former operations, the ratio of net operating profit per ton to net smelter and refinery returns on the ore per ton was probably much less, it seems very likely that there still remains in the mine, within the explored part of the ore zone, a substantial tonnage of ore, formerly too low grade to be mined, but which can be profitably removed now. Unfortunately the only assay maps now available are those prepared by several mining engineers, covering only the 5th and 6th levels of the Ute-and-Ule workings on the Ute vein, and the 6th levels of the Hidden Treasure shaft; and the results of their work have been assembled on Exhibit "F", "Assay Map".

This exhibit shows one block of probable ore between the 5th and 6th level of the Ute-and-Ule workings on the Ute vein, marked "Block "A", containing 12,800 tons of ore, averaging 0.01 oz gold, 2.57 oz. silver, 15.9% lead and 4.0% zinc, with an indicated net operating profit of about $23.00 per ton, or about $295,000 total.

There is, however, quite a large unstoped area above the 5th level, in all probability containing small blocks of narrow or low-grade ore,

previously uncommercial, but which now can be profitably mined. It also seems probable that by extending the 5th level to undercut the orebodies, which were stoped down to the 6th level of the Hidden Treasure shaft, 190 ft. above, commercial ore would be encountered. It is true that Benjovsky's samples of this level do not encourage much hope, but the fact that there is a long stope length immediate-above this level suggests strongly that either something was wrong with Benjovsky's sampling, or that the drift on this level was largely in the wall of the vein, so that the samples are not representative of the vein itself. There is furthermore the possibility to be considered of ore occurring along unexplored parallel or cross veins in this area. Altogether there seems good reason to expect the survival in this area, above the Ute 5th level, of at least 25,000 tons of possible ore, of the general average of 0.01 oz. gold, 2.5 oz. silver, 14.0% lead and 4.0% zinc, which, at a net value of $15.19 per ton, would have a total value of $375,000, which, added to the $295,000 valuation of "Block "A", would make a total of $670,000 worth of possible and probable ore within the area served by the Ute 5th level. There are further possibilities below the Ute 5th level, other than Block "A", and in the area explored by levels from the Ule shaft; but it is impossible at the present time to appraise them.

In attempting to evaluate the continuation of the Ute-and-Ule ore zone southwesterly from the furthest workings from the Ule shaft in that direction, and northeasterly from the furthest workings from the Hidden Treasure shaft in that direction, all that can be done is to indicate possibilities. Within the explored section of the Ute-and-Ule ore zone, which is about 5,000 ft. in length along strike,

there has been a total production of 416,000 tons from the Ute-and-Ule and the Hidden Treasure mines. It seems probable that there is enough commercial ore remaining in this section to increase the original ore contents to 500,000 tons, or 100 tons per foot of strike length. Assuming that there are about 5,000 ft. of unexplored strike length to the southwest and 1,000 ft. of unexplored strike length to the northeast, along this ore zone, making a total of 6,000 ft. at 100 tons per ft., this would indicate a total of 600,000 tons, which at a net operating profit of about $15.00 per ton, would have a total value of $9,000,000. It is to be understood, again, that this figure is merely to point out possibilities, and is not to be construed as a serious attempt to appraise the potential value of the property.

<u>SUMMARY</u>. The Ute-and-Ule Mine (including the Hidden Treasure mine) has produced 416,000 tons of ore, averaging about 0.01 oz. gold, 3.4 oz. silver, 12.0% lead and 2.9% zinc, from an explored strike length of 5,000 ft. along the ore zone. It is believed that, within the area served by the accessible Ute No. 5 level, there exist 12,800 tons of probable ore and 25,000 tons of possible ore, with an estimated net value, at 15¢ lead and 12¢ zinc, of about $670,000; while it is possible that unexplored extensions of the ore zone northeasterly and southwesterly might yield an additional 600,000 tons of ore, with a net value of about $9,000,000. The property is about 90% equipped, containing a hydroelectric power plant, a 75 ton flotation mill, and camp buildings; and it probably would not require an expenditure of more than $50,000 to effect repairs, make

necessary changes and alterations, and supply deficiencies. The veins are small, averaging only about 3 ft. in width, and the commercial ore-shoots are discontinuous, so that 100 tons per day is probably the maximum scale of operations. By hand-sorting out 25 tons of waste per day, which probably would be feasable, the 75 ton per day flotation mill could be adapted to this scale of operations. With the value of the ore chiefly in lead and zinc, and the content of precious metals low, the property is very susceptible to influence by fluctuations in the prices of these metals, yielding a handsome profit when they are high and a small one when they are low. The cut-off point of no profit is about 7½¢ per lb lead price and 6¢ per lb. zinc price, or the equivalent; but in view of the present shortage of these metals, and the fact that the economy of the nation seems now to be permanently on a higher price plateau, it appears rather unlikely that metal prices will ever again sink to those levels. The fact that the property is nearly completely equipped; that there is a substantial value of probable and possible ore which can be reached through existing and accessible workings; and that large potentialities in unexplored ground are indicated; suggests that, while a small property, it is an attractive one.

COLORADO STANDARD LEAD ZINC MINES, INC.

Supplement to the data compiled

on the Ute & Ulay Mine

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On Nov. 15 - 16, 1939, I was at the Ute & Ulay Mine for the express purpose of checking personally the summary that I had compiled from earlier reports and of forming my own opinion as to the merits of this mine, more particularly as to whether a full examination would be justified.

The most important item is, of course, the reserve of ore. In company with Mr. Edmund H. Burke, manager and son of Mr. H. H. Burke, owner of the mine, I went through the main adit tunnel to the Ute vein and along the Ute vein to its boundary with the Hidden Treasure Mine. There is a length of over 1,200 feet of continuous ore to be found here. It cannot all be "seen" as for the last 300 feet the drift was put in by contract and is not on the vein, which however can be observed at the Hidden Treasure Shaft, at one cut into the wall and at the point where the drift was started off from it. The average width of the samples taken by Mr. E. Chace along this level was 2'-2". From what I saw, I feel satisfied that Mr. Chase was viewing the mine for its content of direct shipping ore and that he restricted his samples to the high grade streak and that an average width of 3' would be much nearer the mark for milling ore, which is all that would be considered for any future operation.

At most places, the stopes show widths of 3' or more. At one place, a definite contraction of 18", near manway No. 2 North was evident, but the extension of the stope both ways showed widenings to 30" Widths up to 5' and 6' have been reported to me by Mr. M. B. Burke and his son, all of whose statementshave been verified, when I have been able to confirm them by personal observation, so I have no doubt but that I should have confirmed these too, had I been able to visit the designated places.

The Ute is the only vein accessible for examination at present, but there are others on the property. Most notable of these is the Ulay, which was opened by a shaft and from which 11 levels have been driven. At the mine there is a large working section map of the Ulay (or Ule) vein, showing the extent of the 11 levels and at the extreme south end of the 11th level is the intriguing statement written in pencil "Largest ore body thus far encountered in the Ule and also the richest. Ore chute (word illegible) stope 380' ". A pencil line indicates that this ore was stoped cut to above the 10th level.

This map was made by a Mr. Wilson and shows evidence of having been made with care. The authorship and date of the pencil notation are not known, so too much reliance should not be placed on it, but the upper levels have not been driven to this ore chute in most cases and the adventure of this exploration is decidedly tempting. Further there is no stoping shown on the Ulay vein to the North of the shaft below the 8th level, so a good orebody may well be found there also.

The Ulay vein often runs high in zinc and the presence of this mineral in the concentrates sold, due to the dilution it causes and to the actual penalty it invokes, may well have been the cause of the closing down of this shaft. With modern methods of differential flotation, zinc loses its objection and can be turned into a source of profit.

The outcrops of both the Ute and the Ualy veins can be seen across the creek on its south side. There is only one opening visible, a short tunnel too low down to be used with advantage for development. The formation in this tunnel was said to be 20' wide and to carry heavy galena. Fresh tunnels higher up on the hillside should be started on both veins. The ore could be transported from them to the mill by short serial trams.

Another vein is named the Invincible. Its outcrop can be seen in places and a little work has been done on it, I understand. Not enough is known about it to give it any credit, except as a possibility.

From my trip through the mine, along the level and some of the stopes and looking into the winze and from what I have been told is now accessible, I should judge that 10 days at the mine would be ample for a complete examination of both the surface and underground.

The surface plant is extensive and was working steadily at the time of my visit. A few hundred feet up stream is a dam, from which a flume leads to the power house, in which there are three water wheels. One of these is connected to a large 30-year old Ingersoll-Sargeant slow-speed air compressor, of the type which, with ordinary care, will be still operating steadily 30 years hence. Another is connected to a generator, which supplies the power for the mill, the lighting etc. The third is a spare, which can be connected to either.

The mill was running on dump ore from the Ulay shaft. Its operation consists of coarse crushing followed by a ball mill in close circuit with a Dorr classifier and two batteries of flotation cells, 12 in each battery. The recovery in the lead cells was reported to be high, but the zinc cells had not yet been brought up to standard, owing to the pressure of other work. The present rate of operation was reported as 4½ tons per hour, which could be increased to 6 tons by the addition of a magnetic pulley and closer grinding in the coarse crusher. Further details of the mill and other equipment are given in the compiled data.

My conclusions were:

1. A full examination is warranted and would take about 10 days on the property.

2. There is a good showing of ore in the main Ute tunnel and in the stopes above it and in the winze below it. The expectation of finding more ore in the Ute vein below the tunnel level is good and the extension of this vein across the creek should certainly be developed.

3. The Ulay vein, to which no credit has been given in any of the old available reports, warrants re-opening. The maps indicate areas of ore reserves, not accessible at the moment. The other veins, such as the Invincible, need exploration.

4. The surface plant is economical to operate and adequate for the present operation. It has been working steadily. Some additional equipment should be installed such as a magnetic pulley to remove trampiron, more mine cars, etc. for an enlarged operation.

Nov. 20, 1939

Respectfully submitted

S. A. IONIDES

COLORADO STANDARD LEAD ZINC MINES, INC.

THE M. B. ~~BURKE MINING~~ AND INVESTMENT COMPANY

301 Humboldt Street

Denver, Colorado

February 12, 1940

Mr. James W. Oldham
1000 Grand Avenue Temple
Kansas City, Missouri

My dear Mr. Oldham:

I have your letter of the 6th, but have been feeling so badly I have not been able to answer same until today.

I note what you say about having had several conferences with your associates, of which I am glad to hear.

I don't believe that it would be possible for us to make a deal on the lines you suggest, namely $50,000.00 after you had made a thorough examination of the property. I am not trying to get any one to operate this property, but to sell it because of my prolonged illness.

What I want to do is sell the property, and receive a payment of $50,000.00 and give all the time necessary to pay me the balance of the purchase price without working any hardship on the purchaser.

We have in sight on the Ute vein alone measured up ore to the extent of 145,000 tons, which according to the engineers report, and checking with other engineers would be worth $2,066,000.00 This ore is exposed in the floor of the drift from the Hidden Treasure line for 1,200 feet in a southerly direction, and as soon as we have finished a drift we are driving south from this point we will have an additional 350 feet to add to this.

We have a winze that is sunk to a depth of 100 feet below the tunnel level on the Ute vein, and drifts drove both north and south about 500 feet. This is all in first class ore, ore that is worth as broken from $18.00 to $20.00.

There is a cross cut drove from the Ute shaft that is approximately 230 feet below the bottom of this winze, and has cut this same grade of ore at that depth. This shaft I have never used.

We haven't done any work on the Ulay vein either by tunnel or shaft. When I purchased the property I removed the water from the Ulay shaft to the 6th level, which is 285 feet from the collar. I removed the water in order to check the maps on this particular level, as to the ore that was in sight, and the extent of same. There is a back cut out for about 390 feet which shows ore for the entire distance, and this ore continues several hundred feet beyond this point. There are several levels above this which have fine bodies of ore in gold, silver, copper, lead and zinc.

This shaft has 5 levels below this point, and I am told by very reliable people who have been connected with the Ute and Ulay at various times, that there is a great deal ore in sight in the levels below the 6th, in particular the 11th level, it has the largest, and richest body that has been mined from either one of these veins. This chute was on the south end of the 11th level, and was about 400' long, and was stoped up to the 10th level, and no farther. This cute contained very high silver and copper values. The reason it was not mined above the 10th level was because the Ulay shaft house burned down.

I have met several very reliable people, in my course of seeking information, who say that this chute was continuous, and just as rich above the 10th level.

We are working the Ulay dump, that came out of this shaft. The engineers claim there is about 60,000 tons of ore in same. All of this ore came out of development work on the various levels on the vein, as there was never any cross cutting done. This dump as near as we can ascertain runs between $6.00 and $7.00 in gold silver, copper, lead and zinc.

Regarding the mine and mill equipment. There is absolutely nothing that can be done to improve our mill outside of a secondary crusher and a magnetic pulley. The other equipment is first class in every respect.

We have a 3-150 h.p. boilers, and Ingersoll-Rand compressor, which is capable of making 2,400 cubic feet of air per minute. Three Leffel water wheels, which develop 160 h.p. each. One runs the generator, one the compressor, and one in reserve. There is 180 k.w. generator that makes power enough for our mill and any other electric power we need at the present time, and a 250 h.p. Corliss steam engine.

We have a concrete dam across Hermon Creek which is 67 feet high, and connected by a 900 foot open flume to the surge tank.

There is a concrete blacksmith shop which is equipped with sharpener, heating furnace and forge. An abundance of equipment of all kinds, and at least 10 tons of machine steel. A machine shop with first class lathe, emery wheel and drill press all in first class condition.

We have a concrete locomotive house and charging plant, and a first class storage battery locomotive.

The Ute tunnel is equipped with 30 lb. rail and a 5 inch air line.

From the contents of your letter you must expect to have to do a lot of work and buy a lot of equipment before you start making profit. The day you get your organization together and get strung out you will start to make money. There is nothing to be bought for the property other than the secondary crusher and the magnetic pulley. This would bring the mill up to a capacity in excess of 200 tons. All equipment necessary to mining is on the ground with the exception of 5 or 6 stopers. We have 4 stopers, 4 jack hammers and a drifter.

This property from our dump operation will make us $6,000.00 or $7,000.00 a month with an expense of about $1,200.00. All of this profit would go into reconditioning the Ulay shaft, and the cutting out of backs of 2 stopes, one of which is 557 feet long, and the other over 300 feet long which is practically all solid ore to surface, which is approximately 500 feet.

We have this fifth level in shape now to work 8 or 10 stopers. So you see there is very little to do to make this mine a paying proposition. You can see that it would be impossible for me to go into such a deal as you suggest.

We have 157.26 acres patented and 180 patented, which covers all this vein system, namely the Ute and Ulay, and numerous others.

I am herewith enclosing an assay map which Edwin Chase made on this property while examining the Hidden Treasure Mine. In the place where there is no assays shown on the level was because the lagging and stulls had decayed and let a great deal of rock down on the level. The space from assay 21 to the Hidden Treasure line was drove in the foot wall outside the vein. Sample No. 15 was a pop shot put into the footwall and opened a portion of the vein. At the bottom of the shaft of the Hidden Treasure the vein is opened up, and is about 4 feet wide showing a general average of the ore taken from the floor of the level. The average of the width of this ore is the high grade streak, and does not take in all of the vein, which is all a good milling grade and between 3 and 4 feet wide from wall to wall on a average.

