224 New Customhouse
Denver 2, Colorado

October 6, 1952

Memorandum

To: W. M. Traver, Jr.

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMA-860, Ibex Extension Mine (Lead-Zinc)

Enclosed are two copies of a letter from the Administrator, DMEA, to Mr. A. C. Furman, notifying him that Docket DMA-860 is being removed from the active file.

John F. Shaw
For W. H. King

Enclosures

JFS:jp
cc Subject
Chron
AHKoschmann (2)

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

Mining Division
Date Rec'd
OCT 3 - 1952
BUREAU OF MINES
Denver, Colorado

OCT 1 1952

Mr. A. C. Furman
1625 K Street, N. W.
Washington, D. C.

Re: Docket No. [illegible]-860 (Lead-Inc)
Ibex Extension Mine, Colorado

Dear Mr. Furman:

This office wrote you July 31, 1952, requesting information as to your plans regarding your request for an exploration loan. To date we have received no reply to that letter, and assume that you are no longer interested in receiving exploration assistance from the Government. Therefore, your docket is being removed from the active file and sent to the closed files.

If in the future it should develop that you again wish to make application for exploration assistance, we will be pleased to consider your request.

Sincerely yours,

C. O. Mittendorf
Administrator

JGKeating/bjl (written 9/30/52)

Copy to: Docket
Adm. C. File
Op. Committee
H. F. Keller (2)
Mr. Keating
Mr. Tiahon
Mr. McKnight
Region IV(2)
Chron.

95

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REFERENCE SLIP

DATE 10/19/51

REFERRED TO:

1. ~~Allsman~~ Pye
2. Raschmann
3. U.S.G.S.
4.

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: Letter from Tom Lyon returning brochure of Green Chandler Furman, DMA 860

Check (X) before the items needing attention.

JHE
Initials of sender.

GPO 16—51162-1

[illegible] Star Construction
Denver 2, Colorado

January 25, 1952

Gentlemen:

Re: Reporting to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: Project DME 650, Gates Crawford Tungsten, Bellows-Star Extension Mine, Lake County, Colorado, Exploration Loan - $75,000 (Lead-Silver)

Enclosed herewith are the original and two copies of a negotiated report on the subject project which was requested by memorandum from Tyler Lyon, Chairman, Operating Committee, to J. H. Earl, Jr., Executive Director, Region IV, dated September 13, 1951.

Also enclosed are the original and one copy of the Field Team's original report which were returned to the field from Washington by Mr. Lyon's memorandum dated October 17, 1951.

We agree with the conclusions and recommendations of the enclosing team that the project be approved on the basis of the negotiated report, which recommends a maximum of 1200 feet of diamond drilling to be undertaken in three stages, the approval of the second and third stages contingent on the results of the previous stage or stages.

Government participation will be 50 percent or $37,500.

J. H. Earl, Jr.

A. H. Kerschmann

Enclosures

JHE:AH

cc: Bechtel, Akron.

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
OCT 19 1951
BUREAU OF MINES
DENVER, COLORADO

OCT 17 1951

Re: DMA-860
Greene Chandler Furman
Hellena-Ibex Extension
Leadville District
Lake County, Colorado
Exploration loan, $326,619
Zinc, lead, copper

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

Dear Mr. East:

As requested in your letter of October 4, 1951, we are returning the application of Greene Chandler Furman, together with the field team report on the Hellena-Ibex Extension property.

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Lowell B. Moon
for Bureau of Mines

Olof L. Rose
for Geological Survey

REGIONAL DIRECTOR'S
OFFICE
REGION IV
OCT 19 1951
BUREAU OF MINES
DENVER, COLORADO

OCT 17 1951

Re: DMA-860
Greene Chandler Furman
Hellena-Ibex Extension
Leadville District
Lake County, Colorado
Exploration loan, $326,619
Zinc, lead, copper

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

Dear Mr. East:

As requested in your letter of October 4, 1951, we are returning the application of Greene Chandler Furman, together with the field team report on the Hellena-Ibex Extension property.

Very truly yours,

Tom Lyon, Chairman
Coordinating Committee

For Bureau of Mines

for Geological Survey

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

224 New Customhouse
Denver 2, Colorado

January 15, 1952

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: Docket DMA 860, Green Chandler Furman, Hallene-Ibex Extension Mine, Lake County, Colorado, Exploration Loan - $75,000 (Lead-Zinc)

Enclosed herewith are the original and two copies of a supplemental report on the subject docket which was requested by memorandum from Tom Lyon, Chairman, Coordinating Committee, to J. H. Ernst, Jr., Executive Officer, Region IV, dated September 20, 1951.

Also enclosed are the brochure and one copy of the Field Team's original report which were returned to the field from Washington by Mr. Lyon's memorandum dated October 17, 1951.

We concur with the conclusions and recommendations of the examining team that the project be approved on the basis of the supplemental report, which recommends a maximum of 8500 feet of diamond drilling to be conducted in three stages, the approval of the second and third stages contingent on the results of the previous stage or stages.

Government participation will be 50 percent or $37,500.

J. H. Ernst, Jr.

J. H. Ernst, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosures

JHT:ld

cc: Docket, chron.

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

200 New Customhouse
Denver 2, Colorado

January 3, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 860, Hellena Ibex Extension Mine, Leadville, Colorado; Supplemental report (drilling)

Attached are 8 copies of a supplemental report and accompanying map by Ogden Tweto and M. R. Salsbury on subject docket in compliance with a request from Tom Lyon dated September 20, 1951, that specific locations of diamond drill holes to explore subject property be given.

It is recommended that the drilling program be set up in three stages. For Stage I, which is essentially of a probing or wildcat nature, 8 drill holes are located. Holes to be drilled in Stages II and III are contingent on results obtained in Stage I, and, obviously, locations of these holes cannot be located at this time. It is also recommended that the drilling be closely supervised by DMA field inspectors: (1) to assure efficient operation; (2) to approve location of holes of Stages II and III determined from results obtained in Stage I; and (3) to determine the stage at which the exploration work be terminated if it is not carried to completion.

I concur with these recommendations.

The brochure is enclosed.

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

Enclosures (9)

January 2, 1951

Memorandum

To: DMA Field Team, Region IV

From: Ogden Tweto, U. S. Geological Survey
M. R. Salsbury, U. S. Bureau of Mines

Subject: DMA Docket 860, Hellena Ibex Extension Mine, Leadville, Colorado; Supplemental report (drilling)

In the report on Docket 860, transmitted by the Field Team September 7, 1951, a program of diamond core drilling from the surface, totaling 3500 feet and estimated to cost $75,000, was recommended to explore the Hellena vein north of the shaft, and the Blue limestone several hundred feet west of the shaft. In a memorandum from Tom Lyon, Chairman, Coordinating Committee, to J. H. East, Jr., Executive Officer, Region IV, dated September 20, 1951, a request was made for specific locations of the holes to be drilled in this program.

In response to this request, we have prepared the accompanying map, divided the program into three stages, and, for Stage I, located eight drill holes as indicated on the map and inset table. Division of such an exploration program into stages is necessary because the advisability and location of most drilling after the first few holes is contingent on results obtained in these holes. The objectives of the drilling program are, first, to determine whether either the Hellena vein or the "replacement" target west of the Weston fault is commercially mineralized, and second, if one or both is mineralized, to establish whether tonnage

and grade are sufficient to warrant a development loan to reopen the Helena mine.

The proposed program is divided into three stages: Stage I is essentially of a probing or wildcat nature, to hunt for concealed ore. It comprises the eight holes, totaling 3000 to 3500 feet, located on the map. If the results of this drilling are entirely negative, consideration could be given to ending the program at this stage. If the Stage I drilling is partly successful, but does not yield enough information to form a basis for drilling to block out ore, or if, in spite of negative results in Stage I, further drilling may be justified on geologic grounds, a few more holes may be necessary. These comprise Stage II. As shown below, a maximum of five holes, with a maximum total length of 2200 to 2500 feet, is adequate for this stage. If Stages I and II are both negative, the program should certainly be terminated at the end of Stage II (i.e. at a maximum of 6000 feet of drilling). If positive results are obtained from Stage I and/or Stage II, further drilling may be required to prove enough ore to warrant reopening the mine or to form the basis for a development loan. Such drilling comprises Stage III. Of the proposed maximum total of 8500 feet, a minimum of about 2500 feet would be left for Stage III. As Stage III is predicated on some positive holes in the earlier stages, this additional footage, together with the earlier positive holes, should be sufficient to determine whether there is enough ore present to warrant reopening the mine.

Thus, to summarize, a minimum of about 5500 feet, and a maximum of 8500 feet of drilling is proposed, and the actual total might be anything between 3500 and 8500 feet. As Stages II and III are contingent

on earlier drilling, the holes for these stages cannot be located at this time, and only the Stage I holes are discussed below.

In the area west of the Hellena shaft, the objective is the Blue limestone, which is upthrown on the west side of the Weston fault. As explained in the brochure, a churn drilling program was attempted in this area in 1927. Five holes were drilled, but only one reached the objective, the Blue limestone; this hole cut 26 feet of pyrite, with some lead and zinc, at the top of the Blue limestone, followed by 40 feet of moderately mineralized limestone. No record of assays of this material has been preserved, and there is even uncertainty as to the identity of the hole that showed this ore.

It is therefore necessary to re-drill the area to search for and partially outline the ore deposit. The first diamond drill hole should logically be located near the churn hole in which sulfides were found. According to one source of information (a map of the American Smelting and Refining Company), this was in hole 5; according to another (an old section in Bureau of Mines' file) it was in hole 3. The location given in the brochure does not fit either of these two locations. As hole 5 is near the Weston fault, and possibly in a narrow block between this and another fault 200 feet to the west (see map), the first proposed hole is placed 50 feet southwest of churn drill hole No. 5, to avoid the fault, and as a compromise between the locations of churn drill holes 3 and 5. The hole would be about 600 feet deep (400 feet to the Blue limestone, and 200 feet to go through the limestone). Two other vertical holes, Nos. 2 and 3, 150 feet southeast and northwest of hole No. 1, are also proposed for Stage I in this area. These would also be about 600 feet deep.