Hoping to hear from you, and with best personal regards, I am

Yours very truly

Signed: M. B. Burke

MBB:JB

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 29 1951
LAWSON F. STROUSE
Executive Secretary

REPORT - UTE-ULAY MINES - COLORADO

By T. D. Benjovsky
March, 1926

LOCATION:

The Ute and Ulay property is owned by the M. B. Burke Mining and Investment Company of Denver, Colorado. The property is situated nearly west of the town of Lake City, Colorado, some four miles by wagon road. It is in the Galdena Mining District of Hinsdale Hounty, Colorado. Lake City is the terminal point of the Denver & Rio Grande western branch narrow gauge line, connecting with main narrow gauge line at Sapinero, Colorado.

DESCRIPTION:

The property consists of the following patented mining claims; MAG: ORIC: MAYOR OF LEADVILLE: MAID OF HENSEN: UTE EXTENSION: ULE: EQUATOR: FREE LANCE:ANNIE: CUTER: YANKEE DOODLE: BUSHNELLUTE: SAXON: REGULATOR: LEADVILLE: 16 in all; the John J. Crooke placer and the following mill sites; Equater; UTE MILL SITE ; and Ule Mill Site.

H ensen Creek, a tributary to the Lake Fork of the Gunnison, flows over the property, so that it divides it about equally, that is, one half is south of the creek and one half north of the creek. All development of any consequence is north of the creek.

HISTORY:

The property was purchased from prior owners, during October, 1925, by Mr. M. B. Burke, of Denver, Colorado, for a price reported to me of $30,000.00. This information was given me by Mr. Burke himself. The property is being operated at present by the M. B. Burke M. & I. Company. Discoverers of the Ute and Ulay, were Harry Hensen, Jorl K. Mullen, Albert Mead and Charles Goodwin. Locations were made in 1871 during the month of August. From this time on production was made until 1886 when a maximum production was made of $750,000.00. Spasmodic production from this time on has taken place by light operation. The U.S.G.S reports a total production of 10 to 12 million dollars.

The survey also credits the Ute vein with the major production, which I think is correct.

GEOLOGY:

The geology of the district consists of volcanic rocks or of intrusive igneous masses. The surface are of Tertiary time and consist principally of Rhyolites and Adesites. Igneous intrustions of granite porphyries are known in different parts of the district, but no great areas are shown. The flows of volcanic rock were not continuous, and occurred at different periods of the Terriary age. In between periods of flows, erosion played a major part with the resulting changes of appearances of the topography of the country. Later, erosion has probably formed the narrow precipitous canons, as they exist today.

The immediate formation, Andesite to the north, and higher up overlaying with rhyolite and further north the whole is overlain by to Potosi series of rocks. The U.S.G.S. remarks that this whole mass is underlain by granite. The depth to whi h the volcanic formations have been known to cover the district is given as much as to 7,400 feet.

Since the major mines of the whole San Juan District occur in the Andesites, and in instances in immediate overlaying rhyolites, the geological conditions immediate to the property are favourable.

The property is traversed by several veins having a NE & SW rike, dipping NW. Several E. and W. verins, dipping north are shwon to exist, but have not been as extensively developed as the NE and SW veins. These veins are fissures, which came about by cooling and settling possibly by faulting, caused by intrusions at or in the vicinity of this location. These veins, as well as being fissures, have been affected to some extent by replacement, shown as follows: the walls are affected by bein filling solutions. In these instances the walls are highly solidified, and included fragments of country rock and are highly altered.

The important veins of the NE and SW trend are: Ute, the Ulay and Nicholson veins. A description of each of these veins can not be made at this time nor can descriptions of the SW veins be made, but all remarks are from a study of the Ute and Ulay veins. Crossing veins may have a great importance to occurrences of ore bodies in the Ute and Ulay veins. Some of the principal crossing veins are shown on map.

The Ute vein traced by the U.S.G.S. has been shown outcropping some 2700 feet. It is given a known vertical range of 1700 feet. Recent investigation has extended the known southern position of the vein, at least 1000 feet. From previous statements, a possible vertical range of 7400 geet might be found. The vein has general strike NE and SW varying from N1. 46E. maximum to N. 19 E. minimum. Average dip is 59 degrees to NW. This has been determined from numerous readings, from 52 minimum to 65 degrees maximum. What these variances in strike and dip are due to has not been determined in every case, but undoubtedly some of them are due to faulting. This variance in strike and dip, as well as the topography of the country, furnish a distinct wavy appearance to the outcrop, and has offered no little difficulty in determining actual position of the vein, both in underground workings and on the surface. Underground, the Ute vein has been opened up laterally by drifts in vein, some 1880 feet and as deep below surface on plane of vein as 1120 feet. This is conclusive proof that extent of the vein both laterally and vertically can be expected.

The Ulay vein has been traced on surface for a distance of 1240 feet north from the Ulay shaft. It has been developed underground for a lateral distance of 1520 feet. In depth it has been worked on plane of the vein, some 560 feet. (Question as to some of the works, 420 ft. south of the shaft being on Ulay vein). The strike of the vein varies from N. 40-42 degrees E. to N. 67 E. Dips northwesterly 67 as a minimum and 69 as a maximum. Going north from the shaft the ore streak pinches, even becomes tight and hard. South of the shaft, the vein intersects the Ute vein and in proximity of the intersection is wide; ore streak also is wide. I am inclined to believe in either direction, north or south, from this influence of this intersection the vein is smaller, and ore streak narrower, and of no great importance as a source of ore, unless influenced by intersections similar to Ute with other veins carrying ore.

The Ute and Ulay veins as they are today can be described as originating as follows; Fracturing of the volcanic formation; enterance of silicious solutions which intensely altered the walls and filled all

vacant spaces; a second fracturing which opened up the veins in the natural line of weakness, with a possible movement along the strike of the veins; a mineralizing solution then entered and deposited quartz-fluotite and galena, sphalerite, (yellow jack variety), rhodochrosite, tetrahedrite, and more quartz; more movement of formation, shattering and fracturing the walls and lastly more solution depositing barite and more galena. The origin is further borne out by the fact that the ore occurs in a persistent streak in the centre of the vein. Intersections with other veins of different strike undoubtedly account for the wider ore bodies. Of the two veins I believe the Ute to be the strongest and better vein. In no case in the vein is the ore streak smaller than six feet, while the Ulay vein, gets as small as .15 feet.

Ore deposits commercially profitable have been found in both the Ute and Ulay veins. Values of the veins are in metals of lead and zinc. The peculiarity is the absence of any appreciable amount of gold and silver; gold is nothing, the silver is only 1 to 5 ounces. This condition is general throughout all workings of the Ute mine, with possible exception of the northern part. Beyond north end of Ute claim the vein enters Hidden Treasure territory, and from this time the ore carries a great deal more silver. Dips or pitches of the ore shoots caused lots of argument locally, I believe facts on the ground tend to prove gradual trend of the ore bodies to the north. I further believe more evidence will be found in future exploration confirming this fact. Characteristic features of the ore shoots and streaks are that they occupy central part of vein, and in Ute vein the shoots are noted for t their continuity, being 500 to 750 feet, to 1,000 geet long, and attaining a depth of plane, on plane of vein of 1,100 feet.

SAMPLING:

I have only sampled the 6th level of the Ute mine. The reason for this is, it is the only block of undeveloped ore which shows signs of returning any profit in future production in either Ute or Ulay mine, and is the only accessable developed block.

I have prepared a plate showing the whole Ute mine, on plane of vein. I have marked the ore streak where possible to measure, the same; "Good" means profitable ore; "Fair" means possible profit; "Poor" means no profit. I also show an assay map, Ute 5 level, assays taken by A.S. & R. Co. in 1917, at intervals of 100 feet. My sample interval is 10 feet. I also, in bloaks marked Good, Fair and Poor, measured the ore streak wherever possible at 10 feet intervals. The samples taken by A. S. & R. Co. are dry lead.

COMPARISON OF SAMPLES

Samples by T. D. Benjovsky, Ute #6 level, Value. ag. 60, pb 6.5¢

Average	Wd	Au	Ag	pb	Zn	Cu	Fe
	2.118	.009	2.36	12.05	4.7		$20,85 per ton
A.S.R. Ute #5			3.12	13.02			$18.77 " "
A.S.R.Co. average of 474 tons shipped in sinking Ute. 6							
Average		.01	3.7	18.2	4.7		$22.66 per ton

- -

DEVELOPED ORE:

Developed Ore, Block between 6 and 5 level Ute.
Abg. value $20.85; 7303 tons, total val. $151,267.55

PROBABLE ORE:

Block between #5 and #4 levels, Ute Mine:

600 x 190 x 1.72 13	15083 tons
110 x 75 x 1.72 13	1092 "
50 x 60 x 1.72 13	378 "
275 x 150 x 1.72 13	5457 "
190 x 120 x 1.72 13	3016 "
Total	25027 tons

POSSIBLE ORE:

Block of ground between #4 and #3 levels. Ute Mine:

850 x 120 x 1.83 13	14358 tons
320 x 406 x 1.83 13	18288 "
Total	32646 tons

Block of ground between shaft with winch & Hidden Treasure shaft:

550 x 86 x 1.83 13	12296 tons
Possible ore forward	36868 tons
Block between #5 and #6 Ute	
1320 x 350 x 1.95 13	66337 "
Total	103205 tons

In estimating the possible ore some mention should be made of the dumps. What these contain I do not think is of much importance. At #3 level Ute dump is large, possible 10,000 tons. In their present mixed condition they are poor. I think most of the lead was sorted from the original ore, so that zinc would be the only metal content worth while, should they prove profitable to work.

DEVELOPMENT:

The Ute vein is developed by a series of cross-cut tunnels, designated as levels, of which there are six in number. Four of them connect to surface, while one, level four, was driven from shaft sunk from level #3.

Number 6 level was driven from bottom of shaft sunk below level #5. No. 1 level starts in Friday Gulch, thence SE 210 feet where it intersects the Ute vein 160 from croppings on plane of vein.

No. 2 level starts in Findlay Gulch driven SE 424 feet, intersects Ute vein 270 feet, from croppings on plane of vein. After intersection of vein by #1 and #2 levels drifts are run northerly, eventually reaching the Hidden Treasure shaft.

No. 3 level was driven in various directions in the hanging-wall side of the vein, finally intersecting the Nicholson vein, then drifting north on this vein eventually to cut the Ute vein some 930 feet from portal. From this point it follows Ute vein to the Hidden Treasure shaft. At point of intersection of Ute vein, the level is 330 feet below croppings of vein on plane of vein.

No. 5 Tunnel starts just below county road and to west of Ute vein, is driven on course N. 35 30 E. and cuts Ute vein from 720 feet from portal; holding the same course it is driven 460 feet further to intersection with the Nicholson vein, thence drifts on Nicholson vein some 100 feet or more, where the Ute vein was picked up on hanging-wall side of Nicholson vein. From this point on, drift is on Ute vein for 1080 feet, thence drift is in foot wall some 200 feet, to a point supposed to

be directly under the Hidden Treasure shaft. At a point 1780 feet from portal, a winze was sunk 110 feet on the plane of the vein, and at bottom of level #6, was driven north 220 feet and south 290 feet.

The Nicholson Vein is developed by what has been known as the Ute shaft. This shaft is located in a northwest direction, 580 feet approximately from the portal of No. 5 tunnel. It is sunk vertically to a depth of some 400 feet (reported) At bottom, cross-cuts were driven, easterly and northerly. The cross-cut, east, intersected a vein with a NE strike and NW dip. A drift on this vein north reached a lenth of some 890 feet. The old map from which I have taken this data shows the northern part of this drift, supposedly in or. The drift to the north intersected a vein with a NE strike; no dip given. This vein was drifted on for 450 feet. The distance between these veins is about 540 feet and they are approximately parallel in strike. I have named this shaft and the vein to the west, the NICHOLSON, in order to distinguish terms from Ute workings and vein.

Ulay vein was developed by two short tunnels, levels #1 and #2 and by a shaft some 574 feet deep which followed the dip of vein approximately. From shaft eight levels have been driven; #3 north 350 feet, south 50 feet at point 30 feet below collar to shaft.

#4 level, 120 feet below collar is driven N.250 feet and S. 150 feet.

#5 level, is 186 feet below collar of shaft and is driven N. 230 feet.

#6 level, (South 450 feet more or less) is 281 feet below collar of shaft and was driven N. 660 feet and S. 150 feet.

#7 level, is 350 feet below collar of shaft, and is driven north 760 feet and S. 360 feet more or less.

#8 level, is 440 feet below collar of shaft, driven N. 350 feet and S. 380 feet.

#9 level, is 490 feet below collar of shaft; driven N. 230 feet and S. 280 feet.

#10 level, is 560 feet below collar of shaft, driven N. 190 feet and S. 810 feet.

All these are supposedly on the Ulay vein. The vein is further opened up by the California cross-cut tunnel, some 1100 feet NE of the collar of the shaft, and by workings on the Lightning Striker, still further N.E.

All this data of Ulay shaft is correct, as far as #6 level; below this I could not go as water prevented. Data below this is compiled from old maps more or less reliable.

Underground developments in all veins have shown formation to be Andesite. There are in some cases evidence of some intrusive Rhyolite. Faults have been noted, but so far have proven of only minor importance. These have been noted entirely on Ute vein. One important fact which tends to prove Ute and Ulay veins due intersect is that unwatering the Ulay shaft drains all the Ute workings.

Ute Vein: Stopes developed on Ute vein; the principal stope of the Ute mine is in the extreme north end of the property, adjacent to the Hidden Treasure shaft. From this stope the production of the mine was made. It represents approximately 247,500 sq. ft. of vein surface. No recored of tonnage can be obtained. Beginning at a point where #5 drift enters the Ute vein, a stope laterally 800 feet long was developed. The total area of this stope to #4 level is 152,000 sq. ft. of

of which 52,400 sq. ft. was stoped. This leaves 99,600 sq. ft. to be stoped, and I have estimated the same to contain 25,045 tons of probable ore. Between #4 and #3 levels, a block of ground containing 102,00 sq. ft. of vein, or 14,358 tons, has been partially prepared for stoping. A small short stope central to block connects with #3 level. I could not inspect this block critically enough to list it other than possible ore.

Ulay Vein: Stopes developed on Ulay vein are as follows: Above #1 level, north of shaft; above #3 level, north of shaft; above #3 level, north and south of shaft; above #4 level, north and south of shaft; above #5 level north and south of shaft; above #6 level, north and south of shaft; above #7 level, north and south of shaft; above #8 level south of shaft; above #9 level, south of shaft.

The shaft on its course traversed through the ore shoot, so at top, ore is north of shaft; at bottom the ore is south of the shaft.

An idea of the amount of stoping is best shown by map, and gives the following; The square feet vein surface developed, north of the shaft and above #10 level, is 69,700 sq. ft. There has been extracted north of the shaft, above 10th level, 93,600 sq. ft. South of shaft and above #10 level, 51,100 sq. ft. of vein surface. This leaves in the Ulay mine 219,200 sq. ft. of vein surface developed.

Conditions of the mine workings made sampling prohibitory and the fact that below #5 level mine is under water, my conclusion is that all this developed vein area is only a possibility after all.

Some mention of the Ulay dump should be made. This is one more possibility and might contain as much as 20 to 30 tons of material; the value of this dump is not known; I think it is questionable if it can be handled profitably.

EQUIPMENT: The ute and Ulay properties were worked with the same equipment and management. The power plant as it stands today is operated by steam and is of side to side construction. Boiler room is furnished with three 125 return tubular type boilers, 125# working pressure. Fire box is equipped with grates, for mine run coal and water slushing of the ashes. In front of boilers is an immense storage bin(coal), with a capacity of 1,000 tons. This steam plant furnishes steam for one Ingersol compound steam two-stage air compressor, piston inlet type, with a rated capacity 4,000 ft.(cubic) free air per minute.

a 150 hp simple Corless steam engine, furnished power for the mill. As an auxiliary plant a set of water turbines in end of engine room could be reconditioned and would furnish enough of power to operate air compressor and mill of 100 tons capacity nearly the year round. Short water seasons require steam plant.

A complete machine shop was at one time maintained and operated in conjunction with operations of property.

N. B. (New equipment on a large scale has been installed at the Ute and Ulay mines since this report was made in 1926)

Hoisting equipment is very inadequate and of practically no value for future operations.

The mine is bare of any equipment whatever, even the air lines have been taken out of the different workings. Track are of 20" gauge and consists of three sizes of rails, all in the same track, from 7# to 16# rail.

[illegible]

N.B. (New stoping and drilling machines, steel and cars etc., have been added in 1927 after this report wasmade)

MINING OPERATIONS: Mining operation after drifting consisted of overhead stoping principally. Some underhand stoping was executed at different times and places, where ore would warrant. In stoping operations open stopes were carried as follows: Back of stopes was breaststoped from one end of stope to the other one, back and forth, until about 60 ft. had been raised on the muck. At these levels the line of stulls was put in, lagged and the same operation repeated until ore played out or next level was reached.

Chutes were carried every 25 ft. on main levels; between lines of stulls dirt was drawn through lagging or shoveled over and ends. The vein was stoped from wall to wall, and as can be seen now, lots of extra ground waste was mined in the ore. All ore mined was trammed to surface ore houses, here grizzeled from coarse mill ore, waste and crude sorted. Mill ore put with undersize of grizzley to mill, crude to smelter, and waste to dump.

MILL OPERATION: Mill operation handled about 100 tons per day, and consisted of crusher, rolls, trammels, jigs, Wilfley tables, old fashioned buddles, and a rag plant. Although the ore contained zinc, no attempt was made in early operation to make zinc concentrates, and this went to the creek with the tails. A lead-silver concentrate was the product shipped from the mill. Concentrates were hauled to railroad and shipped to Leadville for treatment. Cost for transportation and treatment are not available for past production.

ESTIMATES UTE MINE: There is some 873,000 sq. ft. of Ute vein surface ready to begin work on, through openings already existing, and since the blocks are of size enough that they would produce lots of ore, should conditions make ore, I would propose the following:

With new equipment required for track in #5 level, with this equipment cross-cut in #3 level can be completed east to Ute vein and west to Nicholson vein; further development below #6 level downward to level of drifts on Nicholson vein, from Nicholson shaft, drifting through blocks in old stopes. In conjunction with this work, some prospecting of territory south of Hensen Creek should be carried out on the Ute vein.

Close supervision of this work is very essential. Good judgment formed from logical conclusions as development proceeds is only limit placed on extent of contemplated work. The present power plant will furnish adequate power for all these operations at the same time.

Favourable developments of these projects would determine the possibilities of a mill, also the kind and type. The past methods of stoping might be improved on, to mine a cleaner ore, and thus more profit made.

Development might prove the feasibility of opening up the Ute vein with new approaches.

The Ute and Ulay veins offer an attractive mining venture, in which the actual returns might be many times the investment, providing the property is priced right.

RIDGEWAY R. WILSON & ASSOCIATES
MINING ENGINEERS

COPY

REPORT ON CALIFORNIA MINE. LAKE CITY, COLORADO. By T. D. Benjovsky

The CALIFORNIA MINE is owned by Henry Kohler of Denver, Amelia Rich Landrow, and a Mr. Hollister of New York City, N. Y. It is under lease and bond to Mr. Chas. A. Mendenhall of Lake City, Colorado. Copy of Bond and lease is attached to this report.

The Mine is located on Ute Hill, some three and a half miles west from Lake City, the nearest rail and shipping point. The lower workings enter Ute Hill at level of the county wagon road.

The Mine is in the Galena mining district of Hinsdale County, Colorado, and consists of one mining claim, U. S. Survey No. 376A, containing 8.62 acres; a millsite, U. S. Survey No. 376B, containing 3.57 acres. A total of 12.19 acres. Survey No. 376A contains the only mineral ground.

Mining on the Ute Hill of the Galena Mining District has been more or less active since the early seventies. More intense activity is under way at present in this neighborhood than for some years past, so any property in vicinity is worthy of preliminary examination.

Property adjacent to the California on the south is the Ule Mine; to the north is the Lightning Striker; and to the West, the Hidden Treasure Mines. The California is located on the northerly extension of the Ule vein. The Ule was at one time a large producer of lead and zinc ores. Northerly on the California or Ule veins within California boundry, and Lightning Striker, only a small amount of work has been done. Geographically and geologically, the location is good, In early days some attempt was made to operate the mine. A small jigging plant operated with steam was located on the mill site at portal of lower level and ore mined from this level was milled.

For reasons too numerous to mention, these operations were not successful and were suspended.

The mine geologically is located in the Picayune Volcanic Series, about the same position as the Ute & Ule Mines; i. e. between center and top boundary of the flow. The prevailing rock being dark green andesite.

The vein has an average strike of N.42 degrees, thirty minutes west, and dips from 58 degrees to 65 N.W. It is unquestionably the extension of the Ule vein to the north, and a complete description of the Ule vein fits the California. This will be found in previous report on Ute & Ule Mines.

Minerals found in the ore streak in the vein are quartz, galena, sphalerite, iron, and copper sulphides. The ore streak, as in Ute & Ule, occupies the central portion of the vein, and heavy deposits of quartz are on either wall. Metal content of these walls amounts to nothing. The ore streak while persistent is rather small. Evidence on the ground would confirm the grade to be milling. Several attempts have been made to sort the ore, with practically no success.

The vein measures from 2.5' to 6' to 8' wide. The ore streak in no case measured more than 2.1' over a distance of 293 feet, at 20 foot intervals, the average width being 1.2 feet. Data from surface and from Ule survey show that as vein

REPORT ON CALIFORNIA MINE. LAKE CITY, COLORADO. - M. T. D. Mathews.

The California Mine is owned by Henry Kohler of Denver, Colorado (Mr. Mathews, and a Mr. Dillingham of New York City, N. Y. It is under lease and bond to Mr. Chas. A. Hendricks of Lake City, Colorado. Copy of bond and lease is attached to this report.

The mine is located on the Hill, some three and a half miles west from Lake City, the nearest rail and shipping point. The lower workings enter the Hill at level of the county dirt road.

The lines in the Golden Mining District of Hinsdale County, Colorado, and some plats of the adjoining claims, U. S. Survey No. 3706, containing 3.67 acres, a mill site, U. S. Survey No. 3706, containing 0.17 acres, and a Mill Site, Survey No. 3704 contains the only mineral ground.

Mining on the Lee Hill of the Golden Mining District has been more or less sporadic since the early discoveries. More intensive activity is under way at present in this neighborhood than for some years past, so any property in vicinity is worthy of preliminary examination.

Property adjacent to the California on the north is the Lee Mine to the south is the Lightner Property and to the east, the Golden Eagle Mine. The California is located on the northerly extension of the Lee vein. The Lee has at one time a large production of lead and zinc ores. Northerly on the California on the veins within California boundary, and Lightner Section, only a small amount of work has been done. Geographically and geologically, the location is good. In order that more attention was made to operate the mine, a small flotation plant operated with ores and located on the mill site at period of lower prices and ore mined from other level was milled.

For reasons too numerous to mention, these operations were not successful and were abandoned.

The mine geologically is located in the Hinsdale volcanic series, about the same position as the Ute & Ulay Lines; i. e. between contact and top boundary of the flow. The prevailing rock being dark green andesite.

The vein has an average strike of N.42 degrees, slightly eastern course, and dips from 50 degrees to 65 N.W. It is approximately the orientation of the Ute vein to the north, and a complete description of the Ute vein from the California. This will be found in previous report on Ute & Ulay Mines.

Minerals found in the ore shoots in the vein are quartz, galena, sphalerite, pyrite, and copper sulphides. The ore shoots, as in the Ute & Ulay, occupies the central position of the vein, and large deposits of quartz are on either wall. Total portions of shoots mills easier to nothing. The ore shoots with the exception to milling small. Evidence on the ground tends confirm the proof to be milling. Several attempts have been made to work the ore, with practically no success.

The vein varies from 2.5' to 6' to 8' wide. The ore opened in places measured more than 5.0' over a distance of 250 feet, at 20 feet intervals, the average width being 1.0 foot. Data from surface and from the survey also show as very

goes north, it splits; part of split continuing on is general strike and dip to Ule vein, the other part striking off towards the Ute vein.

The manganese content of vein shows very strikingly on the ore when exposed to weather. On exposure, the pieces of ore vary in color from brown to black. Some rhodocrosite was noticed in specimens.

Ore reserves do not exist. While it might be assumed that ore does continue on plane of the vein some 370 feet from lower workings to workings on the surface, that show ore, no workings prove this. Vein has been drifted on in lower workings some 293 feet, but a large part of this is on Ule territory. Assays were taken at intervals of 20 feet, which seemed consistent with observations underground.

Developments consist of a series of open cuts on surface and a tunnel, the portal of which is on mill site. The tunnel cuts the vein about 600 feet from portal and at a vertical depth of 340 feet; slope depth of 370 feet. From point of intersection of vein north a drift on vein is 293 feet in length. A stope has been cut out from point of intersection of tunnel and vein up to end of drift.

The mine offers nothing more than a prospect. On account of the lower workings entering on the Ule ground, right-of-way is questionable. The size and crooked course of the tunnel are serious drawbacks confronting operation of the mine, and are no assets practically.

Developments must be essentially in a prospective sort of way. Some work on the surfact indications would be logical within the boundary of the California claim. Any ore developed could be followed down or laterally. Results of this work are purely prospective.

Property could not be considered on terms of the present bond and lease; I would suggest, a bond and lease for $5,000; time five years; 10% royalty to apply on bond. At this price owners must agree to establish right-of-way over Ule territory.

March 1926

[illegible] well, it appears part of which continuing on in general strike and dip to the west, the other part striking off toward the [illegible].

The mineralogic content of vein shows very distinctly on the outcrop exposed in [illegible]. On exposure, the edges of are vary in color from brown to black. Some radioactivity was noticed in specimens.

Ore reserves do not exist. While it might be assumed that ore does continue on plane of the vein some 270 feet from lower workings to workings on the surface, that other one, no workings prove this. Both has been drifted on in lower workings some 200 feet, but a large part of this is on the barrenary. Assays were taken on intervals of 20 feet, which showed constituents which observations underground.

Investigations consists of a series of pockets on surface and a tunnel. The pocket of which is on hill side. The tunnel cuts the vein about 200 feet from pocket and at a vertical depth of 240 feet, along depth of 270 feet. From point of intersection of vein with a drift on vein is 200 feet in length. Stoping has been cut out from point of intersection of tunnel and vein up to end of drift.

The mine offers mining were there a prospect. On account of the lower workings cutting on the the ground, right-of-way is questionable. The shaft and crosscut [illegible] of the tunnel are certain hazards [illegible] operation of the mine, and are in bad shape practically.

Steel quarry was in substantially in a prospective area of way. Some work on the surface indications would be logical within the boundary of the California claim. Ore are developed could be followed down or laterally. Results of this work are purely speculative.

Property could not be considered on terms of the present lease and lessee's would support. A bond and lease for $2,000; term five years; 10% royalty to apply on bond. [illegible] this price owners must agree to establish right-of-way over the [illegible]

[illegible] 1955

COPY

RIDGEWAY R. WILSON & ASSOCIATES
MINING ENGINEERS

REPORT ON HIDDEN TREASURE MINE
GALENA MINING DISTRICT, HINSDALE COUNTY, COLORADO

By T. D. Benjovsky
To
Chas. E. Schwarz, c/o St.Louis Smelting & Refining Co., St. Louis, Missouri .

LOCATION

The Hidden Treasure Mine is located in the Galena Mining District, Hinsdale County, Colorado. Is distant from Lake City, the county seat, some three miles west on Henson Creek. Lake City is the terminal point of the D. & R. G. narrow gauge R.R. The mine is served by a very good wagon road, connecting to the railroad.

PROPERTY

The property consists of the following Patented mining claims on Ute Hill:

Hidden Treasure, Invincible, Protector, Otis, Windsor, Albany, Steele, Metropole, McComb, McCarty No. 3, McComb No. 2, and the McCarthy Possessary claims, Hot Stuff No. 1 & No. 2, Dutch Mike, and Manager Lodes. Two fractions were located April 26, called Charleston, and Intersection.

Located on Henson Creek on which the mill, and power projects are built, are patented the following mining claims; Hard to Beat, Winner, Hard Tack, Don Quixote, and the Crystal. Possessary claims are Tunnel Lode and Thomas Placer. All the mining property is on Ute Hill, and consists of 120 acres more or less patented, and about 40 acres possessary. The milling and power projects have 50 acres more or less, patented. and 20 acres more or less, possessary.

The title of the property is held by the McCarty Hidden Treasure Mining Company, 726 World Herald Building, Omaha, Nebraska. It is a Colorado Corporation capitalized for $1,250,000. The property is at present time under option to The St. Louis Smelting & Refining Company, St. Louis, Missouri.

HISTORY

The Hidden Treasure Claim was located during the late seventies. The first ore was mined during 1897, from this time on until 1908 it was worked continuously. Since date of first location it has been added to from time to time, in way of mining claims, and equipment such as water power project, mill and tramway. Most of money for buildings, mill, and power project and tramway has come out of the mine. Work was resumed in 1912 and 1913, then ceased until presentowners took over property in 1918. A very unsatisfactory operation was attempted at this time and finally property closed down. Since 1918 no work has been attempted. The mine and tramway have gone to complete ruin. The buildings and mill have been kept clean. The water power project has in pipe line gone beyond repair.

Litigation has been introduced more or less into the operations of the mine. This was with Ute Mines on the south involved Apex rights, rights-of-way for ventilation and drainage. By a compromise, recorded in the UnitedStates District Court all controversies were settled for all time.

REPORT ON HIDDEN TREASURE MINE
QUEEN MINING DISTRICT, MESEVAS COUNTY, COLORADO

by E. T. Dougherty
to
Chas. E. Schmerz, c/o Colorado Smelting & Refining Co., St. Louis, Missouri.

LOCATION

The Hidden Treasure Mine is located in the Colona Mining District, Hinsdale County, Colorado. It adjoins and lies from the county seat, Lake City, 12 miles west of Lake City. The City is the terminal point of the D. & R. G. narrow gauge R.R. The mine is served by a very good jeep road, connecting to the railroad.