If none of these three holes disclose ore, or mineralized rock, further drilling may be unnecessary. At most, in this event, no more than two additional holes would seem justified in Stage II. Similarly, if only one of the Stage I holes yields positive results, one or two additional holes in Stage II may be needed. If two or more of the Stage I holes show ore, Stage II might be omitted, or combined with Stage III.

The second objective, in both the proposed drilling program and in the program of underground development proposed in the original application, is to explore the Hellena vein north of the present workings. Five inclined holes totaling about 1500 feet are proposed for Stage I for this objective. Two holes, at -45° and -65°, would be drilled from a site 100 feet north of the Hellena workings and would intersect the Hellena vein at approximate depths of 100 and 200 feet below the collar of the Hellena shaft. Two more holes with the same inclinations would be drilled from another site 100 feet farther north. A fifth and deeper hole, to intersect the vein about 340 feet lower than the Hellena collar, would be drilled from a site between the first two (see map). If none of these holes show ore in the vein, further drilling should be unnecessary. If all or nearly all show ore, Stage II can be omitted or combined with Stage III. If only one or two holes show ore, other holes (Stage II) may be needed, but obviously, their locations cannot be specified at this time. Stage II should require no more than two or three such additional holes, with a total maximum length of 1000 feet.

If and when a contract for diamond drilling is let, holes of relatively large bore should be specified, for several reasons: (1) All the holes will start in bouldery glacial drift; (2) The bedrock is almost

certain to be rather badly broken and consequently difficult to drill, as this area is in a fault block bounded by major faults; (3) If the Blue limestone is mineralized, it may be silicified or cavernous or both, requiring a hole of greater than minimum diameter at that depth for efficient drilling; (4) Difficulty was experienced in the earlier churn drilling, although this may reflect too-light equipment, a common fault of the churn drilling done in this district; (5) Some of the holes are moderately deep (600 feet), and the others, although shorter, are inclined, which in large part vitiates the advantage in length; (6) Past experience in drilling the altered and fractured rocks of the Leadville district has shown that high costs, poor recoveries, and lost holes are in large part attributable to attempting to drill holes of too-small bore. We therefore recommend that all holes be at least of BX size where they enter the bedrock, that they be held at this size as long as drilling conditions make practicable, or to at least half the distance to the objective, and that the hole size be planned no smaller than AX at the objective.

The original cost estimate on the entire drilling program is broken down to fit the more detailed plans outlined above. It will be noted that the estimated time for completion totals 10 months. This allows for preliminary reconnaissance by the operator, possible increased moving and setting up time under the revised program, and possible delays and expense occasioned by the fact that the entire program, if carried through, will lap over into the winter season.

The duties of manager and geologist have been combined, and it is essential that project operations be closely supervised by DMA field inspectors in order to assure the savings in management costs intended

and also to determine the stage at which the exploratory work should be terminated if it is not carried to completion.

The lease given by the owners provides for a monthly payment of $500 per month starting January 1, 1952. This, of course, is not a proper expense, so far as the government is concerned, and is not allowed for in the estimate. The lease should be re-examined to determine if any other clauses would be violated by the development program outlined.

STAGE I

Time Schedule - 5 months

3500 feet diamond drill hole at $7.50/ft.	$26,250	
Manager and geologist at $500 per month	2,500	
Accountant (part time) at $50 per month	250	
Analysis - drill core and sludge	350	
Surveying and mapping	250	
Miscellaneous expenses (including transportation, drill core boxes, office space, etc.)	400	
Total Stage I		$30,000

STAGE II

Time Schedule - 2½ months

2500 feet diamond drill hole at $7.50/ft.	$18,750	
Manager and geologist at $500 per month	1,250	
Accountant (part time) at $50 per month	125	
Analysis - drill core and sludge	350	
Miscellaneous expenses (as shown in Stage I estimate)	200	
Total Stage II		20,675

STAGE III

Time Schedule - 2½ months

2500 feet diamond drill hole at $7.50/ft.	$18,750	
Manager and geologist at $500 per month	1,250	
Accountant (part time) at $50 per month	125	
Analysis - drill core and sludge	350	
Miscellaneous expenses (as shown in Stage I estimate)	200	
Total Stage III		20,675
Contingencies		3,450
Total 3 Stages		$75,000

The recommendation in the "Summary, Conclusions, and Recommendations" of the original report is revised to read:

"Accordingly, it is recommended that an exploration loan of $37,500--50% of the estimated cost of $75,000--be granted for exploratory surface drilling, divided into 3 stages, the approval for the 2nd and 3rd stages being contingent on the results of the previous stage or stages, as outlined in this memorandum."

224 New Customhouse
Denver 2, Colorado

October 4, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 860, Green Chandler Furnace, Hallene-Dyer Extension,
Leadville District, Lake County, Colorado

Please return the brochure on the above application for an exploration loan, so that we may complete the information requested in your letter dated September 20, 1951.

J. H. Earl, Jr.

JHE:ld

cc: DMA docket, chron.
Knowlton

WMT/dd

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20
Denver Federal Center
October 2, 1951

Mining Division
Date Rec'd.
OCT 3 1951
BUREAU OF MINES
Denver, Colorado

Memorandum

To: M. H. Salsbury,
Leadville Drainage Tunnel

From: W. M. Traver, Jr.

Subject: DMA-860, Hellena-Ibex Extension Mine, Lake County, Colorado

Please find enclosed a memorandum from the Region IV Field Team transmitting to me a copy of a memorandum from Tom Lyon requesting additional information for preparation of a contract on the subject docket.

The cost information requested will, of course, be estimates but should be broken down and itemized in accordance with the Coordinating Committee's instructions. To facilitate your work, we are enclosing a copy of Circular Letter No. 8 and a copy of form MF-200, "Contract". Herman T. Schassberger is planning to do some plane tabling and prepare a topographic map upon which you and Ogden Tweto can locate your proposed drill holes. Schassberger will contact you either before or upon completion of his map.

Since this report was submitted, I have talked to C. W. Jordan who was engineer on the former Hellena operations and he states there was mineralization shown in the Blue limestone where it was penetrated in the drift east from the shaft on the 500-foot level. Testing this area would require long drill holes and it would probably be advantageous to limit your holes to testing the shallow area west of the shaft and the main Hellena fissure.

The Colorado Branch office copy of the final DMA report and a copy of Volume 12, No. 3, Colorado Scientific Society Proceedings, are also enclosed.

Please return all the material enclosed with your sketch and cost breakdown.

W. M. Traver, Jr.

enclosures
cc PTAllsman
WHKing
DMA 860
DMA Chron.

REGIONAL DIRECTOR'S
OFFICE
REGION IV
SEP 24 1951
BUREAU OF MINES
DENVER, COLORADO

Re: DMA-860

SEP 19 1951

Mr. Greene Chandler Furman
1424 K Street, NW
Washington 5, D. C.

Dear Mr. Furman:

The Lead-Zinc Branch of the Defense Minerals Administration has reviewed your application for an exploration loan at the Hellena-Ibex Extension Mine, Lake County, Colorado.

In order to complete your application, you will need to submit "Landlord's Subordination Agreements". We are enclosing seven (7) copies of MF-202, the above mentioned form, six copies of which should be filled out and returned to me.

We wish to thank you for your consideration in this matter.

Very truly yours,

J. P. Billings, Chief
Lead-Zinc Branch

Enclosures 7

ELNewcomb:emp
G 9-17-51
Copies to: J. H. East, Jr.
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

224 New Customhouse
Denver 2, Colorado

September 27, 1951

Memorandum

To: W. M. Traver, Jr.

(Through Chief, Mining Division, Region IV)

A. H. Koschmann

From: DMA Field Team, Region IV

Subject: DMA Docket 860, Green Chandler Parman, applicant, Malena-Ibex Extension Mine, Lake County, Colorado

Attached hereto is copy of letter from the Coordinating Committee requesting additional information for processing a contract for a $75,000 exploration project.

Please obtain this as soon as possible.

J. H. East, Jr.

A. H. Koschmann

Attachment

WDR:ld

cc: DMA docket, chron.
Koschmann

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 24 1951
BUREAU OF MINES
DENVER, COLORADO

350

Airmail

SEP 20 1951

Re: DMA-860
Hellena-Ibex Extension Mine
Lake County, Colorado
Exploration loan, $75,000
Lead, zinc

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

Dear Mr. East:

In order to complete the processing of the subject docket we find that certain additional information is required beyond that which is given in the field team report. Under estimated costs, the $11,250 allowed for supervision, assaying, geological consultation and general expenses needs to be itemized. What is the estimated rate (so far as it can be given) and total cost on each of the included items? There is not a map, accompanying the field team report, indicating where drill holes will be located. We would like to know where the holes will be put down, how many, their inclination, and to what estimated depths.

The above information is required in preparing the details of the contract. We would appreciate your assistance in obtaining this information. Thank you for your consideration in this matter.

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

T. P. Thayer
For Geological Survey

Copy of this letter sent to Frank of Kaufmann with accompanying letter dated 8-27-51.

[redacted] New Customhouse
Denver, Colorado

[redacted]

[redacted] September 7, [redacted]

[redacted]

To: [redacted] Secretary, Defense Materials Administration

From: TMA Field Team, Region IV

Subject: Final Report, Project No. [redacted], Green Chamber Tunnel, Hallam-Ibex Extension, Leadville District, Lake County, Colorado

Enclosed herewith are original and two copies of the report as indicated above.

In accordance with the conclusions and recommendations of the consulting team.