PROPERTY

The property consists of the following patented mining claims on the Ridge:

Hidden Treasure, Invincible, Protection, Gold, Pittsburg, Liberty, Lincoln, Independence, Monarch No. 1, Lincoln No. 2, and the adjoining Independence claims.
Mill Site No. 1 & No. 2, Beach Mills, and Dredger Lodes. The Protection was located April 26, called Charleston, and Independence.
Located on Hanson Creek on which the mill, and lower properties are located, are patented the following mining claims: Hard to Beat, Hanson, Hard Vein, Don Quixote, and the Crystal. Necessary claims are Tunnel Site and Tunnel Site #2. All the mining property is on the Hill, and consists of 120 acres more or less patented, and about 40 acres necessary. The milling and power projects have 30 acres more or less, patented, and 20 acres more or less, necessary.
The title of the property is held by the Hidden Treasure Mining Company, 706 Wright Building, Denver, Colorado. It is a Colorado Corporation capitalized for $1,750,000. The property is at present subject to the St. Louis Smelting & Refining Company, St. Louis, Missouri.

HISTORY

The Hidden Treasure claims were located during the late seventies. The first ore was mined during 1897, from this time on until 1903 it was worked intermittently, since date of first location it has been added to from time to time. All way of mining claims, and equipment such as water power projects, mill and tramway. Lots of money for buildings, mill, and power projects, and tramway has gone out of the mine. Work was resumed in 1912 and 1913, then ceased until preservations took over property in 1918. A very unsatisfactory operation was attempted at this time and finally property closed down. Since 1918 no work has been attempted. The mine and tramway have gone to complete ruin. The buildings and mill have been blown down. The water power project has in pipe line gone beyond repair.

Litigation has been introduced more or less into the operations of the mines. This was with the mines on the south involved lost, rights, rights-of-way for ventilation and drainage. By a compromise, recorded in the United States District Court all controversies were settled for all time.

PRODUCTION

The production has been from records of the U. S. G. S. upwards of $700,000. Considering poorly adapted milling practice, nothin being realized for zinc, a large amount of value at present day has been lost, for which the mine has no credit.

GEOLOGY

Ute Hill rises rather abruptly from Henson Creek level, some 1000 feet. It consists of volcanic rocks entirely. At 1000 feet is a considerable flat, thence it rises some 1500 to 2000 feet to top of ridge, dividing Henson Creek from Crystal Creek. That part from Henson Creek to the Flat is known as Ute Hill and production which has been made is from this part. The base of the mountain is andesite. The top is rhyolite. These rocks are of Tertiary age, and consist of flows which dip to the north slightly. Great erosion between periods of flows has left unconformity between the thyolite and andesite. No igneous or sedimentary rocks have been recognized in the immediate vicinity of the property. The andesite has been recognized as the Picayune Andesite, and the rhyolite as the Eureka Rhyolite, by the U.S. G.S. North of the Ute Hill, the rhyolite is capped with the Potosi Series of rocks consisting of rhyolites principally. The U.S.G.S. remarks that these volcanics may be 7400 feet in thickness and are underlain with granite. This geology has already been described in report on Ute Mines.

Some faulting has taken place since the formation and deposition of the veins. What effect these faults have on the vein, ore deposits, etc. has not been worked out, and from minimum amount of development into these faulted zones no definite information is available. One fault shows prominently in shaft above old No. 1 level and in No. 1 level, effects of this fault can be studied to some extent on five and six levels Hidden Treasure.

VEINS

The Hidden Treasure property is traversed by the same veins as the Ute & Ule property. All development has to date been on the extension northerly of the Ute vein. A parallel vein known as the "Invincible vein" traverses the property some 300 to 400 feet west of the Ute Hidden Treasure vein. East the Ulay vein is supposed to traverse the Hot Stuff Group of claims and is supposed to be more or less parallel to Ute-Hidden Treasure, some 500 to 600 feet must separate these veins. These veins which are fissures were probably formed during a single period. Physical characteristics and minerals deposited are very similar in all cases. Locally there are many little fissures well mineralized which traverse the territory between the main veins. These have all kinds of strikes and all kinds of dips. These crossing fractures or fissures have more or less import to a study of the ore deposition in the main veins, since at these intersections with main veins usually considerable enrichment in size of ore deposit is noticed.

Personal conclusions are that the vein fissuring may be classified as follows:

1. A main zone of fissuring, which has a general strike N.E. and S.W. dipping to the west.
2. A minor fissuring, various strike and dips, very limited in extent, which were formed by subsequent settling during the formation of the major fissures. The Ute-Hidden Treasure vein is the main fissure of Ute Hill. Veins such as Ule, Nicholson, etc. are simply splits from this main fissure. These veins continue along their different courses gradually weakening in width, and eventually changing

INTRODUCTION

The production has been from records of the U. S. G. S. amounts to $700,000. Considering poorly adapted milling practice, mostly being replaced for piling, a large amount of value as presents may have been lost, for which the mine has no credit.

GEOLOGY

The Hill mines rather thoroughly from Hudson Creek level, some 1000 feet. It consists of volcanic rocks exclusively. At 4000 feet is a considerable flow, thence it rises some 1500 to 2000 feet to top of ridge, dividing Hudson Creek from Crystal Creek. That part from Hudson Creek to the Hill is known as the Hill and production which has been here is from this part. The base of the mountain is andesite. The top is rhyolite. These rocks are of Tertiary age, and remnants of these might be the north slightly. Great erosion between periods of flows has left uneven contact between the lava and andesite. No igneous or sedimentary rocks have been recognized in the immediate vicinity of the property. The andesite has been referred to the Tuscarora Andesite, and the rhyolite as the Tuscarora Rhyolite, by the U.S. G.S. Depth of the Hill, the rhyolite disappeared, then the Tuscarora Series of rocks consisting of rhyolites predominately. The U.S.G.S. records that these rocks may be 1000 feet in thickness and are underlain with granite. This geology has already been described in reports on the mines.

Mine Geology has taken place since the formation and deposition of the veins. Most effect these faults have on the veins, are obscure, etc. Has not been recognized, and from minimum amount of development has these faults been of minor importance in available. The fault shows probably in right above old No. 1 level and in No. 1 level, effects of which can be traced in some extent on this and the Lucile Hidden Treasure.

VEINS

The Hidden Treasure property is traversed by two main veins as the lies a file property. All developments has to date been on the extension northerly of the 3rd vein. A parallel vein known as the Invisible vein traverses the property some 200 to 400 feet west of the Hidden Treasure vein. Just the Illy vein is supposed to traverse the 1st North group of claims and is supposed to be more or less parallel to the Hidden Treasure, some 200 to 400 feet west regarding these veins. These veins which are fissures were probably formed during a single period. Physical characteristics and mineral composition are very similar in all cases. Locally they show very little fissures well mineralized which traverse the territory between the main veins. These have all kinds of textures and all kinds of dips. These crossing fissures or fissures are more or less lapse to a study of the deposition in the main veins, since as these interconnections with main veins are considerable evidence in size of ore deposit is noticed.

Personal conclusions are that the vein fissuring may be classified as follows:

1. A main zone of fissuring, which has a general strike N.N. and S.S. dipping to the west.

2. A minor fissuring, varying strike and dip, very limited in extent, which was formed by subsequent revolution during the formation of the main fissures. The cross-fissures traverse with in the main fissure of the Hill, Lucile and in the Hidden Treasure, are simply splits from this main fissure. These veins contains such similar different courses and dip with main zone in width, and eventually closing

their strike and dip, returning to the main vein. This accounts for numerous crossing fissures, and the enrichments on the intersections. Immense areas of country rock between the splits and main vein might be called horses.

In the formation of the main vein it should not be expected that the main fissure would continue throughout the various rock formations, along a definite strike and dip. Some places in formations traversed by vein rock is hard, again it is breccia, sometimes rhyolite, sometimes andesite; I think reason for changing of strike and dip of Ute-Hidden Treasure vein can be thus explained. Of course the two mentioned faults may have a great deal to do with just these various characteristics.

The Ute-Hidden Treasure vein in its course N. E. through the country did split at times. At a point south of Henson Creek it split, one split continuing as Ute-Hidden Treasure, the other as the Ule vein.. The Ule on its course north further splits, and each of these splits tend to return to the Ute-Hidden Treasure. Where these splits return or junction with the main vein, there has been large ore bodies formed. The Ute-Hidden Treasure vein continuing north in present workings gets smaller and smaller in corsssection, little splits occur into the hanging wall at intervals, and do go north. Eventually it is possible that as yougo north further and further, it would become unprofitable and pinch as the Ule ore does, and following out one of these splits would take work to the Invincible vein which would have the mineral and thus become the principle continuation north of the ore bodies from Ute-Hidden Treasure vein. No mine workings exist on the Invincible vein, nor does this vein show any mineral on the surface. However, it is possible that just this condition does exist, and it might be well to prove it. If workings would prove this to be so, then to north and west is a mine worthy of development. No ore was found within boundaries of Hidden Treasure property on surface. In fact, it was 365 feet below surface before any ore or value was found on Hidden Treasure property in the Ute-Hidden Treasure vein.

ORE DEPOSITS

Examination of the Ute-Hidden Treasure vein in the Ute workings and Hidden Treasure workings, ore deposits as developed were confined to probably three shoots. Going farther, considering Ule workings also on No. 5 level, ore deposits are four shoots. 1st shoot, at junction of Ute & Ule veins or splits; 2nd shoot beginning at point where No. 5 level intersects Ute vein beyond junction of Nicholson vein; 3rd shoot beginning at point some 220 feet south of Hidden Treasure shaft on Ute No. 5, and 4th shoot beginning at point some 240 feet north of Hidden Treasure shaft on Hidden Treasure No. 6 level. These four shoots were undoubtedly very profitable. Unfortunately the first shoot or shoot at split of Ute and Ule could not be studied closely on account of conditions of the mine workings. The shoots of ore in Ute and Hidden Treasure mines are accessible and can be studied.

Commercially profitable ore has been worked continuous in Hidden Treasure and Ute Mines. To the north the silver values increase. To the south silver decreases, lead and zinc increase. The dip, or rake, of these ore shoots seems to be toward the north unquestionably. These shoots are in neighborhood of 500 feet long on the strike of the vein, and have been measured up as high as $4\frac{1}{2}$ feet solid zinc and lead sulfide. As an average, the metal content of these shoots at present market is about $20 per ton, silver at 60¢ and lead at $6\frac{1}{2}$¢. The average width better than 2 feet. In most cases the ore streak is centrally located within the vein. Foot and hanging walls are of quartz. Some cases structure is distinctly banded alternating pbs., quargz, pbs. zn, barite, exceptions to this are found in Hidden Treasure workings where ore shoots show distinct blotches or spotted condition in vein.

about granite and clay, according to the main veins. Time relationship for numerous epoch-
ing, fissures, and the mineralization on the intersections. Numerous types of contact
rock between the aplite and main vein might be called hornfels.

In the formation of the main vein, it should not be overlooked that the main fissures
would contain throughout the various rock formations, along a definite strike and
dip. Same places in formations traversed by veins may be hard, again in hard rocks,
sometimes brittle, sometimes ductile. I think reason for changing of strike and
dip of the Hidden Treasure vein can be then explained. It may be due to minimum
that it may have a great deal to do with that, causes various alterations.

The Ute-Hidden Treasure vein in the Gunnison, is through the morning dip still at
times. At a point south of Hidden Treasure it again, and right continuing on the Ute-
Hidden Treasure, the other as the Ute vein. The Ute on the course north through
aplite, and much of these aplite hard to venture to the Ute-Hidden treasure. There
there aplite return on junction with the main vein, there has been large one broken
formed. The Ute-Hidden Treasure vein continuing north in various workings goes
smaller and smaller in convergence. Little aplite occur into the working well as
improved, and do go north. Eventually it is probable that at some depth Hidden
and Ute, it should become unprofitable and pinch as the Ute and close, and follow-
ing one of those aplite would take work to the last profitable vein which would have
the minerals and time because the petrologic continuation north of the Hidden Trea-
Ute-Hidden Treasure vein. No mine workings exist in the Hidden vein, nor there
table vein also any mineral on the surface. However, it is possible that pinch
continuation does exist, and it might be well to prove it. If workings would prove
this to be true, then to north and west in a mile-width of development. No ore has
found within boundaries of Hidden Treasure property on surface. In fact, it was
305 feet below surface before any ore or value was found on Hidden Treasure pro-
perty in the Ute-Hidden Treasure vein.

(D) DESCRIPTION

Examination of the Ute-Hidden Treasure vein in the Ute workings and Hidden Treasure
workings, are reported as developed were confined to practically three shoots. Begin
further, considering the workings along on No. 5 level, one dropping the four shoots
last shoot, at junction of Ute & Hidden veins of aplite and shoot beginning at point
where No. 5 level intersects the main junction of Hidden Treasure, and shoot
beginning at point some 250 feet north of Hidden Treasure shaft on Ute No. 5, and
last shoot beginning at point some 250 feet north of Hidden Treasure which is Hidden
Treasure No. 5 level. These four shoots were undoubtedly very productive. Un-
fortunately the first shoot or about 25 feet of Ute and Ute could not be studied
adequate accounts of conditions of the mine workings. The shoots of ore in the
and Hidden Treasure mines are accessible and can be studied.

Commercially profitable ore has been mined continuous in Hidden Treasure and Ute
Mines. To the south the ore values increase. To the south either increases,
load and also increase. The dip, by rule, of these ore shoots seems to be towards
the north approximately. These shoots are in neighborhood of 300 feet long on the
strike of the vein, and have been measured up as high as 4½ feet solid value and
load material. As an average, the metal content of these shoots at present market
is about 250 per ton, silver at 60¢ and lead at 4½¢. The average width varies
2 feet. In most cases the ore shoots is centrally located within the vein. Some
and hanging walls are of barren. Some cases structure is distinctly hanging
wall pinch, quartz, pyrite, etc. Deviations to this are found in Hidden Treasure
workings where ore shoots show distinct blobbies or spotted condition in veins.

SAMPLING

Possible tonnages of ore were considered in sampling the mine. These were: tonnage above No. 1 level; tonnage north of present development; tonnage below No. 6 level. I also tried to check up with sampling of Chase & McCarthy's. Sampling above No. 1 level proves ore bunchy, pinched and swelled, no tonnage developed. Interval sampling 10 and 15 feet. No. 1, No. 3, and No. 5 levels could not be reached without enormous expense. Sampling of bottom of No. 6 level shows the existence of two shoots of ore, the north end of one 170 feet north of Hidden Treasure shaft, the beginning of second shoot 290 feet north of shaft extending about 700 feet.

The part of shoot at the next to the shaft averages in width 3.86 feet, gold, silver & lead content $18.26. The second shoot averages in width 2.81, gold, silver & lead content $8.37 per ton. The interval of sampling here was every ten feet.

DEVELOPMENT

The mine was originally developed through a crosscut and a shaft from point of intersection of crosscut with the vein. Later this shaft was raised to surface and also sunk to a depth of 900 feet from surface on the plane of the vein. From the shaft 313 feet from surfact No. 1 level drifted north on vein some 800 feet, 50 feet below this old No.1 level drifted north on vein some 250 feet. No. 2 level drifted north from shaft at point some 500 feet below surface, some 900 feet. About 80 feet below No. 2 level is No. 5 level shich went north on vein some 1500 feet. 80 feet below No. 3 leve, No. 5 level goes north on vein some 1300 feet. Approximately 200 feet below No. 5 level, No. 6 goes north on vein some 1180 feet. 50 feet below No. 6 level, No. 7 level extends north on vein some 170 feet. With the exception of what might be inaccessible, there are no cross cuts into the hanging wall of the vein. On level No. 1 there are two different places where foot wall cross-cutted. These show nothing but country rock away from the vein. From surface down shaft some 200 feet is rhyolite, then from this point down the shaft the workings are in andesite. No prospect raises or winzes were driven. From the crooks and cavy ground encountered along the courses of each level some faulting must have taken place subsequent to ore and vein formation periods. Mine water does not amount to anything so far. No. 7 level and the shaft below six are under water.

The stopes are extensive, they reach laterally from shaft to point about 900 feet on level No. 6, and go clear through to level No. 1. They have been left open and at present time are in very bad shape to examine as they have started to cave at the top. In area of vein surface, they represent 293,500 sq. ft. Only small pillars are left in most cases. These pillars show stopes were on ore.

EQUIPMENT

The power plant for the mine was located at mill. It consists of a water power driven compressor. Compressor is rated at 1500 cu. ft. sea level, at 126 R.P.M. This is connected to mine with a 4" pipe line some 400 feet long. Distribution through the mine was with 2" and 1½" pipe.

The hoisting plant which for any purpose whatever is out of date, was located at collar of shaft. It was electric, direct current, double drum and was counterbalanced. It operated a contraption in the shaft on which a car at a time was

GENERAL

Possible footages of ore were considered in supplying the mine. These were footage above No. 3 level, footage north of present development, footage below No. 5 level. It was felt to chase up a rich shoot of ore is worthwhile. Sinking above No. 1 level proves ore nearby, blocked and developed, no damage determined. Proposal sinking 10 and 14 feet. No. 4, No. 5, and No. 6 levels could be reached without excessive expense. Sinking of bottom of No. 6 level shows the existence of two shoots of ore. Northern end of one 170 feet north of Hidden Treasure shaft, the beginning of another since 200 feet north of shaft, extending about 700 feet.

The part of shoot at the west to the shaft averages in width 3.06 feet, gold, silver & lead contents 12.20. The second shoot averages in width 2.61, gold, silver & lead contents 13.37 per ton. The footwall of sampling here was every ten feet.

DEVELOPMENT

The mine was originally developed through a crosscut on a shaft from point of intersection of crosscut with the vein. Later this shaft was sunked to surface and also sunk to a depth of 600 feet from surface on the plane of the vein. From the shaft 313 feet from surface is No. 1 level drifted north on vein some 700 feet, 50 feet below this old No. 1 level drilled north on vein some 250 feet. No. 2 level drifted north from shaft to point some 500 feet below surface, some 300 feet. About 60 feet below No. 2 level is No. 3 level which went north on vein some 1200 feet. 80 feet below No. 3 level No. 4 level goes north on vein some 1200 feet. Approximately 100 feet below No. 4 level, No. 5 level, No. 6 goes north on vein some 1500 feet. 50 feet below No. 6 level, No. 7 level extends north on vein some 170 feet. The condition of drift might be discussable, there are no cross cuts into the hanging wall of the vein. On level No. 1 there are two different places where footwall cross-cutted. These show nothing the country rock carry from the vein. From sinking down shaft some 200 feet in profundo, then from this point down, shaft the workings are in shaft. No crosscut raises or winzes were driven. From the crooks and very ground encountered along the courses of both level and hanging wall have taken place subsequent to ore and vein formation periods. Ground water does not amount to anything as far. No. 7 level and the shaft below are under water.

The stopes are extensive, they reach laterally from shaft to points about 200 feet on level No. 6, and go clear through to level No. 1. They have been left open and as present they are in very bad shape to examine or other have attempted to cave at the top. In course of vein crosscut, they crosscuts 223,500 on. 7. Only small stringers are left in most areas. These pillars show stopes were ore.

EQUIPMENT

The power plant for the mine was located at mill. It consists of a motor power driven compressor. Compressor is rated at 8.00 cu. ft. per level, at 125 P.S.I. Air is transmitted to mine with a 4" pipe line some 800 feet long. Distribution through the mine was with 2" and 1½" pipe.

The hoisting plant which was the principle concern in ore of mine, was located at collar of shaft. It was electric, direct current, double drum and was equipped as usual. It operated a conveyation in the shaft or hoist a car 4'x4' 7'high.

hoisted, this platform on which car was placed run on rails on the foot wall side of the shaft.

What pumping was done was with compressed air. I did not find any pump whatever, so assume it was left in shaft.

The mine was connected to the mill with a gravity tramway some 3900 feet long. Motor controlled. This equipment with exception of buckets and terminal equipment is beyond use.

Mine blacksmithing was at collar of shaft. It was all done by hand. At present time no amount of tools are left which can be used, should it be desirable to use the shop at all.

The shaft house is at collar of the shaft and originally was of good size. It is a wreck at present and almost beyond any salvage stage. The same applied to upper tram terminal.

The mill, power plant, office and residence buildings are located 3 miles from town at junction of Henson and Crystal creeks. These buildings are in good repair and can easily accommodate 75 men, with boarding house equipment for probably 50 men.

The mill building is better described as containing the following units: Storage bin and tram terminal, crushing and concentrating plant, steam power plant, compressed air plant for the mine, machine shop, and water power plant for mill. This is all under one roof. A blackmsith shop west of mill and couple of buildings used for barns.

A store house with distributing track connects to mill and county road.

Assay office, and office building, are under one roof. No amount of assay or office equipment is left.

The water power plant is served from the dam on Henson Creek 90' high, built of concrete, by a wooden stave pipe line 26" in diameter. This line serves compressor wheel and wheel to electric generators which drive the mill.

COMMENTS

Past history shows that there were good large bodies of ore. It also shows that all operations in the mine were conducted in the most expensive way possible, resulting in a low grade value for the ore, besides making mining costs high. I do not believe that average of ore mined in past would be over $6.50 per ton recovered. Stockder gives during one period of operation (1901-1902) the following: Produced 19535 tons at cost of $4.67. He failed to give value or amount recovered per ton. This value I have given $6.50 per ton and Stockder's cost gives, I believe, about what has been accomplished. It compares today with just about what is being done anywhere in San Juan district where mills are operated. Sunnyside & Smuggler Union, and Tom Boy.

Past history shows that all operations were carried on a little at a time, with no definite plans for the future; consequently, no concerted effort to have a future. This resulted in the deplorable condition of the mine, the openings of the mine, tramway and the poor arrangement of power plant and mill.

Mechanical Equipment

Material. This platform on which ball was placed was on rails on the foot wall side of the shaft.

Much power was come was with compressed air. I did not find any pump manufacturer, so assume it was both air shaft.

The ship was connected to the mill with a gravity tramway more 1000 feet long. Power connection. This equipment with exception of bookers was complete equipment is beyond use.

Mine blacksmithing was at collar of shaft. It was all done by hand. It presents like no amount of tools are left which can be used, should it be desirable to use the shop at all.

The shaft house is at collar of the shaft and originally was of good size. It is a wooden air pressure and almost ground any village place. The same applied to power house building.

The mill, power plant, office and residence buildings are located 2 miles from town at junction of Hanson and Crystal creeks. These buildings are in good repair and can easily accommodate 75 men, with boarding house equipment for probably 50 men.

The mill building is better described as containing the following units. Storage bin and feed machinery, crushing and concentrating plant, steam power plant, compressed air plant for the mine, machine shop, and motor power plant for mill. This is all weather-proof. A blacksmith shop used of mill and supply of building wood for burn.

There horses with distributing track possible to mill and supply road.

Among offices, and office building, are under one roof. No amount of assay or office equipment is left.

The motor power plant is served from the dam on Hanson Creek 300 high, built of concrete, by a wooden flume cape 7 ins 30" in diameter. This flume serves approximately and close to electric generators which drive the mill.

CONCLUSIONS

Past history shows that there were good large bodies of ore. It also shows that all operations in the mine were conducted in the most economical way possible, considering the low value for the ore, besides making mining costs high. I do not believe that average of ore mined in past would be over $6.50 per ton recovered. Schedule gives during one period of operation (1906-1908) the following: Produced 1958 tons at cost of $4.67. He failed to give value or amount recovered per ton. This value I have given $6.50 per ton and Schedule's cost given. I believe, about what has been accomplished. It compares today with past shows what is being done anywhere in Ten Mile District where mills are operated. Everywhere a Smeller Ruler, and Tom Tay.

Past history shows that all operations were carried on a little at a time, with no definite plans for the future; consequently, no concerted effort to have a future. This resulted in the unfavorable condition of the mine, the condition of the mine, tramway and the poor arrangement of power plant and mill.

FUTURE PROSPECTS

I have every reason to believe that prospecting to the north will result favorably. I believe prospecting in bottom or downward extension of mine will be favorable.

I do think it will take at least $150,000 to confirm my beliefs on the prospecting. With this expenditure and about three years' time, it is possible that profits expected might be in the millions.

Consideration of Henson Creek District as a whole, it might be worth while to consider the acquisition of property, develop the water power mill and mine with the idea in view that during the next few years other properties might be developed by others, and their ores could be purchased on ground, or that properties might be available after the so-called wild-catting is over.

RECOMMENDATION

I cannot see from results of assaying, examination, and surveying, anything but a long time operation. Being unable to get right-of-way through Ute workings, amount of expenditure it would take to drive newcross-cut tunnel or sink a new shaft no ore being developed at present time, I believe the proper thing to do is to forget the project from a mining venture point of view until conditions different than existing today are present.

One possible way might be to have present owners put up their share of expense, or whole expense of driving the proposed tunnel into the Hidden Treasure vein, expenditure to be returned to both parties out of possible ore if any is found.

PUBLIC RELATIONS

I have every reason to believe that prospecting in the north will really benefit Canada, I believe it essential to begin by discovering an amount of ways which is favourable.

I do think it only fair to issue [illegible] to results by failure on the prospectors, with this also organization and about three years' time. It is possible that [illegible] might be in the meantime.

Consideration of Canada food industry as a whole, it might be worth while to make a thorough exploitation of property, having the water power, mill and also with the idea in view that during the next five years China, [illegible] might be developed by Canada, and thus one could be prepared to produce, or that [illegible] might be available after the so-called [illegible] is over.