J. H. Ewart Jr.
[redacted] J. H. Ewart, Jr.

A. H. Kerchmann
[redacted] A. H. Kerchmann

[redacted]

oj

cc: DMA Subject and Chron.

Mining Division
Region IV

September 6, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, Project No. 860, Green Chemical Process, Hellens-Tiger Extension, Leadville District, Lake County, Colorado

The application of the subject project was for an exploration loan of an estimated cost of $[illegible], with the objectives of exploring the blue limestone in the Hellens Shaft and to explore the Hellens Vein north of the present workings. The proposed methods of exploring were by diamond core drilling and drifting.

A review by the consulting engineer of the applicant's work estimates shows that they are long and even after reducing their proposed drilling program from [illegible] feet to 9,[illegible] feet, the estimated total cost of the program by the bureau of Mines is $[illegible].

The consulting team states that the entire prospect has merit from a strictly geological point of view, and that it is entirely feasible and logical. They recommend, however, that the exploration be started with a first stage of certain diamond core drilling to explore the shallow blue limestone west of the Hellens Shaft and the Hellens Vein in the unexplored area north of the Hellens Shaft. This work would consist of roughly 6[illegible] feet of diamond core drilling at an estimated cost of $[illegible]. Supervision, geology, sampling, and bookkeeping is estimated at a cost of $[illegible], bringing the total to $[illegible].

The report contains the essential data for processing a contract, and we concur with the recommendations of the field examiners that the first stage of the project should be approved.

Paul T. Allemann

WDM:oj
cc: DMA Subject and Chron.

Filed # 7
W. W. D. Jr.

T

OPR WA 310 PLS OKTVOV

WA 310 MOK

WASH DC BU MINES 310 GA PLS

DENVER BUR MINES 235 7-31-51 8-20 AM

C O MITTENDORF

PLEASE AIR MAIL COPY OF LEASE ON HELENA IBEX EXTENSION GROUP, LEADVILLE, LAKE COUNTY, COLORADO, DMA DOCKET 860. WE SUSPECT CERTAIN TERMS OF THE LEASE MAY CONFLICT WITH EXPLORATION PROPOSED BY ELDER.

PAUL T ALLSMAN, ALTERNATE, FOR J H EAST JR, EXECUTIVE OFFICER

ANOTHER ONE

August 16, 1951

Memorandum

To: W. M. Traver, Jr.

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA-860, Ibex Extension Property, Lake County, Colorado

Herewith is the Lease and Option on the above docket that you recently requested. Please return this with your final report.

Paul T. Allaman, Alternate

Enclosure

PTA:oj
cc: DMA files
Subject
Chron.
Contract

Form 6-95

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REFERENCE SLIP

DATE 8/15/51

REFERRED TO:

1. Allsman
2.
3.
4.

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: Please handle - letter from Lyon re: DMA 860, Ibex Extension (Lease attached)

Check (X) before the items needing attention.

JHE

Initials of sender.

GPO 16—51162-1

Aluminum
Pot handle
JAE

350

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

AUG 13 1951

Airmail

Mr. J. H. East, Jr., Region IV
Bureau of Mines
224 New Customhouse Building
Denver 2, Colorado

Dear Mr. East:

Enclosed is a Mining Lease and Option which was handed to me today by Mr. Greene Chandler Furman with regard to DMA 860 - Ibex Extension Property, Lake County, Colorado.

I presume this will complete the information required for your field investigation of this property.

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Enclosure

Approved:

For Bureau of Mines

T. P. Thayer

For Geological Survey

STANDARD FORM No. 14
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

FROM Defense Minerals Administration
BUREAU Salaries and Expenses Defense Production Act Department of
CHG. APPROPRIATION Interior 1420137 - 1952

U. S. GOVERNMENT PRINTING OFFICE 10—1723

REGIONAL DIRECTOR'S OFFICE
REGION IV
AUG 20 1951
BUREAU OF MINES
DENVER, COLORADO

August 16, 1951

J. H. East, Jr.
Bureau of Mines, Region IV
224 New Customhouse Building
Denver 2, Colorado

Requested lease form DMA Docket 860 was airmailed August 8.

Gunnard Johnson

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

GNE

CONFIRMATION

T

OPR WA 310 PLS OK VV

WASH 310 PLS MOK
DC BU MINES 310 GA PLS

DN 235 BUR MINES 8-14-51 1-10 PM

C. O. MITTENDORF

PLEASE AIRMAIL COPY OF LEASE ON HELENA IBEX EXTESNSION GROUP, [redacted] XXXXX LEADVILLE, COLORADO, DMA DOCKET 860, AS REQUESTED IN TELETYPE JULY 31, [redacted]1951. REPORTM HELD UP PENDING RECEIPT OF LEASE .

J. H. EAST ,4.

38-8

8348 XXX END MSG ACK PLS BMH

MSG RECD OK BUT SOME OF IT IS PRETTY WELL GARBLED PERHAPS THEY CAN MAKE IT OUT CJ HOPE SO OM

T

OPR WA 310 PLS OK VV

WASH 310 PLS MOK
DC BU MINES 310 GA PLS

DN 235 BUR MINES 8-14-51 1-10 PM

C. O. MITTENDORF

PLEASE AIRMAIL COPY OF LEASE ON HELENA IBEX EXTESNSION GROUP, [redacted] XXXXX LEADVILLE, COLORADO, DMA DOCKET 860, AS REQUESTED IN TELETYPE JULY 31, [redacted]1951. REPORTM HELD UP PENDING RECEIPT OF LEASE .

J. H. EAST ,4.

38-8

[redacted] XXX END MSG ACK PLS BMH

MSG RECD OK BUT SOME OF IT IS PRETTY WELL GARBLED PERHAPS THEY CAN MAKE IT OUT CJ HOPE SO OM

AUGUST 14, 1951

C. O. MITTENDORF, DIRECTOR
PRODUCTION EXPANSION DIVISION
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

PLEASE AIR MAIL COPY OF LEASE ON HELENA IBEX EXTENSION GROUP, LEADVILLE, LAKE COUNTY, COLORADO, DMA DOCKET 860, AS REQUESTED IN TELETYPE JULY 31, 1951. REPORT HELD UP PENDING RECEIPT OF LEASE.

J. H. EAST, JR.

LD

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

1201

(08)

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

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J H EAST JR. BUREAU OF MINES REGION IV=

224 NEW CUSTOMHOUSE BLDG DVR=

REQUESTED LEASE FORM DMA DOCKET 860 WAS AIRMAILED

AUGUST 8=

G E JOHNSON ACTING CHIEF LEAD ZINC BRANCH=

REGIONAL DIRECTOR'S OFFICE
REGION IV
AUG 16 1951
BUREAU OF MINES
DENVER, COLORADO

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

WMT/dd

Building 2-A, Denver Federal Center

M. H. Salsbury, Leadville

August 3, 1951

W. M. Traver, Jr.

Report on DMA-860, Hellena - Ibex Extension Group, Leadville Mining District.

Returned herewith are the two copies of the subject report in accordance with your memorandum of August 1, 1951.

W. M. Traver, Jr.

enclosures

cc PTAllsman
DMA-860
DMA Chron.

Date Rec'd.
AUG 6 1951
Bureau of Mines
Denver, Colorado

Date Rec'd.
AUG 6 1951
Bureau of Mines
Denver, Colorado

REGIONAL DIRECTOR'S
OFFICE
REGION IV
JUN 18 1951
BUREAU OF MINES
DENVER, COLORADO

Re: Docket DMA-860

Mr. Greene Chandler Furman
1424 K Street, NW
Washington 5, D. C.

Dear Mr. Furman:

Your application, together with supporting data for a loan to explore the Ibex Extension property in Lake County, Colorado, has been referred to Mr. J. H. East, Jr., Executive Officer of the Field Team, 224 New Customhouse, Denver 2, Colorado for further information and advice.

Very truly yours,

Tom Lyon, Director
Supply Division

EJLyons:emp
G 6/12/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
~~xxxxxxxxx~~
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

224 New Customhouse
Denver, Colorado

June 18, 1951

Memorandum

To: A. H. Koschmann (with brochure)

P. T. Allsman

From: DMA Field Team, Region IV

Subject: DMA 860, Ibex Extension Property, Leadville, Colorado, applicant Greene Chandler Furman

We are enclosing the brochure on DMA 860 and a letter from the Chairman of the Coordinating Committee. You will note on the second page of Mr. Lyon's letter that it is requested that Ogden Tweto review the application critically to determine if the project is suitable on a geologic basis and that if his decision is favorable, costs and methods should be investigated.

Mr. Koschmann will have Mr. Tweto review the application and Mr. Allsman will secure the necessary information so that Exhibits A, B, C, D and E can be prepared.

J. H. East, Jr.

A. H. Koschmann

Attachments
JHE/el
cc: DMA files
Allsman
Koschmann

C AHR, 6/18

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

OFFICE
REGION IV
JUN 18 1951
BUREAU OF MINES
DENVER, COLORADO

Re: Docket DMA-860
Ibex Extension Property
Leadville, Colorado
Lead-zinc-copper
Exploration loan

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

Dear Mr. East:

Attached is the application and supporting data submitted by Greene Chandler Furman of Washington, D. C. for a loan to explore the Ibex Extension property in Secs. 28 and 33, T. 9 S., R. 79 W., Lake County, Colorado.

The applicant's proposal, which has been modified several times includes the following:

Unwatering Hellena Shaft to 700 level
10 Diamond drill holes, averaging 450 ft. each, from the surface in the area from 800 ft. west of the Hellena Shaft to explore the upper contact of the "Blue" limestone.
2 Diamond drill holes, 200 ft. and 400 ft. each, upward from the breast of the crosscut west of the Helena shaft on the 500 level to explore the same contact as above.
3 Diamond drill holes, averaging 500 ft. each, below the 700 level to determine depth of and mineralization in the "Blue" limestone.
10 Diamond drill holes, averaging 700 ft. each, from the 500 level extended north (see below) at various intervals to determine depth of and explore the "Blue" limestone adjacent to the Hellena fault fissure.
Driving the drift on the 500 level 2400 ft. north to explore the Hellena fault fissure.