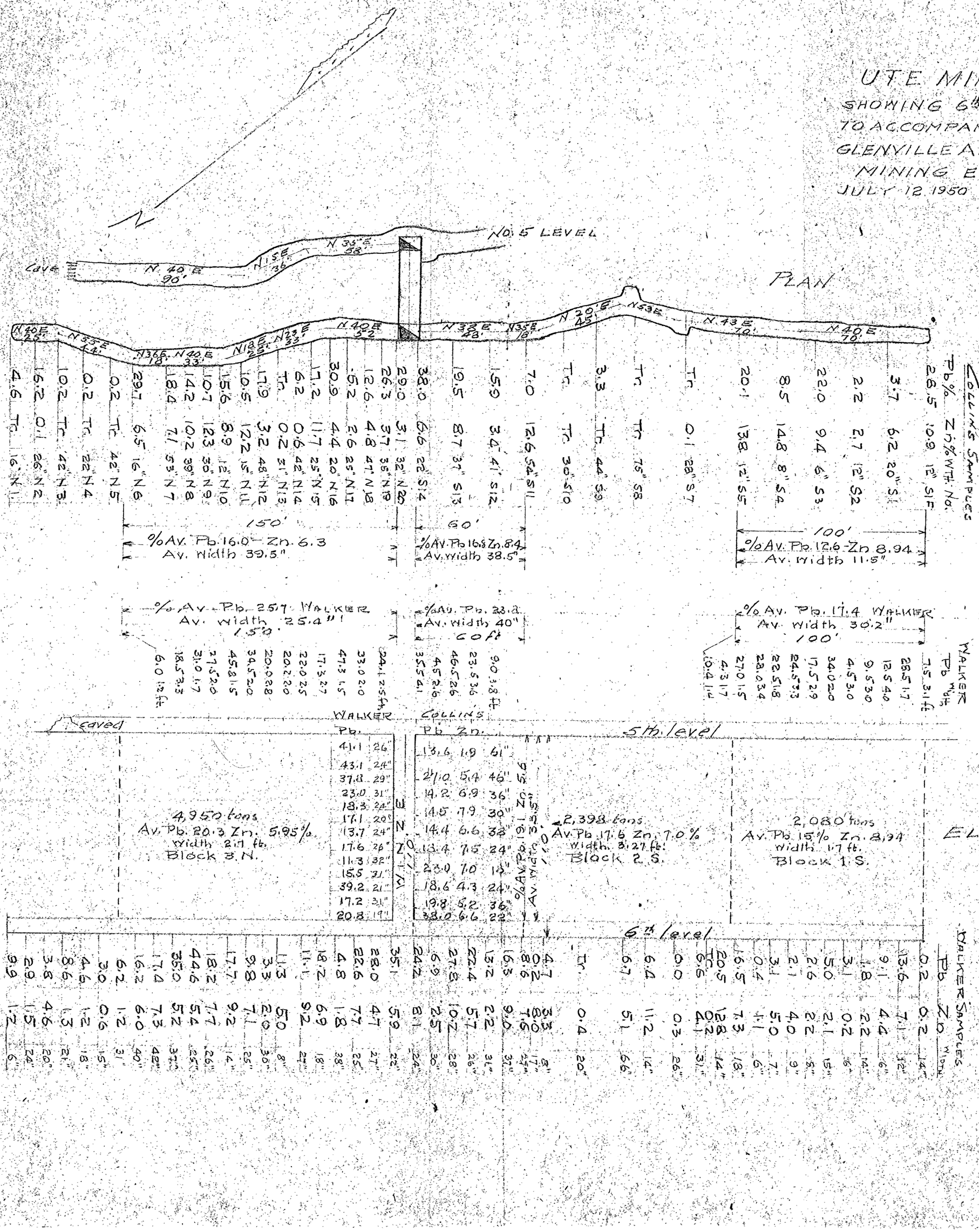
CONCLUSION

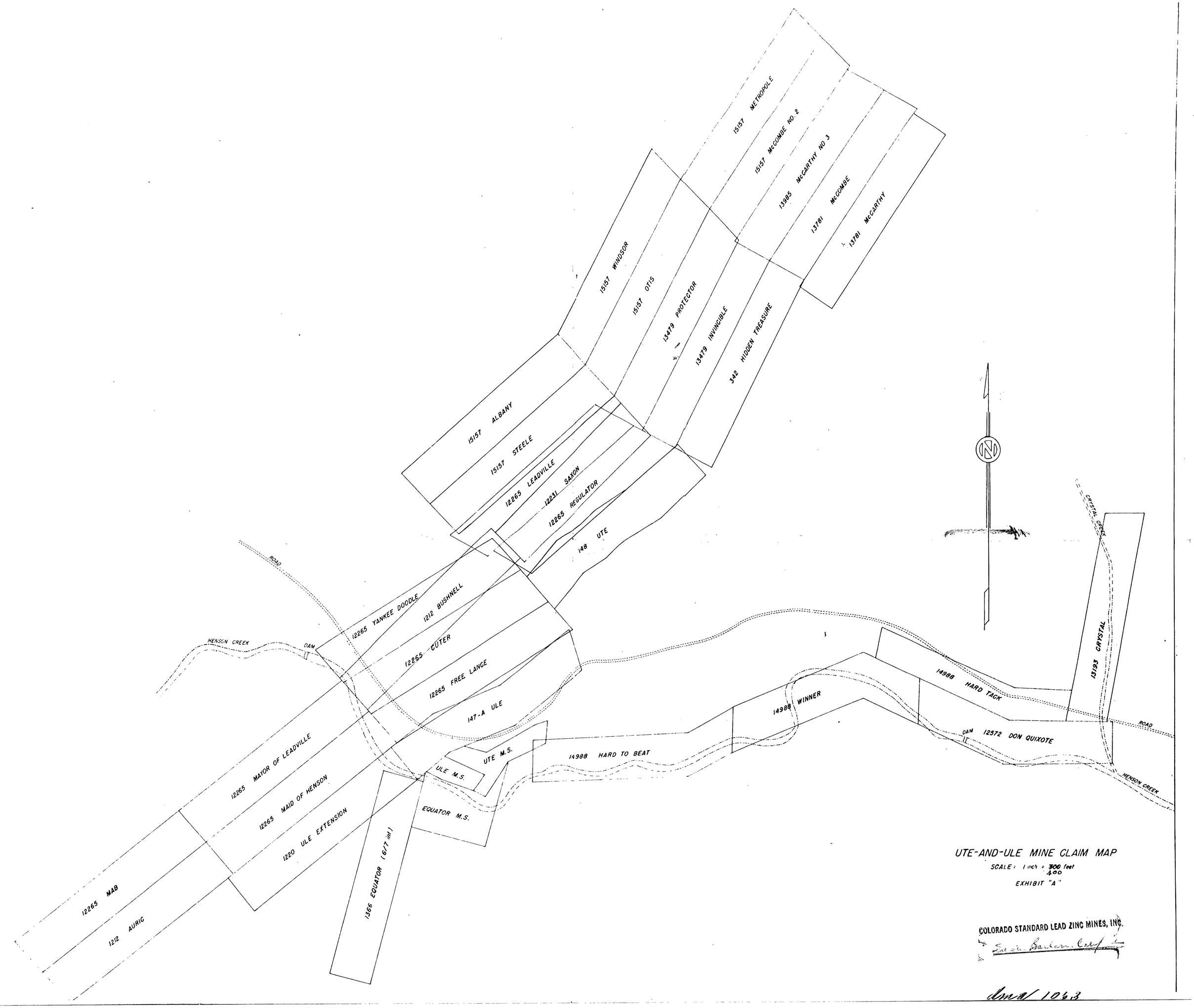
I regret too from results of surveying, construction, and surveying, anything but a fair idea [illegible]. Being unable to [illegible] through the [illegible] amount of [illegible] it would take to give [illegible] or [illegible] to do [illegible] [illegible] I believe the people [illegible] to do to [illegible] the project from a mining venture point of view [illegible] [illegible] [illegible] are present.

One possible way might be to have [illegible] prospectors [illegible] or [illegible] [illegible] the [illegible] [illegible] [illegible]

UTE MINE

SHOWING 6th LEVEL
TO ACCOMPANY REPORT
GLENVILLE A. COLLINS
MINING ENGINEER
JULY 12 1950 SCALE 1"=40'





UTE-AND-ULE MINE CLAIM MAP

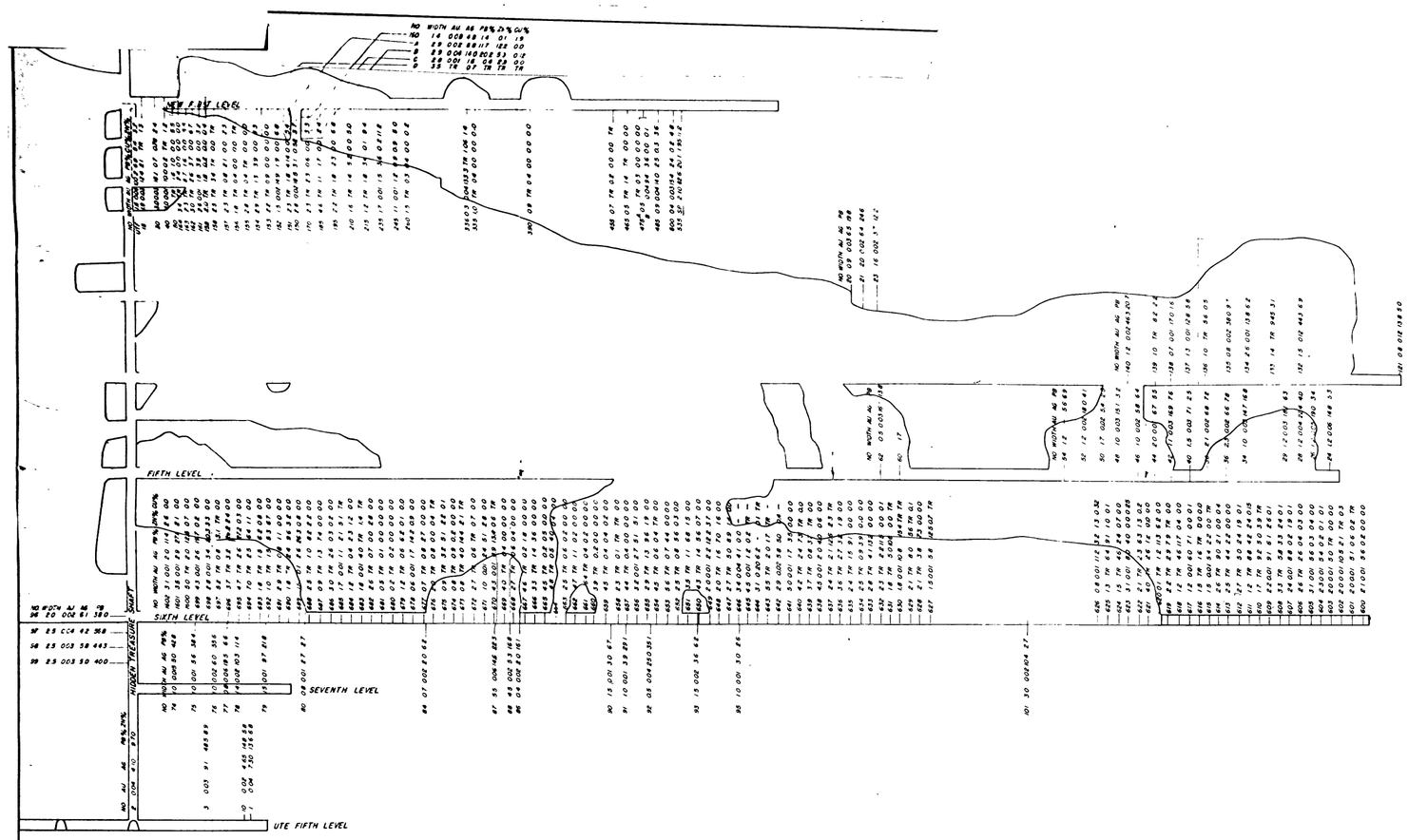
SCALE: 1 inch = ~~300~~ 400 feet

EXHIBIT "A"

COLORADO STANDARD LEAD ZINC MINES, INC.

Sarah Barkan, Corp. Sec.

dma/ 1063



HIDDEN TREASURE MINE
ASSAY MAP

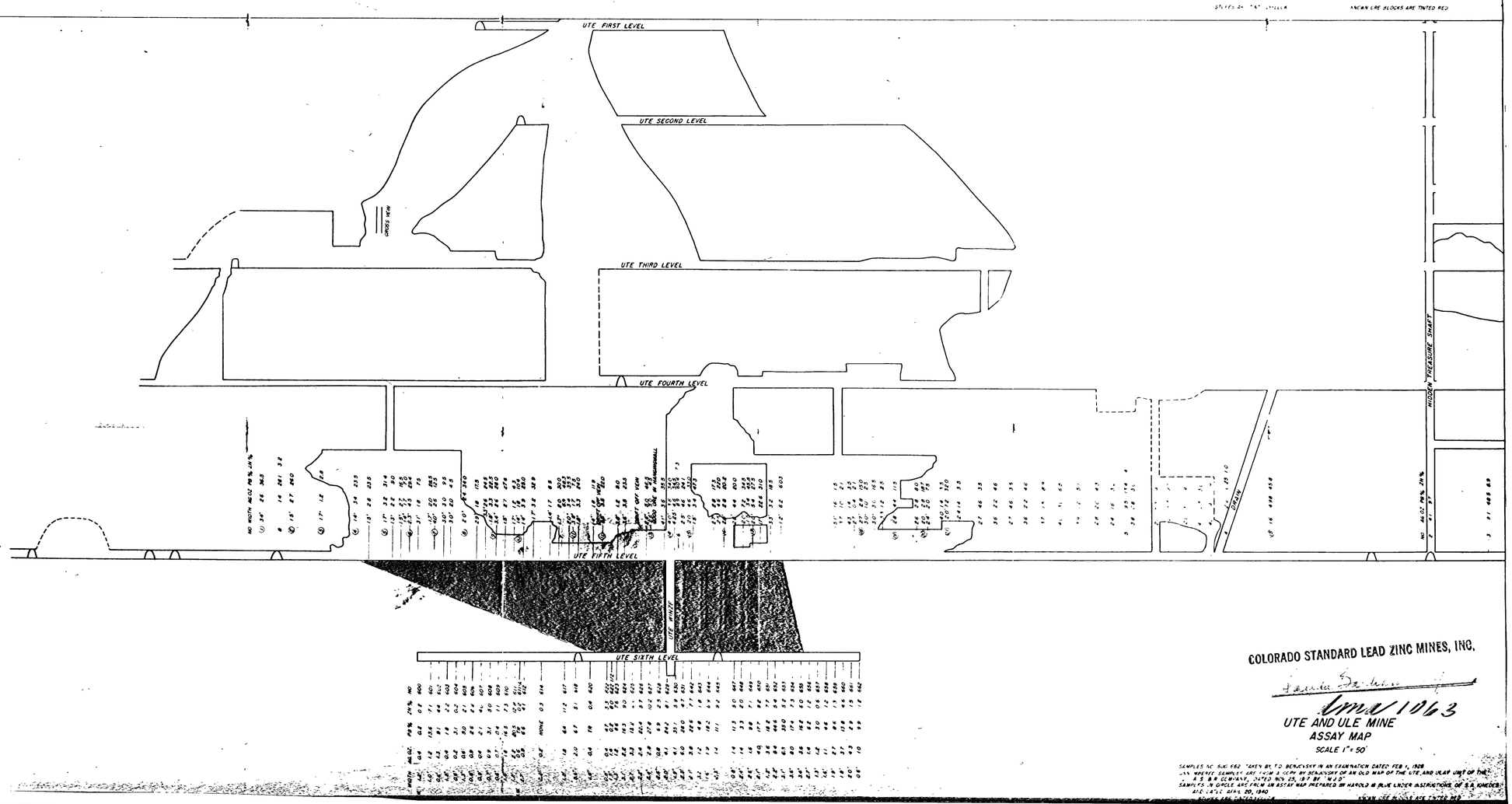
SCALE 1" = 50'

100

SAMPLES No. 15, 30, 40, 50, 150, 160, A, B, C, D, 170, 185, 195, 210, 225, 235, 245, 260, 335, 356, 390, 455, 465, 479 A & B, 485, 500, 535, 600-669, 1600-1602 HAVE BEEN "TAKEN BY T. D. BENJOVSKY IN AN EXAMINATION DATED FEB 1, 1928.
SAMPLES No. 14 FROM SIXTH LEVEL, No. 99 IN THE HIDDEN TREASURE SHAFT, 24 & 26 ON FIFTH LEVEL, 121-140 ON THIRD LEVEL AND 21-23 IN SECOND LEVEL HAVE BEEN "TAKEN BY EDWIN E. CHASE" IN AN EXAMINATION DATED 4/11/47.
MANY STOPE FACES SAMPLED BY CHASE HAVE BEEN SUBSEQUENTLY MINED AND THESE SAMPLES HAVE BEEN OMITTED FROM THIS MAP.

STOPES IN "NO" SYSTEM

KNOWN ORE BLOCKS ARE TINTED RED



RETURNS FROM A.S.&R.CO. PUEBLO SMELTER FROM ORE BROKEN IN SINKING WINZE FROM UTE 5 TO UTE 6 LEVELS JANUARY 1918 TO MAY 1918

TONS	AU OZ	AG OZ	PB. %	SiO_2 %	ZN. %	S %	PAID
67	0.01	3.5	25.0	58.5	1.5	7.1	$ 38.90
115	0.01	3.2	14.0	63.5	1.8	5.7	75.84
135	0.01	3.6	18.0	64.3	4.1	5.2	118.90
68	0.01	3.0	18.0	63.4	4.0	5.5	51.50
91	0.01.5	3.7	16.5	64.8	3.7	6.4	65.50
TOTAL 476	0.01	3.7	18.2		3.7		8.66 AVERAGE PER TON

PROBABLE ORE — BLOCK A.

LENGTH OF ORE ON UTE 5TH LEVEL (EXCLUDING WINZE) IS 300 FEET
LENGTH OF ORE ON UTE 6TH LEVEL (EXCLUDING WINZE) IS 213 FEET
THE BLOCK IS 104 FEET HIGH FROM THE BACK OF THE SIXTH TO THE SILL OF THE FIFTH
THE AVERAGE MINING WIDTH IS 5.18 FEET, AFTER ADJUSTING LESS THAN THREE FOOT SAMPLE WIDTHS TO A THREE FOOT MINING WIDTH
THE ORE TONNAGE ESTIMATE IS BASED ON 9 CU FT IN PLACE EQUALS ONE TON

	TONS	AU	AG	PB	ZN
	18,000	0.01	3.37	13.5	4.0

UTE FIRST LEVEL
UTE SECOND LEVEL
UTE THIRD LEVEL
UTE FOURTH LEVEL
UTE FIFTH LEVEL
UTE SIXTH LEVEL
UTE SHAFT
HIDDEN TREASURE SHAFT
DRAIN

COLORADO STANDARD LEAD ZINC MINES, INC.