The total estimated cost of the above project, including purchase of new equipment, is $326,619.00. The applicant has signified his willingness to pay his share of the cost.

JTE

The Lead-Zinc Branch recommends that Ogden Tweto review the application critically to determine if the project is suitable on a geological basis. If his decision is favorable, costs and methods should be investigated. If it is decided that the project should be approved, any particulars necessary to complete the contract should be determined.

Very truly yours,

Tom Lyon

Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

Olaf P. Rove
For Geological Survey

224 New Customhouse
Denver, Colorado

June 25, 1951

Memorandum

To: W. M. Traver, Jr.

From: Chief, Mining Division

Subject: DMA Docket 860, Hellena-Ibex Extension, Leadville, Colorado.
Greene Chandler Furman, applicant

Herewith is the brochure on the above docket together with a copy of Ogden Tweto's report. The latter states that the "project has merit geologically." The brochure comprises a lot of extraneous matter, much pertinent data are not presented and cost estimates appear to be completely out of line for the district.

You are urged to make a very careful appraisal. Since the project has a good chance of being approved in some form, you should submit all the information, particularly exhibits A to E with your report for inclusion in the contract. Six copies are required for the latter.

P. T. Allaman

Attachments

APR 12 1951

In reply please
refer to DMA-860

Mr. Greene Chandler Furman
1424 K Street, NW
Washington 5, D. C.

Dear Mr. Furman:

One of the purposes of the Defense Production Act of 1950 is the encouragement of exploration, development and mining of strategic minerals and metals. When an applicant has proven reserves of strategic materials, Federal aid in mining can be given through procurement contracts for such materials as are in short supply. On the strength of these contracts, the applicant can obtain private financing in most instances.

The program recently approved for encouragement of exploration of strategic materials calls for participation on the part of the applicant. For zinc, lead and copper deposits it will be necessary to match Government funds on an equal basis. Funds advanced by the Government will be considered a loan, to be repaid if the exploration is profitable, but to be canceled if unsuccessful. The details of the plan, explaining the projects that will be eligible for assistance, the terms and schedules of financing, repayment, and other pertinent information, are enclosed.

A review of your application (DMA-860) for financial aid in reopening and bringing into production the Ibex Extension property in Lake County, Colorado, indicates that part and possibly all of your proposal may be considered under this exploration program. Details concerning expenditures that will be considered chargeable to exploration aid will be subject to a final determination by negotiation.

Before we can proceed further with consideration of your application, which may or may not require a field examination, please indicate your willingness to provide your share of the funds needed to carry out the proposed exploration. Any modification of your original proposal that you may wish to make will be considered, but you should be specific concerning the work you wish to undertake.

Very truly yours,

Otto Herres

OTTO HERRES, Chief
Lead-Zinc Branch

EJLyons:emp G 3/30/51
Copies to: 2 copies to
J. H. East, Jr. Region IV
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon

R. H. Mote
L. F. Strobel
C. O. Mittendorf
Files

Enclosures

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

224 New Customhouse
Denver 2, Colorado

January 15, 1952

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: Docket DMA 860, Green Chandler Furman, Ballenn-Ibex Extension Mine, Lake County, Colorado, Exploration Loan - $75,000 (Lead-Zinc)

Enclosed herewith are the original and two copies of a supplemental report on the subject docket which was requested by memorandum from Tom Lyon, Chairman, Coordinating Committee, to J. H. East, Jr., Executive Officer, Region IV, dated September 20, 1951.

Also enclosed are the brochure and one copy of the Field Team's original report which were returned to the field from Washington by Mr. Lyon's memorandum dated October 17, 1951.

We concur with the conclusions and recommendations of the examining team that the project be approved on the basis of the supplemental report, which recommends a maximum of 8500 feet of diamond drilling to be conducted in three stages, the approval of the second and third stages contingent on the results of the previous stage or stages.

Government participation will be 50 percent or $37,500.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosures

JHT:lf

cc: Docket, chron.

OFFICE OF THE ADMINISTRATOR

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

200 New Customhouse
Denver 2, Colorado

January 3, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 860, Hellena Ibex Extension Mine, Leadville, Colorado; Supplemental report (drilling)

Attached are 8 copies of a supplemental report and accompanying map by Ogden Tweto and M. H. Salsbury on subject docket in compliance with a request from Tom Lyon dated September 20, 1951, that specific locations of diamond drill holes to explore subject property be given.

It is recommended that the drilling program be set up in three stages. For Stage I, which is essentially of a probing or wildcat nature, 8 drill holes are located. Holes to be drilled in Stages II and III are contingent on results obtained in Stage I, and, obviously, locations of these holes cannot be located at this time. It is also recommended that the drilling be closely supervised by DMA field inspectors: (1) to assure efficient operation; (2) to approve location of holes of Stages II and III determined from results obtained in Stage I; and (3) to determine the stage at which the exploration work be terminated if it is not carried to completion.

I concur with these recommendations.

The brochure is enclosed.

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

Enclosures (9)

January 2, 1951

Memorandum

To: DMA Field Team, Region IV

From: Ogden Tweto, U. S. Geological Survey
M. H. Salsbury, U. S. Bureau of Mines

Subject: DMA Docket 860, Hellena Ibex Extension Mine, Leadville, Colorado; Supplemental report (drilling)

In the report on Docket 860, transmitted by the Field Team September 7, 1951, a program of diamond core drilling from the surface, totaling 8500 feet and estimated to cost $75,000, was recommended to explore the Hellena vein north of the shaft, and the Blue limestone several hundred feet west of the shaft. In a memorandum from Tom Lyon, Chairman, Coordinating Committee, to J. H. East, Jr., Executive Officer, Region IV, dated September 20, 1951, a request was made for specific locations of the holes to be drilled in this program.

In response to this request, we have prepared the accompanying map, divided the program into three stages, and, for Stage I, located eight drill holes as indicated on the map and inset table. Division of such an exploration program into stages is necessary because the advisability and location of most drilling after the first few holes is contingent on results obtained in these holes. The objectives of the drilling program are, first, to determine whether either the Hellena vein or the "replacement" target west of the Weston fault is commercially mineralized, and second, if one or both is mineralized, to establish whether tonnage

and grade are sufficient to warrant a development loan to reopen the Hellena mine.

The proposed program is divided into three stages: Stage I is essentially of a probing or wildcat nature, to hunt for concealed ore. It comprises the eight holes, totaling 3000 to 3500 feet, located on the map. If the results of this drilling are entirely negative, consideration could be given to ending the program at this stage. If the Stage I drilling is partly successful, but does not yield enough information to form a basis for drilling to block out ore, or if, in spite of negative results in Stage I, further drilling may be justified on geologic grounds, a few more holes may be necessary. These comprise Stage II. As shown below, a maximum of five holes, with a maximum total length of 2200 to 2500 feet, is adequate for this stage. If Stages I and II are both negative, the program should certainly be terminated at the end of Stage II (i.e. at a maximum of 6000 feet of drilling). If positive results are obtained from Stage I and/or Stage II, further drilling may be required to prove enough ore to warrant reopening the mine or to form the basis for a development loan. Such drilling comprises Stage III. Of the proposed maximum total of 8500 feet, a minimum of about 2500 feet would be left for Stage III. As Stage III is predicated on some positive holes in the earlier stages, this additional footage, together with the earlier positive holes, should be sufficient to determine whether there is enough ore present to warrant reopening the mine.

Thus, to summarize, a minimum of about 3500 feet, and a maximum of 8500 feet of drilling is proposed, and the actual total might be anything between 3500 and 8500 feet. As Stages II and III are contingent

on earlier drilling, the holes for these stages cannot be located at this time, and only the Stage I holes are discussed below.

In the area west of the Hellena shaft, the objective is the Blue limestone, which is upthrown on the west side of the Weston fault. As explained in the brochure, a churn drilling program was attempted in this area in 1927. Five holes were drilled, but only one reached the objective, the Blue limestone; this hole cut 26 feet of pyrite, with some lead and zinc, at the top of the Blue limestone, followed by 40 feet of moderately mineralized limestone. No record of assays of this material has been preserved, and there is even uncertainty as to the identity of the hole that showed this ore.

It is therefore necessary to re-drill the area to search for and partially outline the ore deposit. The first diamond drill hole should logically be located near the churn hole in which sulfides were found. According to one source of information (a map of the American Smelting and Refining Company), this was in hole 5; according to another (an old section in Bureau of Mines' file) it was in hole 3. The location given in the brochure does not fit either of these two locations. As hole 5 is near the Weston fault, and possibly in a narrow block between this and another fault 200 feet to the west (see map), the first proposed hole is placed 50 feet southwest of churn drill hole No. 5, to avoid the fault, and as a compromise between the locations of churn drill holes 3 and 5. The hole would be about 600 feet deep (400 feet to the Blue limestone, and 200 feet to go through the limestone). Two other vertical holes, Nos. 2 and 3, 150 feet southeast and northwest of hole No. 1, are also proposed for Stage I in this area. These would also be about 600 feet deep.

If none of these three holes disclose ore, or mineralized rock, further drilling may be unnecessary. At most, in this event, no more than two additional holes would seem justified in Stage II. Similarly, if only one of the Stage I holes yields positive results, one or two additional holes in Stage II may be needed. If two or more of the Stage I holes show ore, Stage II might be omitted, or combined with Stage III.