Harold Dreher

Uma 1063

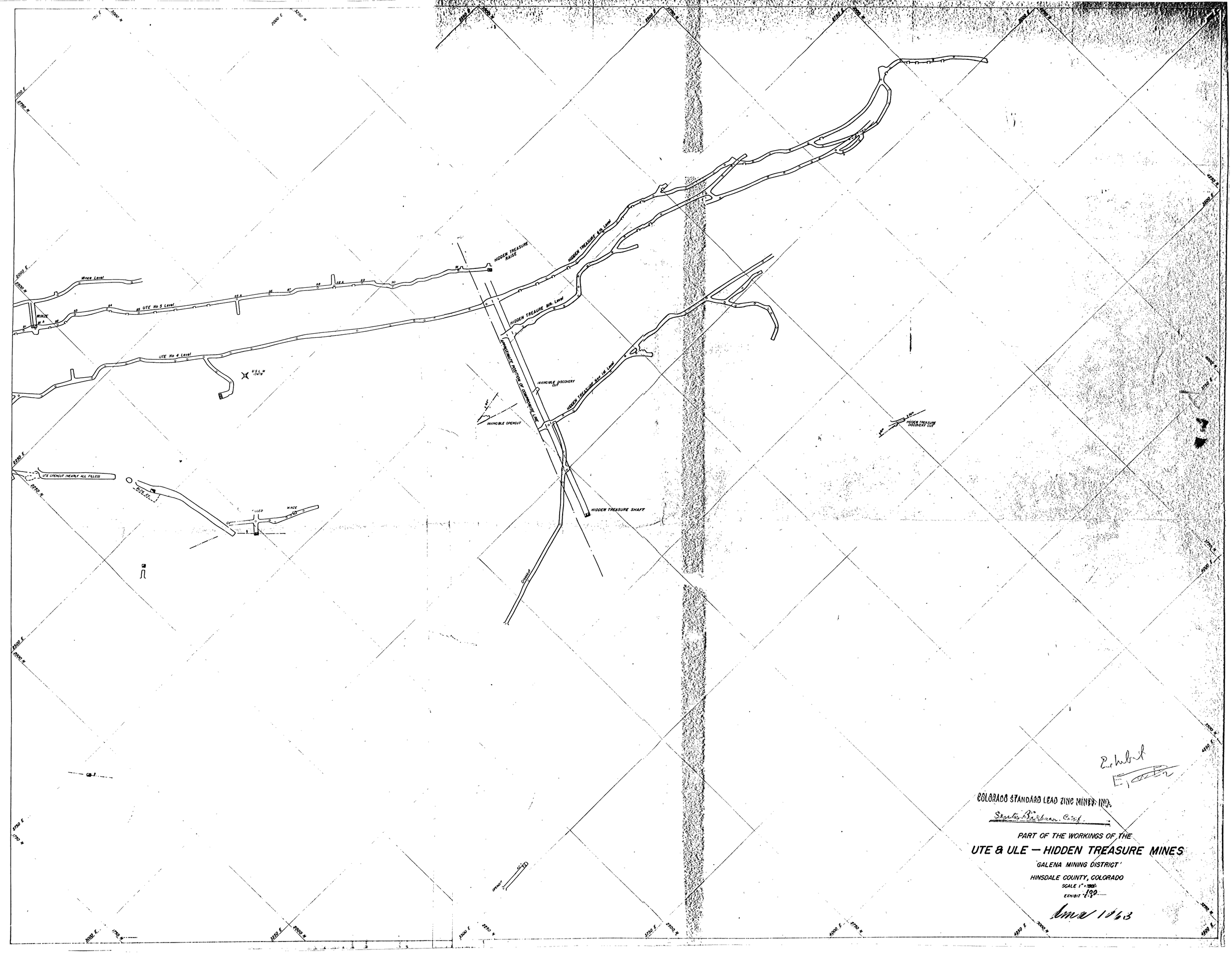
UTE AND ULE MINE
ASSAY MAP

SCALE 1" = 50'

SAMPLES No. 600-662 "TAKEN BY T.D. BENJOVSKY IN AN EXAMINATION DATED FEB 1, 1928"
"AN MARKED SAMPLES ARE FROM A COPY OF BENJOVSKY OF AN OLD MAP OF THE UTE AND ULAR UNIT OF THE A.S.&R. COMPANY, DATED NOV 23, 1917 BY "M.J.D."
SAMPLES IN CIRCLE ARE FROM AN ASSAY MAP PREPARED BY HAROLD & BLUE UNDER INSTRUCTIONS OF S.A. KINDER, DATE APRIL 20, 1940

STOPES ARE CROSSHATCHED

KNOWN ORE BLOCKS ARE TINTED RED


Winze Level
UTE No 5 Level
WINZE
UTE No 4 Level
U.S.M. 1341 B
UTE OPENCUT (NEARLY ALL FILLED)
FILLED
WINZE
HIDDEN TREASURE RAISE
HIDDEN TREASURE 6th Level
HIDDEN TREAURE 8th Level
HIDDEN TREASURE Next 1st Level
APPROXIMATE POSITION OF COMMONWEALTH LINE
INVINCIBLE DISCOVERY CUT
INVINCIBLE OPENCUT
HIDDEN TREASURE DISCOVERY CUT
HIDDEN TREASURE SHAFT
COLORADO
OPENCUT
COLORADO STANDARD LEAD ZINC MINES INC.
PART OF THE WORKINGS OF THE
UTE & ULE — HIDDEN TREASURE MINES
GALENA MINING DISTRICT
HINSDALE COUNTY, COLORADO
SCALE 1" = 200'
EXHIBIT E-139
Exhibit
E-139
Case 1063

Silver [illegible] per oz
Gold [illegible] per oz
Lead [illegible] per unit wet

Average value of 18 samples under above prices $25 [illegible] width 1.7 feet
Increase in 200% [illegible] in value

Ground now inaccessible
Vein pinched or values too low for pay
Pay areas now accessible

No	width feet	gold	silver	lead wet	value $
1	1.3	.07	51.1	14.5	65.[illegible]
2	1.0	.02	4.7	77	18.[illegible]
3	2.2	.25	19.9	14.8	36.[illegible]
4	4.1	.02	14.0	15.8	26.[illegible]
6	2.8	.05	20.4	15.0	41.[illegible]
8	2.0	.10	26.1	2.4	31.[illegible]
10	3.6	.04	8.0	0.3	9.[illegible]
12	2.0	.02	5.1	10.9	19.[illegible]
14	1.2	.05	16.0	18.4	25.[illegible]
20	0.9	.03	6.5	19.8	20.[illegible]
21	2.0	.02	6.4	24.6	29.[illegible]
23	1.6	.02	3.7	[illegible]	12.[illegible]
24	1.2	.06	14.8	5.3	20.[illegible]
26	1.2	.05	19.0	3.4	27.[illegible]
28	1.2	.04	22.4	4.0	27.[illegible]
29	1.8	.03	18.1	6.3	24.[illegible]
31	0.5	.01	9.1	16.0	21.[illegible]
32	2.0	.02	13.7	7.0	19.[illegible]
34	1.0	.03	14.7	16.8	27.[illegible]
3[illegible]	2.3	.02	6.6	7.8	12.[illegible]
38	2.1	.02	6.8	7.2	12.[illegible]
40	1.5	.03	7.1	2.5	9.[illegible]
42	1.1	.03	16.9	7.6	23.[illegible]
44	2.0	.01	2.7	5.3	11.[illegible]
[illegible]	1.0	.02	5.8	6.4	11.[illegible]
48	1.6	.03	[illegible]	3.2	19.[illegible]
50	1.7	.02	6.4	2.5	7.[illegible]
52	1.2	.02	18.0	4.1	22.[illegible]
54	1.2	–	5.6	6.9	16.[illegible]
57	2.0	.01	6.7	3.8	16.[illegible]
58	0.8	.02	3.2	2.2	7.[illegible]
62	0.5	.03	14.1	13.5	27.[illegible]
63	4.0	.02	3.2	15.0	19.[illegible]
64	1.0	.02	2.1	2.0	16.[illegible]
65	1.5	.03	8.0	14.0	18.[illegible]
68	1.3	.03	15.0	22.6	32.[illegible]
70	1.3	.02	3.8	16.2	15.[illegible]
72	1.0	.01	2.2	14.0	12.[illegible]
73	2.0	Tr.	6.1	48.6	40.[illegible]
74	1.0	.015	5.0	42.8	35.[illegible]
75	1.0	.01	5.6	38.4	33.[illegible]
76	1.0	.02	6.0	55.6	45.[illegible]
77	0.8	.06	19.5	6.6	26.[illegible]
78	1.4	.02	10.3	11.4	19.[illegible]
79	1.5	.01	9.7	21.8	25.[illegible]
80	0.8	.01	2.7	2.7	4.[illegible]
84	0.7	.02	2.0	6.8	6.[illegible]
86	0.4	.02	2.0	16.1	13.[illegible]
87	5.5	.06	14.6	22.1	32.[illegible]
88	4.5	.02	5.5	16.8	17.[illegible]
89	1.5	–	1.8	3.0	4.[illegible]
90	1.5	.01	1.0	6.7	8.[illegible]
91	1.0	.01	3.7	29.1	24.[illegible]
92	0.5	.04	25.0	13.1	51.[illegible]
93	1.5	.02	3.6	6.2	8.[illegible]
94	1.5	.02	4.6	17.0	17.[illegible]
95	1.0	.01	3.0	2.6	5.[illegible]
96	2.0	.02	6.1	38.0	33.[illegible]
97	2.5	.04	4.2	56.9	44.[illegible]
98	2.5	.03	5.8	44.3	37.[illegible]
99	2.5	.03	5.0	40.0	33.[illegible]
100	1.7	.6	68.1	7.0	78.[illegible]
101	3.0	.02	10.4	2.7	13.[illegible]
102	1.6	.02	5.6	11.7	14.[illegible]
103	1.7	.05	32.0	14.6	45.[illegible]
104	1.0	.05	67.8	3.6	75.[illegible]
105	4.2	.03	18.5	9.2	26.[illegible]
106	3.0	.1	2.4	13.0	11.[illegible]
107	2.5	.02	4.4	9.2	11.[illegible]
108	2.5	.04	22.0	6.2	28.[illegible]
109	2.2	.02	5.4	11.0	13.[illegible]
110	1.7	.03	11.0	14.6	22.[illegible]
111	1.4	.04	20.8	9.7	21.[illegible]
112	2.5	.05	12.4	11.3	22.[illegible]
113	1.7	.03	14.6	10.5	23.[illegible]
114	2.8	.02	5.0	28.8	35.[illegible]
115	1.8	.01	4.0	18.4	17.[illegible]
116	2.2	.03	7.0	22.4	23.[illegible]
117	2.8	.02	5.1	10.1	12.[illegible]
118	2.0	.03	7.1	10.3	15.[illegible]
121	0.8	.12	13.8	5.0	20.[illegible]
123	1.2	.03	20.1	3.5	24.[illegible]
124	1.2	.48	43.3	10.2	62.[illegible]
125	0.4	.07	3.4	Tr.	4.[illegible]
126	0.8	.02	10.8	1.4	13.[illegible]
127	1.0	.01	18.0	6.4	23.[illegible]
128	0.9	.01	17.2	11.0	26.[illegible]
129	0.7	.01	114.8	4.5	125.[illegible]
130	1.0	.01	42.6	4.0	48.[illegible]
131	1.0	.01	6.7	0.3	7.[illegible]
132	1.5	.12	44.3	6.9	54.[illegible]
133	1.4	Tr.	9.4	3.1	12.[illegible]
134	2.6	.01	13.8	6.2	19.[illegible]
135	0.8	.02	38.0	9.7	37.[illegible]
136	1.0	Tr.	5.6	0.5	7.[illegible]
137	1.3	.01	12.8	5.8	17.[illegible]
138	0.7	.01	17.0	1.6	19.[illegible]
139	1.0	Tr.	6.2	2.2	10.[illegible]
140	1.2	.02	46.3	20.7	63.[illegible]
Average of above samples					
	1.7	.034	14.4	13.2	$25.[illegible]

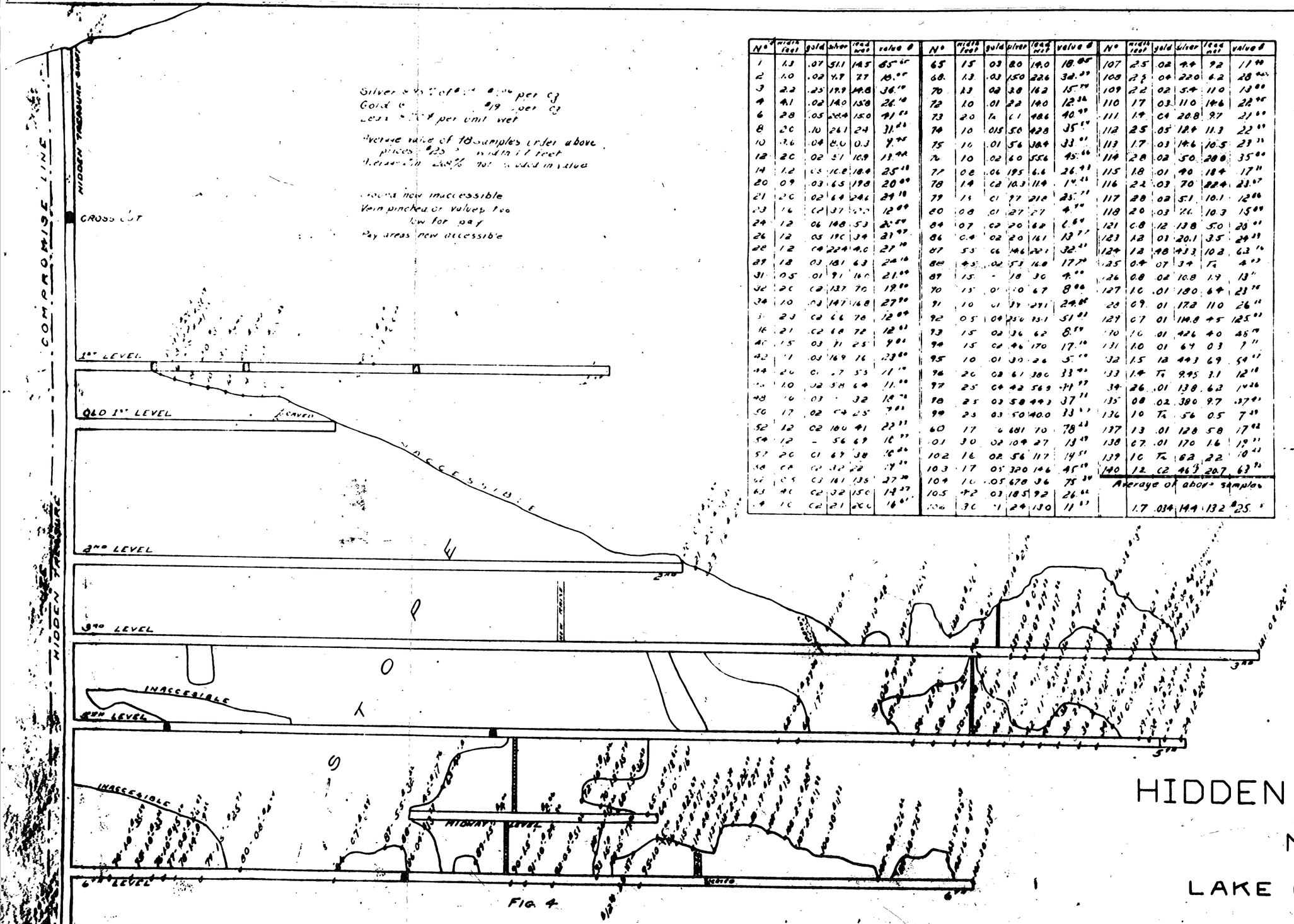


FIG. 4

LONGITUDINAL SECTION LOOKING WEST ON DIP OF VEIN

SCALE 1" = 50'

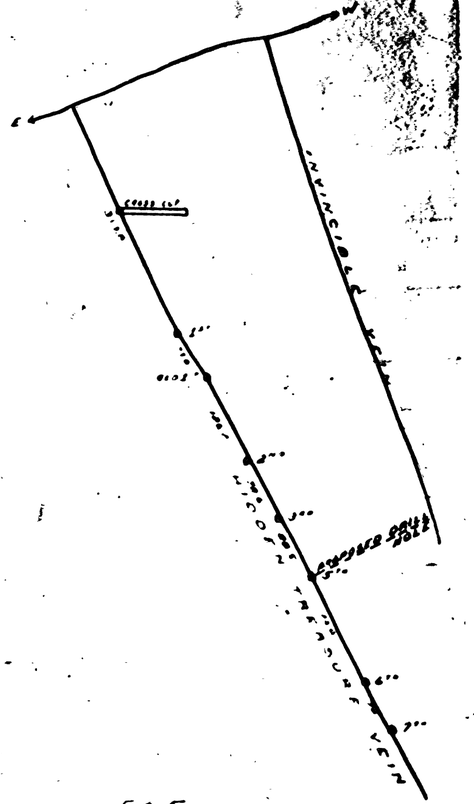


FIG. 5

CROSS-SECTION THRU X-Y, LOOKING

SCALE 1" =

HIDDEN TREASURE MINE

LAKE CITY, COLO.