The second objective, in both the proposed drilling program and in the program of underground development proposed in the original application, is to explore the Hellena vein north of the present workings. Five inclined holes totaling about 1500 feet are proposed for Stage I for this objective. Two holes, at -45° and -65°, would be drilled from a site 100 feet north of the Hellena workings and would intersect the Hellena vein at approximate depths of 100 and 200 feet below the collar of the Hellena shaft. Two more holes with the same inclinations would be drilled from another site 150 feet farther north. A fifth and deeper hole, to intersect the vein about 340 feet lower than the Hellena collar, would be drilled from a site between the first two (see map). If none of these holes show ore in the vein, further drilling should be unnecessary. If all or nearly all show ore, Stage II can be omitted or combined with Stage III. If only one or two holes show ore, other holes (Stage II) may be needed, but obviously, their locations cannot be specified at this time. Stage II should require no more than two or three such additional holes, with a total maximum length of 1000 feet.

If and when a contract for diamond drilling is let, holes of relatively large bore should be specified, for several reasons: (1) All the holes will start in bouldery glacial drift; (2) The bedrock is almost

certain to be rather badly broken and consequently difficult to drill, as this area is in a fault block bounded by major faults; (3) If the Blue limestone is mineralized, it may be silicified or cavernous or both, requiring a hole of greater than minimum diameter at that depth for efficient drilling; (4) Difficulty was experienced in the earlier churn drilling, although this may reflect too-light equipment, a common fault of the churn drilling done in this district; (5) Some of the holes are moderately deep (600 feet), and the others, although shorter, are inclined, which in large part vitiates the advantage in length; (6) Past experience in drilling the altered and fractured rocks of the Leadville district has shown that high costs, poor recoveries, and lost holes are in large part attributable to attempting to drill holes of too-small bore. We therefore recommend that all holes be at least of BX size where they enter the bedrock, that they be held at this size as long as drilling conditions make practicable, or to at least half the distance to the objective, and that the hole size be planned no smaller than AX at the objective.

The original cost estimate on the entire drilling program is broken down to fit the more detailed plans outlined above. It will be noted that the estimated time for completion totals 10 months. This allows for preliminary reconnaissance by the operator, possible increased moving and setting up time under the revised program, and possible delays and expense occasioned by the fact that the entire program, if carried through, will lap over into the winter season.

The duties of manager and geologist have been combined, and it is essential that project operations be closely supervised by DMA field inspectors in order to assure the savings in management costs intended

and also to determine the stage at which the exploratory work should be terminated if it is not carried to completion.

The lease given by the owners provides for a monthly payment of $500 per month starting January 1, 1952. This, of course, is not a proper expense, so far as the government is concerned, and is not allowed for in the estimate. The lease should be re-examined to determine if any other clauses would be violated by the development program outlined.

STAGE I

Time Schedule - 5 months

3500 feet diamond drill hole at $7.50/ft.	$26,250	
Manager and geologist at $500 per month	2,500	
Accountant (part time) at $50 per month	250	
Analysis - drill core and sludge	350	
Surveying and mapping	250	
Miscellaneous expenses (including transportation, drill core boxes, office space, etc.)	400	
Total Stage I		$30,000

STAGE II

Time Schedule - 2½ months

2500 feet diamond drill hole at $7.50/ft.	$18,750	
Manager and geologist at $500 per month	1,250	
Accountant (part time) at $50 per month	125	
Analysis - drill core and sludge	350	
Miscellaneous expenses (as shown in Stage I estimate)	200	
Total Stage II		20,675

STAGE III

Time Schedule - 2½ months

2500 feet diamond drill hole at $7.50/ft.	$18,750	
Manager and geologist at $500 per month	1,250	
Accountant (part time) at $50 per month	125	
Analysis - drill core and sludge	350	
Miscellaneous expenses (as shown in Stage I estimate)	200	
Total Stage III		20,675
Contingencies		3,650
Total 3 Stages		$75,000

The recommendation in the "Summary, Conclusions, and Recommendations" of the original report is revised to read:

"Accordingly, it is recommended that an exploration loan of $37,500--50% of the estimated cost of $75,000--be granted for exploratory surface drilling, divided into 3 stages, the approval for the 2nd and 3rd stages being contingent on the results of the previous stage or stages, as outlined in this memorandum."

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

224 New Customhouse
Denver, Colorado

Air Mail

September 7, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: Final Report, Docket No. 860, Green Chandler Furman, Mellema-Ibex Extension, Leadville District, Lake County, Colorado

Enclosed herewith are original and two copies of the report as indicated above.

We concur with the conclusions and recommendations of the examining team.

J. H. East, Jr.

A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

September 6, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, Docket No. 860, Green Chandler Furman, Helena-Ibex Extension, Leadville District, Lake County, Colorado

The application of the subject docket was for an exploration loan of an estimated cost of $326,619, with the objectives of exploring the blue limestone in two fault blocks and to explore the Helena Vein north of the present workings. The proposed methods of exploring were by diamond core drilling and drifting.

A review by the examining engineer of the applicant's cost estimates shows that they are low, and even after reducing their proposed drilling program from 14,500 feet to 9,750 feet, the estimated total cost of the program by the Bureau of Mines is $376,000.

The examining team state that the entire proposal has merit from a strictly geological point of view, and that it is entirely feasible and logical. They recommend, however, that the exploration be started with a first stage of surface diamond core drilling to explore the shallow blue limestone west of the Hellena Shaft and the Hellena Vein in the unexplored area north of the Hellena Shaft. This work would consist of roughly 8500 feet of diamond core drilling at an actual cost of $63,750. Supervision, geology, assaying, and bookkeeping is estimated at a cost of $11,250, bringing the total to $75,000.

The report contains the essential data for processing a contract, and we concur with the recommendations of the field examinera that the first stage of the project should be approved.

Paul T. Allsman

Paul T. Allsman

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

Mining Division
Date Rec'd.
SEP 4 1951
BUREAU OF MINES
Denver, Colorado

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado
August 31, 1951

Memorandum

To: Chief, Mining Division, Region IV

From: W. M. Traver, Jr.

Subject: DMA-860, Hellena - Ibex Extension, Lake County, Colorado

Please find enclosed the original and seven copies of the "Summary, Conclusions, and Recommendations", by Salsbury and Tweto, and the same number of copies of Salsbury's engineering report on the subject docket.

The examining team recommend an alternate exploration program, the first stage to comprise preliminary surface drilling to determine the extent of mineralization in the Hellena vein north of the shaft and vertical surface drill holes west of the Weston fault to verify possible blanket ore bodies reported in the favorable Blue limestone horizon. Depending upon the outcome of this preliminary program, the more elaborate plan of the applicants can be considered, if justified.

Enclosed also please find the brochure submitted by the Field Team, copy of the lease agreement, and a copy of Tweto's preliminary geologic report.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

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

200 New Customhouse
Denver 2, Colorado

June 22, 1951

Memorandum

To: DMA Field Team, Region IV

From: Ogden Tweto

Subject: DMA Docket 860--Hellena-Ibex Extension, Leadville, Colorado
Greene Chandler Furman, applicant

Enclosed are the original and 7 copies of the above statement by Ogden Tweto.

Ogden Tweto

Ogden Tweto, Alternate
Supervising Geologist
Colorado-Wyoming

Enclosures (8)

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-860, Hellena - Ibex Extension

Leadville, Colorado

M. H. Salsbury, Mining Engineer
U. S. Bureau of Mines

Ogden Tweto, Geologist
U. S. Geological Survey

August 30, 1951

HELLENA - IBEX EXTENSION
LEADVILLE, COLORADO

Summary, Conclusions, and Recommendations

By M. H. Salsbury
Mining Engineer
U. S. Bureau of Mines

and

Ogden Tweto
Geologist
U. S. Geological Survey

HELLENA - IBEX EXTENSION
LEADVILLE, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By M. H. Salsbury and Ogden Tweto

The Hellena mine on the so-called Ibex Extension property is in the southern part of the Leadville district, in Iowa Gulch. The mine is in an area of rather closely spaced and intersecting large faults and the workings are principally in porphyry and "Weber Grits" which overlie the Leadville "Blue" limestone, the chief productive horizon of the Leadville district. The Hellena mine was productive from the Hellena fissure, and the nearby First National mine was productive from shallow replacement bodies in the Blue limestone.

The applicants request an exploration loan of $326.619.60 for the two general objectives of diamond drilling and underground development-one, to explore the Blue limestone in the fault blocks, a relatively shallow horizon west of the Hellena shaft and a deeply down-faulted one below the Hellena shaft, and, two, to explore the Hellena vein north of the present workings. The proposal has merit from a strictly geological point of view. The geologic picture is almost identical to that of the present American Smelting and Refining Company project which adjoins the Ibex Extension ground on the north. On that property the American Smelting and Refining Company has found ore in the deeply down-faulted Blue limestone by core drilling and is now developing this ore.

The Hellena vein has certain characteristics similar to the Sunday vein which is now being mined successfully through the Garibaldi tunnel to the north.

Low grade ore and mineralization was intersected for an interval of 88 feet in a churn drill hole west of the Hellena mine in the shallow Leadville limestone ore horizon, and good ore was mined from small bodies in the Hellena fissure near the shaft. Milling ore reported as aggregating 6,000 tons was mined through the First National shaft from workings in the shallow Blue limestone some 2,400 feet west of the Hellena shaft.

The Ibex Extension property thus warrants further exploration, but it is questionable if the rather elaborate program planned by the applicants should be undertaken as the initial step. It is clear that the applicants' cost estimate for their program is low. Even after scaling down the proposed drilling program from 14,500 feet to 9,750 feet, the cost of the proposed program is estimated by the Bureau of Mines examining engineer at $376,000.00 as contrasted to the figure of $326,619.00 in the applicants' estimate.

The applicants' plan of developing the relatively shallow Blue Limestone in the area west of the Weston fault and along the Hellena fissure north of the shaft before doing anything more than preliminary work on the deep-seated Blue limestone below the Hellena workings is logical.

However, because of the high cost of equipping and rehabilitating the Hellena shaft, it is recommended that the exploration be undertaken in two stages, the second dependent on the results of the first.

The suggested first stage, core drilling from surface, can be completed at a cost of not over $75,000.00 and in seven months under favorable conditions. If winter operations are contemplated, the cost and difficulties will be greater.

The shallow Blue limestone ore horizon west of the Hellena shaft could be outlined by 10 holes aggregating 4,500 feet of drilling, while the extent and grade of ore in the Hellena fissure in the unexplored area north of the Hellena shaft could be roughly indicated by 4,000 feet of drilling from angle holes located along the east side of the Hellena fissure.

Eight thousand-five-hundred feet of drilling at $7.50 per foot will cost $63,750.00 to which can be added $11,250.00 for supervision, geological work, assaying and overhead, or a total of $75,000.00.

The above work will not necessarily provide enough information on which to base a development loan but it should prove whether or not the second stage of exploration is warranted.

The second stage would include equipping and rehabilitating the Hellena shaft and further exploration with probably additional diamond drilling, to form a basis for raising development capital by a Defense Minerals Administration development loan, or other means. It would involve the expenditure of the funds estimated for the original project less the cost of exploratory core drilling, or a sum slightly more than $300,000.00. The total cost of the two phases will probably not aggregate more than the examining engineer's estimate of the exploration project proposed by the applicants in their original application.

Accordingly, it is recommended that an exploration loan of $37,500.00, 50 percent of the estimated cost of $75,000.00, be granted for stage one, exploratory drilling from surface, with the understanding that if the results prove favorable, funds for the second stage will be made available.

Geology

Hellema-Ibex Extension, Leadville, Colo.

Greene Chandler Furman, applicant

DMA DOCKET 860

Statement by Ogden Tweto, U. S. Geological Survey

Hellena-Ibex Extension, Leadville, Colo.

In accordance with the request of Mr. Lyons in his letter of transmittal for Docket 860, and of the Field Team for Region IV, I have investigated the application for an Exploration Loan of $326,619, on a 50-50 basis, for the Hellena-Ibex Extension area. This project has merit geologically, and I recommend it for engineering investigation.

The project is designed to explore the Blue limestone in an area in which this limestone is deeply down-faulted and relatively unexplored. Such a project is almost identical to that now being prosecuted by the A.S.& R. in this same fault block about a mile farther north. The success of the A.S.& R. in this venture is one of the chief arguments in favor of the Hellena project. Another strong argument is that ore was found in the upper 40 feet of the Blue limestone in the churn drill hole 1200 feet west of the Hellena shaft, as shown in the brochure. As stated in the brochure, the Hellena vein has been worked only a short distance on each side of the shaft, and there are good possibilities of finding more ore in the vein as well as in blanket deposits in the Blue limestone.

Certain representations made by the applicants are misleading or erroneous, and cognizance should be taken of them.

(1) It is stated that the Hellena vein is an extension of the Sunday vein. Although this may possibly be true, it has never been proved, and the information available at present suggests that they are two distinct veins. Both, however, are elements of a broad and persistent fissure zone that trends diagonally across the block between the Weston and Ball mountain faults. The Hellena vein, insofar as known, is similar in character and in direction and amount of fault displacement to the Sunday vein. The long strike length of workable ore proved by the current

Jones and Kylene operation on the Sunday vein, together with drilling done by A.S.& R., is grounds for some optimism concerning wide distribution of ore on the Helena vein.

(2) The inference is made in the brochure that practically all the drifting on the Helena vein was in ore. This is not true; the 500-foot level was extended northward on the vein by the Golden Rod Corporation in 1927-29, and the results were classed as "disappointing". Thus, as should be expected, the vein is not everywhere ore-bearing, as the brochure might lead one to believe, but on the other hand, it is a strong vein and has been notably productive within a small area near the shaft. By analogy with many other major veins in the eastern part of the Leadville district, ore should be expected to be widely distributed along the vein.

(3) The point is made in some of the earlier reports included in the brochure that several "contacts" are available for exploration. It should be noted that two of these were reached and found barren in 1927-29. These are the top contact of the Blue limestone with the White porphyry east of the shaft, and the lower contact of the Blue limestone west of the shaft and just west of the Weston fault. By analogy with the Eclipse-Garbutt-Sunday area of the A.S.& R., however, it is the block between the Helena vein and the Weston fault that offers most promise of blanket deposits in the upper part of the Blue limestone, and this has not been tested.

(4) The similarity of this project to that of the A.S.& R. suggests a similarity of problems and costs. The A.S.& R. found that drilling was difficult and costly, and is now experienceing difficulty in getting down to the ore. I am not informed of the costs to date of the A.S. & R. project, but am sure that they are far in excess of the estimates made in the present application. As mentioned in the brochure, this is an "all or nothing" project, and there is

little reason for going into it if the financial resources of the applicant should be so strained by paying his proportionate share of the loan that he could not carry on afterward. In other words, the amount of the loan should be revised upward to cover the entire costs, or assurance should be gained that the applicant will be in a position to carry on financially after the program of government participation has been completed.

(5) Even a most cursory examination of the cost estimates submitted shows them to be unrealistic. Most of the drilling is computed at $3.00 per foot, and some for even less. Present direct costs for such drilling in the Leadville district are $5.00 to $6.50 per foot, or about double the estimated costs. On the other hand, the brochure proposes many more holes than may be needed, and elimination of some of the holes would partly balance the deficiency in cost estimates.

(6) The brochure lists an inventory of $73,129 of mining and milling equipment presumed to be available for use on the Hellema project. This is grossly overestimated with respect to present condition of the equipment. The shaft house and mill at the First National shaft are standing open. All motors and much small equipment have apparently been stolen; some heavy equipment such as the ball mill, has evidently been maliciously wrecked by means of explosives; parts such as wheels, gears, belts, and valves, have been pilfered from much of the equipment; and some equipment, such as the concentrating tables, has deteriorated badly since last used, in 1937. The buildings, and the First National headframe, are in a poor state of repair, but both the First National and the Hellema shafts are in good shape at the collars and therefore presumably at depth. Water stood about 30 feet below the Hellema collar, and about 60 feet below the First National collar on June 20, 1951.

HELLENA - IBEX EXTENSION
LEADVILLE, COLORADO

Engineering Report

By M. H. Salsbury
Mining Engineer
U. S. Bureau of Mines

Engineering

HELLENA - IBEX EXTENSION
LEADVILLE, COLORADO

CONTENTS

Engineering Report	Page
Introduction	1
Acknowledgments	1
Location, topography, and physical features	2
History and production	3
Ownership and extent	4
Description of the deposits	5
Ore reserves	8
Present status	9
Project proposals, with costs	10
Exploration and development	11
New equipment	12
Production plan	16
Summary: cost of project	16
Proposed financing	16
Conclusions	17
Recommendations	17

ILLUSTRATIONS

Figure	Follows Page
1. Location map, Hellena - Ibex Extension, Lake County, Colorado	2
2. Hellena - Ibex Extension, Lake County, Colorado	19

HELLENA - IBEX EXTENSION
LEADVILLE, COLORADO

ENGINEERING REPORT

By

M. H. Salsbury

INTRODUCTION

On July 11 - 13 an examining engineer of the Bureau of Mines v visited the Hellena - Ibex Extension group in Iowa Gulch, Leadville Mining District, Lake County, Colo., for the purpose of checking the physical condition of the property and verifying the equipment as listed in the application submitted under the Defense Production Act of 1950 in Defense Minerals Administration docket 860.

The docket makes application for a loan of $163,309.50, being 50 percent of an estimated exploration cost of $326,619.00.

The proposed exploration program includes installation of a complete surface plant at the Hellena shaft consisting of headframe, buildings, hoist, pumping equipment, and air compressor. Actual exploration planned consists of 2,400 feet of drifting and 9,300 feet of diamond drilling underground and 4,500 feet of diamond drilling from surface.

ACKNOWLEDGMENTS

Acknowledgment is made of information in reports by Robert D. Elder, A. O. Nichols, R. D. George, and F. J. McNair. These reports accompanied the loan application. In addition, U. S. Geological Survey Professional Paper 148 and two reports of the Colorado Scientific Society, Volume 12, No. 3, and Volume 14, No. 2, were drawn upon. Former employees have also been consulted.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Ibex Extension group is located in upper Iowa Gulch in the southeast corner of Leadville Mining District, Lake County, Colo. (fig. 1). It is 6 miles by good county road from the county seat, Leadville, where are found railroad connections, repair facilities, supply sources and, most important, the lead smelting plant of the American Smelting and Refining Company.

Power lines of the Public Service Company of Colorado pass close by the several shafts of the property.

The claims lie along the flour of the east and west gulch and on the north slope. The holdings are in two blocks of claims separated by several claims with different ownership. The two main shafts are easily accessible. The Helena shaft is 250 feet north of Iowa Creek at an altitude of 10,975. The First National shaft and mill are 2,400 feet west of the Helena shaft at about the same elevation but some 400 feet north of the creek bed and 150 feet above it. Both shafts are flooded to the elevation of creek drainage.

The topography of the area is ragged but the shaft sites are good. There is ample dumping room and an adequate tailings disposal site already prepared and previously used at the First National shaft.

The climate is characterized by cool summers and severe winters with heavy snowfall. The road to the mine was kept open by the county during periods of previous operation but there are likely to be brief periods following severe storms when the road will be blocked by snow. One of the water intakes of Leadville's water supply is only a short distance west of the First National shaft and the road to this is kept open. Year around operation is feasible.