COLORADO STANDARD LEAD ZINC MINES, INC.

Surveyed in Colo.

Map 1063

COLORADO STANDARD LEAD ZINC MINES, INC.

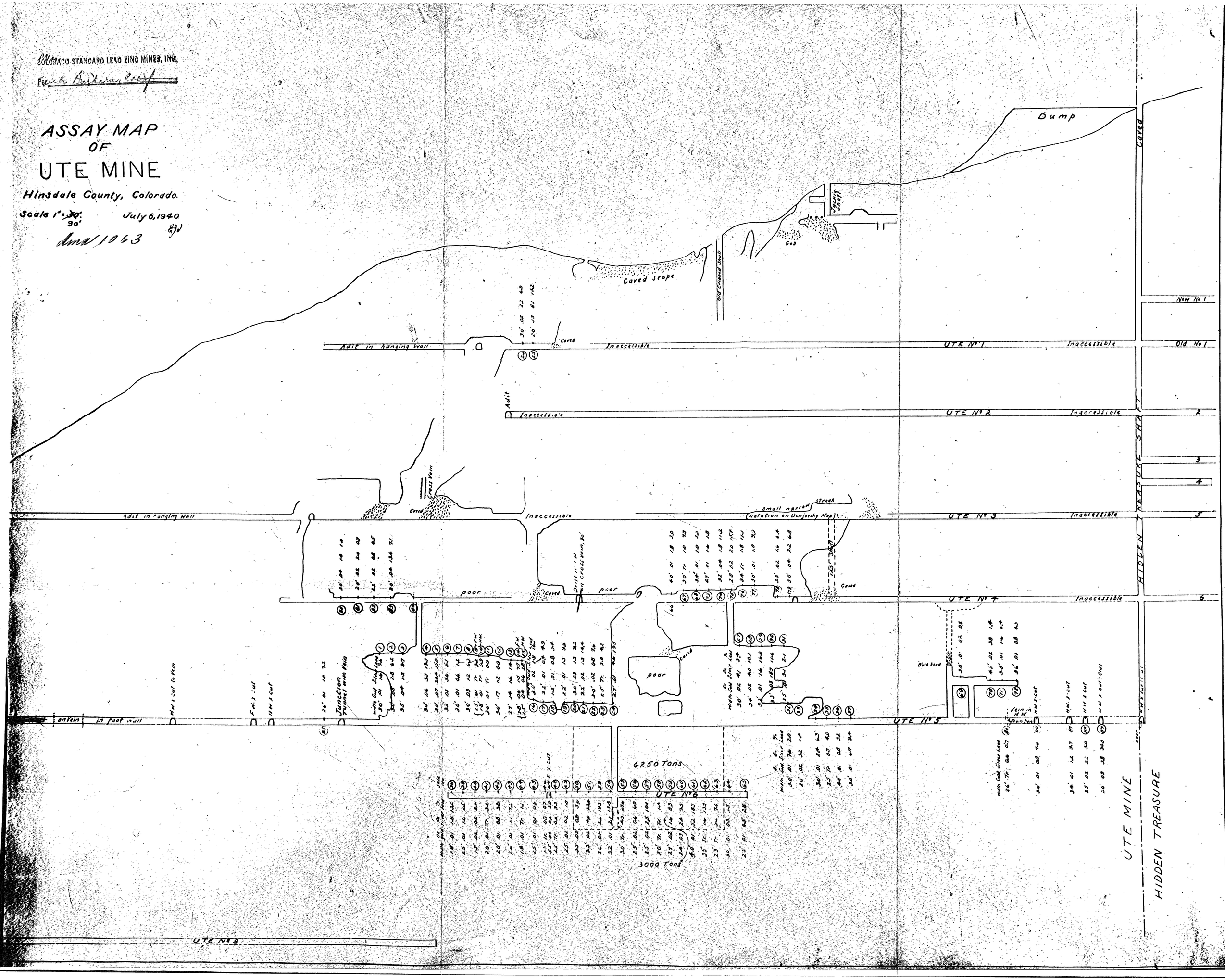
Per

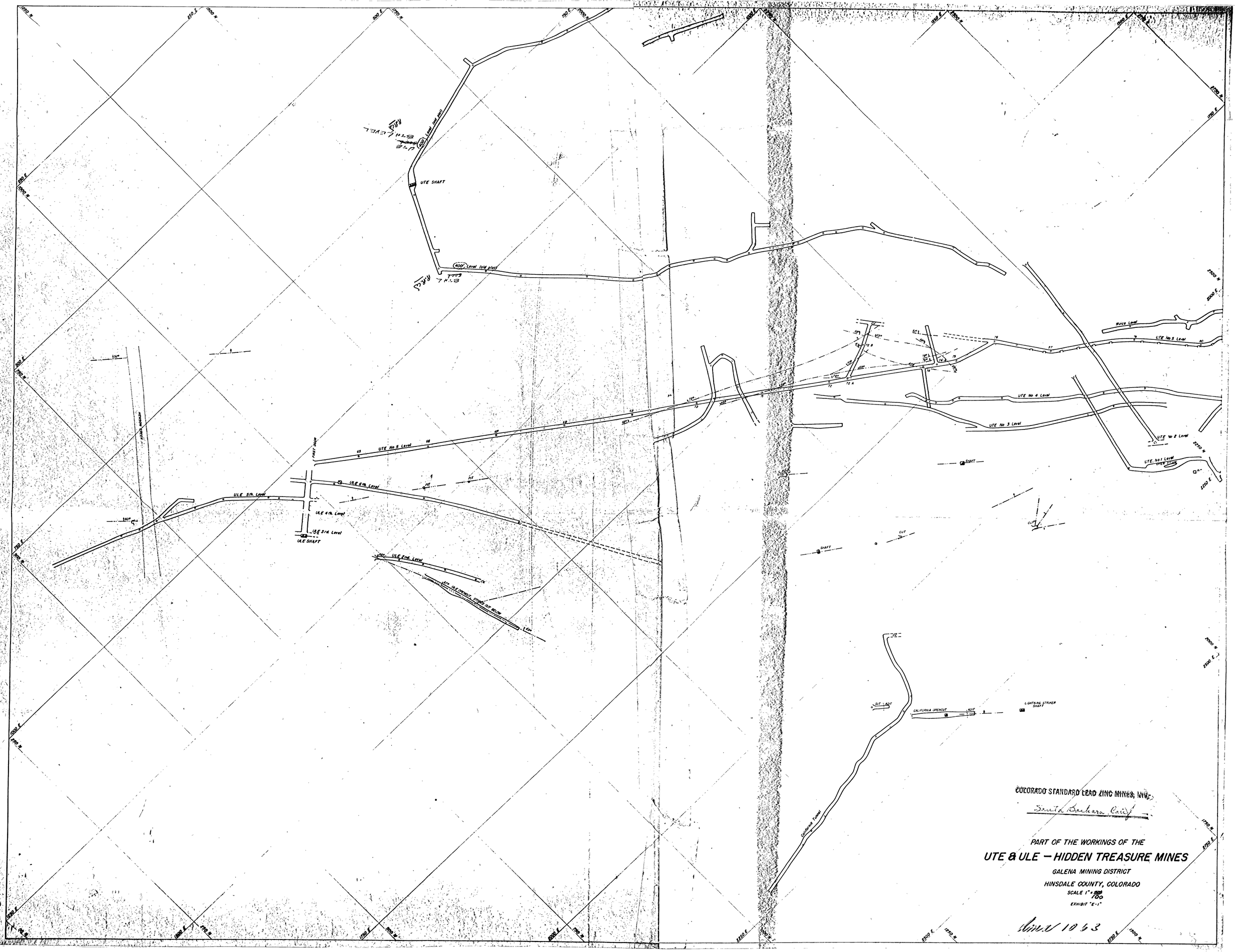
ASSAY MAP OF UTE MINE

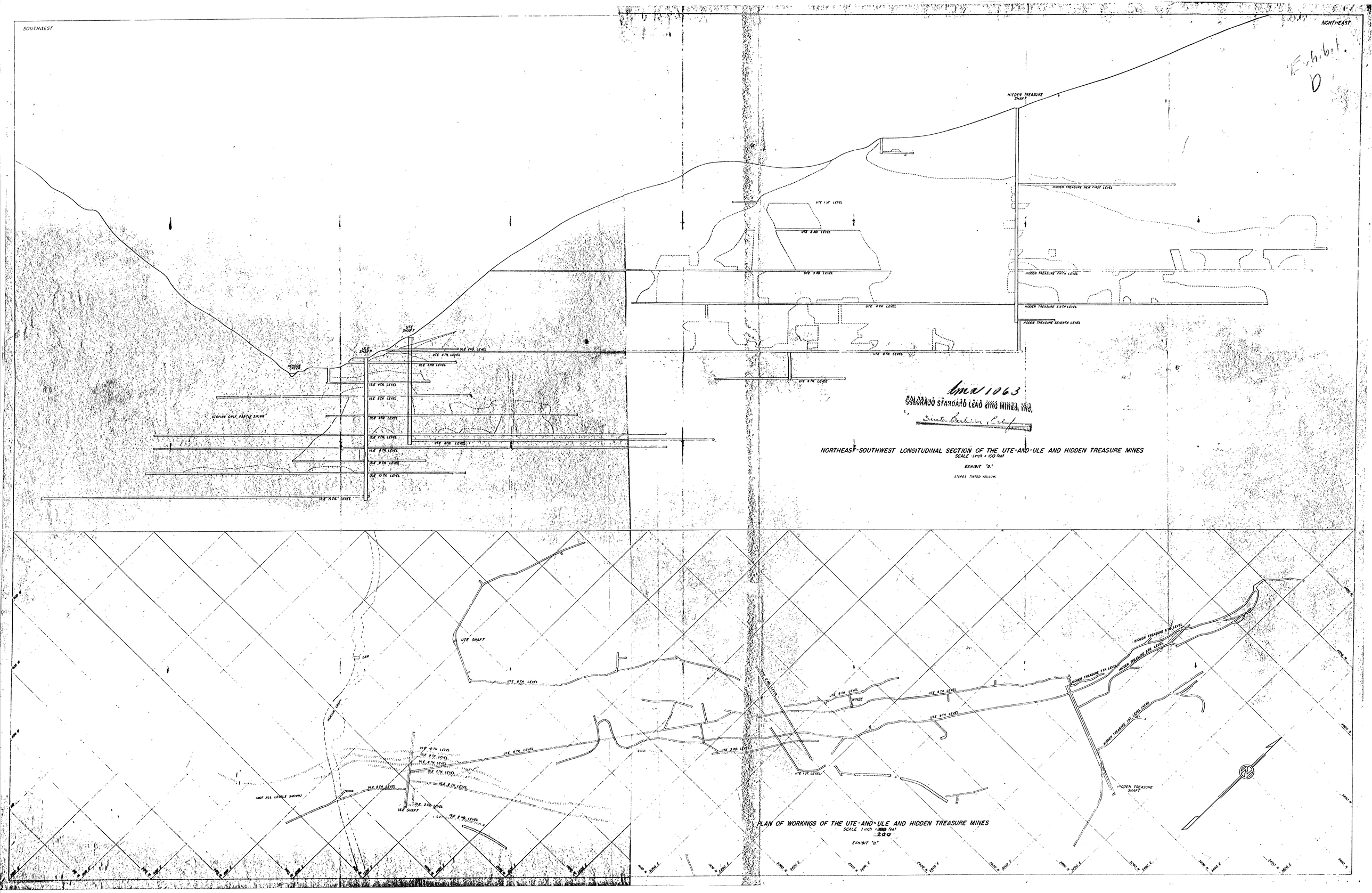
Hinsdale County, Colorado.

Scale 1" = ~~30'~~ 90' July 6, 1940.

Map 1063




UTE SHAFT
400' Level (old plot)
UTE No 5 Level
UTE No 4 Level
UTE No 3 Level
UTE No 2 Level
UTE No 1 Level
Water Level
ULE 6th Level
ULE 5th Level
ULE 4th Level
ULE 3rd Level
ULE SHAFT
ULE 2nd Level
ULE 1st Level
SHAFT
CUT
CALIFORNIA OPENCUT
ADIT
LIGHTNING STRIKER SHAFT
California Tunnel
COLORADO STANDARD LEAD ZINC MINES, INC.
Santa Barbara Calif.
PART OF THE WORKINGS OF THE
UTE & ULE — HIDDEN TREASURE MINES
GALENA MINING DISTRICT
HINSDALE COUNTY, COLORADO
SCALE 1" = 100
EXHIBIT "E-1"


SOUTHWEST
NORTHEAST
Exhibit D
HIDDEN TREASURE SHAFT
HIDDEN TREASURE NEW FIRST LEVEL
UTE 1ST LEVEL
UTE 2ND LEVEL
UTE 3RD LEVEL
UTE 4TH LEVEL
UTE 5TH LEVEL
UTE 6TH LEVEL
HIDDEN TREASURE FIFTH LEVEL
HIDDEN TREASURE SIXTH LEVEL
HIDDEN TREASURE SEVENTH LEVEL
UTE SHAFT
ULE SHAFT
ULE 2ND LEVEL
ULE 3RD LEVEL
ULE 4TH LEVEL
ULE 5TH LEVEL
ULE 6TH LEVEL
ULE 7TH LEVEL
ULE 8TH LEVEL
ULE 9TH LEVEL
ULE 10TH LEVEL
ULE 11TH LEVEL
STORAGE ONLY PARTS SHOWN
Case 1063
COLORADO STANDARD LEAD ZINC MINES, INC.
NORTHEAST-SOUTHWEST LONGITUDINAL SECTION OF THE UTE-AND-ULE AND HIDDEN TREASURE MINES
SCALE 1 inch = 100 feet
EXHIBIT "D."
STOPES TINTED YELLOW.
UTE SHAFT
DAM
HEADGATE DITCH
(NOT ALL LEVELS SHOWN)
ULE SHAFT
UTE 8TH LEVEL
UTE 9TH LEVEL
ULE 10TH LEVEL
ULE 9TH LEVEL
ULE 8TH LEVEL
ULE 7TH LEVEL
ULE 6TH LEVEL
ULE 5TH LEVEL
ULE 4TH LEVEL
ULE 3RD LEVEL
UTE 3RD LEVEL
UTE 1ST LEVEL
UTE 8TH LEVEL
WINZE
UTE 9TH LEVEL
UTE 8TH LEVEL
HIDDEN TREASURE 7TH LEVEL
HIDDEN TREASURE 6TH LEVEL
HIDDEN TREASURE 5TH LEVEL
HIDDEN TREASURE 1ST LEVEL (NEW)
HIDDEN TREASURE SHAFT
PLAN OF WORKINGS OF THE UTE-AND-ULE AND HIDDEN TREASURE MINES
SCALE 1 inch = 200 feet
EXHIBIT "D."