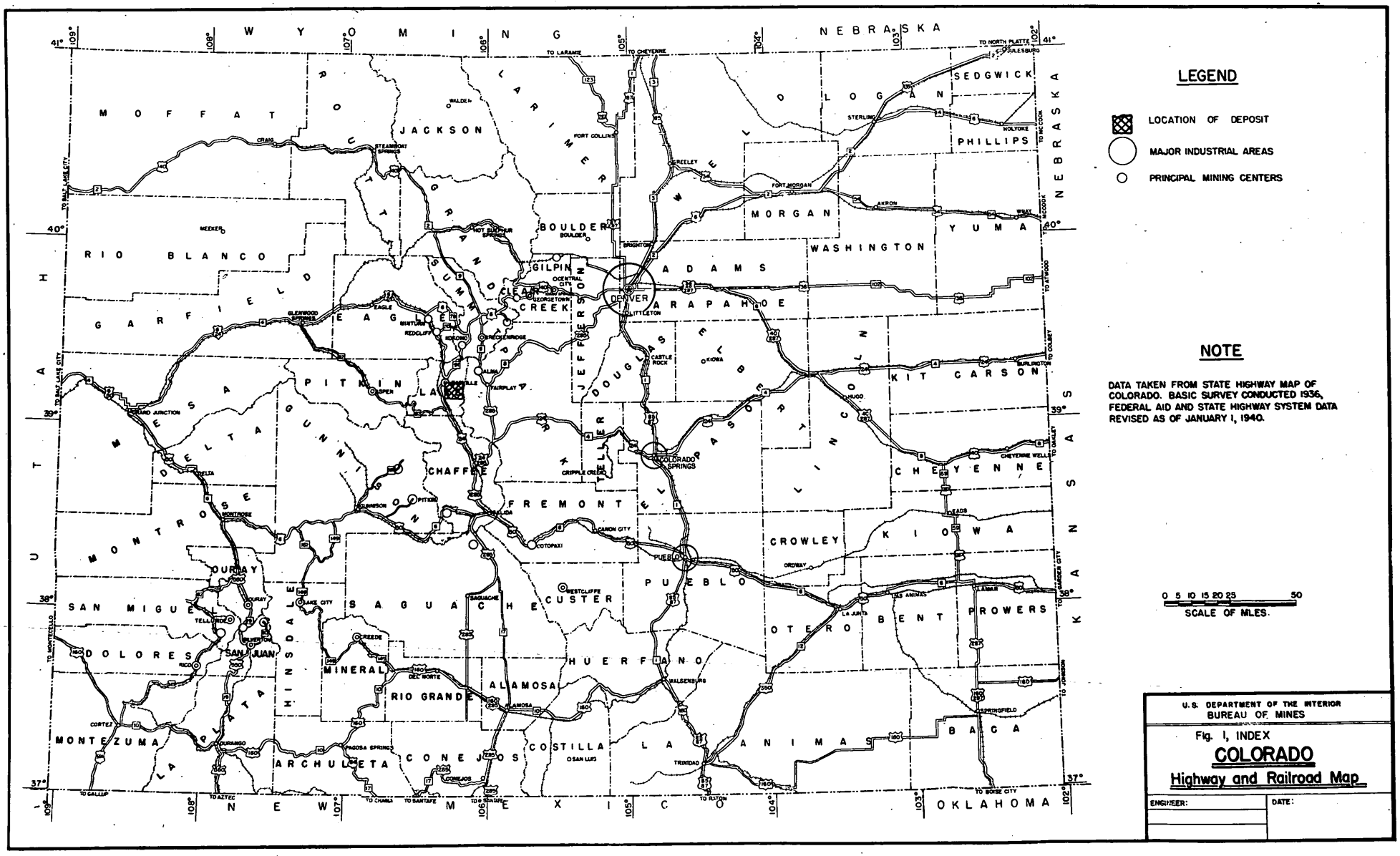

Fig. 1- LOCATION MAP HELLENA - IBEX EXTENSION, LAKE CO. COLORADO. (DMA-860)

There is an ample water supply for milling obtainable from shafts on the property and from Iowa Creek.

The water inflow into the First National workings is reported as very moderate, while the flow into the Hellena is reported as from 300 to 500 gallons per minute with present development openings.

HISTORY AND PRODUCTION

The early history of the Ibex Extension group is fragmental. Professional Paper 148 of the U. S. Geological Survey does not mention the property although the general geology is covered and the adjoining mines on the south-The Clear Grit, Ella Beeler, and Fortuna-are covered briefly in connection with a description of the Weston fault (page 78). The mines on the north, including the Ibex and Sunday, are covered more fully.

The area is described on page 77, Volume 14, No. 2, and page 49, Volume 12, No. 3, publications of the Colorado Scientific Society, by C. H. Behre, Jr.

The earliest direct mention of operation is a period of mining at the First National shaft in 1887. This shaft was also operated in 1917 and 1939 and possibly at other times. In 1887 and 1917 lead-silver ore with as little zinc as possible was mined. In 1939 Elder mined lead-zinc sulfide ore. In 1887 there was a concentration mill on the property, and Elder operated a selective flotation mill in 1937-39. There are no production records available for the earlier periods. Elder mined and milled 6,000 tons of low-grade lead-zinc sulfides from shallow workings during the 1939 operations.

The earliest mention in reports now available on the Hellena is 1906-09. It was unwatered and operated in 1927 by the Golden Rod

Mining and Smelting Corporation, tri-state operators. Closed down in 1929, it has since remained idle. Total production through 1915 is reported as $580,000.00. The operation in 1927-29 produced no ore but Elder milled 4,000 tons of the Hellena dump in his 1937-39 mill project at the First National shaft.

The operations of the Golden Rod Mining and Smelting Corporation in 1927-29, cut short by the depression, gave promise of successful exploration, particularly of the deep-seated Leadville limestone contact below the lowest workings. An intersecting body of lead-zinc sulfide ore was also penetrated by a churn drill hole from surface 1,200 feet west of the Hellena shaft. The ore bodies sought at that time are still the logical targets for exploration. Figure 2 is a diagrammatic sketch showing likely ore horizons that should be explored.

OWNERSHIP AND EXTENT

The Ibex Extension group comprises 186.209 acres of patented mining claims in two blocks separated by the Montreal claim of different ownership, in secs. 28 and 33, T. 9 S., R. 79 W., Leadville Mining District, Lake County, Colo., owned by Robert D. and Margaret H. Elder, of 310 W. 8th Street, Leadville, Colo., now residing at 4233 32nd Road, South Arlington County, Virginia. They have given a 30-year lease and option* to Greene Chandler Furman, Highland Apartments, Connecticut Avenue and California N. W., Washington, D. C. The claims involved are listed and royalties are graduated from 7.0 percent of net returns on all ores extracted from the claims to and including a net return of $10.00 per ton to 32.0 percent of the net returns on ore over a net return of $100.00 per ton. Net returns shall be determined by deducting actual competitive transportation costs from net smelter

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* A copy of the bond and lease agreement including a list of the mining claims was furnished after the field examination and is filed with the application. It differs considerably from the usual Leadville form.

returns on all ore or concentrates sold to a smelter or to a United States mint. If the lessee creates any dumps he shall determine the weights and values of any ores therein according to the facts and pay royalties thereon if and when marketed during the term of the lease. The lessee has the option of purchasing the property before January 1, 1954, for $600,000.00 or before January 1, 1960, for $1,600,000.00. Advance monthly rental of $500.00 starts January 1, 1952. Other stipulations in the lease-option agreement are common to such legal instruments.

A check of the records at the Lake County Courthouse shows the taxes are assessed to the owners as listed above. Taxes through 1949 are fully paid. Taxes for 1950 are delinquent at this date.

The area covered by the claims of this group includes a substantial part of the ground between the Ibex group to the north and Iowa Gulch to the south, some 2,500 feet on the Hellena - Weston fault zone, considered as potential ore-bearing ground, as well as an area covering much of the shallower Blue limestone ore horizons west of the Weston fault.

DESCRIPTION OF THE DEPOSITS

Inasmuch as the Hellena, First National, and other shafts on the property are flooded, no examination of the underground workings is possible. From descriptions in several reports and by analogy with similar ore deposits in other mines of the Leadville district, some conclusions can be reached.

There are two distinct types of ore occurrences on the property. One type, flat dipping replacement deposits at the upper contact of the Leadville or Blue limestone at shallow depths, lies west of the Weston fault. These are probably lead-zinc sulfide deposits of low- to medium-grade. Some of them, more especially the portions higher in lead and silver, have been mined to a limited extent through the First National and Fisk-Julia and other shafts.

The other type, a fissure vein deposit, is found east of the Weston reverse fault in the Hellena vein. This steep-dipping vein is on the west, or footwall, of the Hellena reverse fault, an east branch of the Weston fault which it joins just south of the property. Laughlin so describes it in the description of the Clear Grit mine on page 78 of Professional Paper 148.

The ore occurs as lenses of lead-silver and lead-zinc ore occurring irregularly in a zone some twenty to thirty feet wide. High grade gold stringers were found along the footwall in early mining. The east-dipping vein has beds of the Weber formation with several intruded white porphyry sills on the footwall. At greater depth the Leadville Blue limestone and Parting quartzite will be encountered. The hanging wall of the Hellena vein is a wide, white porphyry intrusive which appears to be a dike occupying much of the Hellena fault. East of this, beds of the Weber formation and the Leadville Blue limestone are again encountered.

The entire block between the Weston fault on the west, the Ball Mountain fault on the east, and the Iowa fault on the south, is faulted downward. This places the upper contact of the Leadville Blue limestone an estimated 1,100 to 1,200 feet below the surface and some 400 feet below the present bottom of the Hellena shaft.

Exploration of this deep ore horizon is one of the objectives of the present proposal. The geological conditions are very similar to those in the downward faulted block to the north where the American Smelting and Refining Company is exploring the Blue limestone through the Eclipse shaft; on the latter property, the ore was diamond drilled and its grade and extent delineated before sinking operations were started. Assay results and other information on the diamond drilling are not available.

The Hellena vertical vein is similar to the Sunday vein which is now being mined through the Garibaldi tunnel to the north of the Ibex Extension. This is a successful operation by lessees on American Smelting and Refining Company property, producing low-grade lead-zinc ore which is shipped to the Resurrection mill in Leadville.

The ground in the Hellena vein is heavy and close support is needed. Mining is likely to be expensive. Mine openings outside of the vein stand well and do not usually require support.

The Leadville Blue limestone replacement deposits in the First National mine are hard and do not require more than an occasional pillar for support. The above information was obtained from a former workman on the properties.

The grade of ore to be expected may be judged by past shipments, bearing in mind that some of these may have been selected.

An average of 6 smelter shipments from the First National shaft in 1917 returned 0.133 ounce gold and 8.00 ounces silver per ton, 5.08 percent lead, and 6.06 percent zinc. The zinc was not paid for and no penalty was reported. In 1938 a trial shipment by Elder from the same mine to the smelter returned 0.115 ounce of gold 7.7 ounces of silver per ton, 8.55 percent lead, and 10.7 percent zinc. Elder states that this was a representative sample of millmill heads.

The lower grade ore, particularly material high in zinc, was reported as not mined by early operators. Elder mined and milled 6,000 tons of this material in his 1939 operation.

An average of 15 shipments of sorted ore from the Hellena vein to the Ohio and Colorado Smelting and Refining Company, at Salida, in 1906-12 ran 0.148 ounce gold and 9.73 ounces silver per ton, 30.91 percent lead, and 7.96 percent zinc.

A similar group of shipments to the Leadville smelter of the American Smelting and Refining Company in 1906 and 1907 assayed 0.182 ounce gold and 9.54 ounces silver per ton, 26.31 percent lead, and 11.0 percent zinc. This was undoubtedly selected ore from high-grade lenses. The only other information available on production from the Hellena shaft is a statement that the production through 1915 was $580,000.00.

ORE RESERVES

It is impossible to estimate probable reserves in either the First National or the Hellena. Records are fragmentary and future possibilities of ore horizons already partly developed and mined can be only surmised.

At the First National, Fisk-Julia, and perhaps other minor shafts, it can be assumed that there are substantial tonnages of low-grade ore available for milling, particularly high zinc ores.

A churn drill hole, one of five put down from the surface by the Golden Rod Mining and Smelting Company in 1927 and the only one which ever reached its objective-the upper contact of the Leadville limestone, west of the Weston fault-encountered 26 feet of heavy lead-zinc-iron mineralization underlain by 40 odd feet of lower-grade mineralization (Elder's Report). Assay figures were not released by the operators.

The Hellena vein has been worked some 150 feet north and 150 feet south of the shaft down to the sixth level. The ore is not continuous. Probably the richest lenses have been mined from this section.

There is not much room for further development south of the shaft as the south endline of the property is close by, but to the north there is ample room. The ore is not likely to be continuous to the north but,

by analogy with the Sunday vein previously mentioned, should produce bodies of commercial ore.

Of the value and extent of ore to be expected in the deep Leadville Blue limestone ore horizon, nothing can be predicted, except that the possibilities are good.

In general, the prospect for commercial ore which can be mined at present prices and under present costs is excellent.

PRESENT STATUS

The present development includes the Hellena shaft, 766 feet deep under water but probably in good condition, with 10 levels and 6,600 linear feet of lateral workings; the First National shaft, 245 feet deep with 2 levels; and the Fisk-Julia shaft, 660 feet deep. All three of these shafts are in good condition, except the upper 100 feet of the Fisk-Julia which is above water level and probably needs retimbering.

A churn drill hole 1,200 feet west of the Hellena shaft on the Hazelholm claim, sunk to a depth of about 605 feet, cut low-grade ore in the Leadville Blue limestone, as previously mentioned.(fig. 2).

A 900-foot crosscut west on the 500-foot level penetrated the Weston fault and is reported to have encountered considerable water.

A 150-foot vertical diamond drill hole from the sump of the Hellena shaft encountered disseminated lead and silver minerals in the white porphyry, according to F. J. McNair. According to a former workman, it also cut a flow of water which could not be handled by the pump and the hole had to be discontinued.

The water flow in the First National is reported as small, never over 40 gallons per minute. In the Hellena shaft the flow is

unknown from previous operating records but it could exceed that experienced elsewhere in the district.

It can be predicted that any further work either by lateral development to the west through the Weston fault, or by diamond drilling below the 700-foot level, will encounter heavy flows of water. That is the experience of the American Smelting and Refining Company in the Eclipse mine where they are almost at the capacity of 1,300 gallons per minute pump installation.

Inasmuch as two of the logical exploration targets involve like development, the possibility of greater water inflow must be prepared for.

PROJECT PROPOSALS, WITH COSTS

Under this heading will be presented the proposals in the application with the applicants' estimates and Bureau of Mines estimates compared.

The applicants list in their proposal a mining and milling plant at the First National shaft to the value of $73,125.00 which is available for use by them.

Unfortunately, the plant is badly deteriorated. Of the equipment listed, only the Telesmith crusher, the flotation machines, classifier, concentrating tables, compressor, hoist, skip, headframe, and buildings are usable. All electric motors have been stolen and the ball mill and head motions of the concentrating tables wrecked. The mill building is now only a shell with the windows and corrugated roof and part of the siding gone.

Of the equipment above nothing can be used to advantage in the proposed exploration program except possibly the skip and dumper, and

negligible amounts of pipe and rail. Possibly some of the items, such as the sinking pump, have been stored elsewhere but, if so, there is no indication shown in the application.

The compressor could be used to augment the larger compressor recommended for the Hellena operation if more air is needed.

Exploration and Development

Applicants' Estimate		Bureau's Estimate	
2,400 ft. of drifting on Hellena vein various levels at $20.00/ft.	$48,000.00	2,400 ft. of drifting at $30.00/ft.	$72,000.00
3 drill holes below 700-ft. level, average 500 ft. each, at $3.00/ft.	4,500.00	Omit	
10 drill holes below 500-ft. level, average 700 ft. each, at $3.00/ft.	21,000.00	Same at $6.00/ft.	42,000.00
2 drill holes upwards in west end of 500 level crosscut to penetrate Blue limestone ore horizon located by surface churn drill hole, 500 ft. at $3.00	1,500.00	Same at $7.00/ft.	3,500.00
10 diamond drill holes from surface, averaging 450 ft. each, to explore Leadville limestone ore horizon west of Weston fault. 2700 ft. at $3.00/ft. (This does not check 10 holes at 450 ft. each)	8,100.00	5 holes, 450 ft. each, at $7.50/ft.	16,875.00
Power cost for 19 months - pumping, hoisting, drilling, and miscellaneous, at $2,200.00/month	$41,800.00	Power cost based on estimate made in consultation with Public Service official, 19 months at $1,600.00	$30,406.00

NEW EQUIPMENT

Applicants' Estimate		Bureau's Estimate	
Shaft signal system	$ 60.00	Shaft signal system	$ 250.00
2 - 6-ft. sheave wheels	900.00	2 - sheave wheels	1,000.00
1 - 125-hp. hoist 6,600 lb. rope pull single drum complete w/ with motor and control equipment	9,700.00	1 - 100-hp. hoist 7500 lb. rope pull with motor and control equipment 300-ft. per minute rope speed	10,500.00
1,500 ft. 1-inch plow steel hoisting cable	1,950.00	1,200 ft. 3/4-inch plow steel cable at $.35 a ft.	420.00
1 - Electric deep well turbine pump for 700-ft. head no capacity given	18,400.00	1 - Electric deep well pump 700-ft. head 1,500 GPM capacity from 500-ft. level	18,400.00
1 - 1,100-ft. two stage air compressor complete with motor receiver, etc.	9,800.00	1 - 914-ft. two stage compressor w/150-hp. synchronous motor	14,700.00
		36-inch x 8-ft. receiver and piping	500.00
1 - Electric winch for lowering turbine pump column complete w/cable	3,600.00	1 - Winch for hauling turbine pump and column	2,000.00
2 - DA30 1R drills	2,080.00	2 - 3-inch automatic drift drills	1,350.00
1 - B58 stoper	735.00	1 - 99-lb. stoper	650.00
1 - J50 jackhammer	365.00	1 - 55-lb. jackhammer	330.00
4 - 50-ft. lengths air hose	149.60	4 sets 50-ft. air hose w/fittings	200.00
4 sets water hose, pressure tank, and fittings	860.00	4 - sets 50-ft. water hose 1/2-inch (eliminate tanks and use gravity water system in shaft)	120.00
		3,000 ft. 3/4-inch black pipe air line	300.00
2,400 ft. 4-inch black pipe air lines	3,200.00	2,000 ft. 4-inch black pipe air line	2,000.00
3,000 ft. 2-inch black pipe air lines	1,660.00	2,000 ft. 2-inch black pipe air line	600.00
Pipe fittings	110.00	Pipe fittings	250.00
Pipe fitting tools	60.00	Tools under miscellaneous tools	

NOTE: Use Victaulic couplings preferably.

NEW EQUIPMENT (continued)

Applicants' Estimate		Bureau's Estimate	
1 - Steel sharpener complete with dies	$ 2,900.00	Omit - Use detachable bits either standard or carbide insert and have them serviced in Leadville	
1 - Oil forge	350.00		
1 - Coke forge	40.00	1 - Coke forge	$ 40.00
Supply of drill steel	600.00	Drill steel - Fabricated, 40 sets threaded and shanked (steel renewal and bit cost is in footage cost of lateral work)	650.00
Auxiliary drilling equipment cross bars, columns, etc.	560.00	Auxiliary drilling equipment	400.00
1 - Mancha tramming locomotive with battery and charger	4,900.00	Substitute 1 - 6-hp. Universal "Tram Aire" which will be satisfactory up to 1,000-ft. Tram is much cheaper and more economical in operation.	1,750.00
1 - Mucking machine	4,750.00	1 - Mucking machine Eimco 12B	2,967.00
20 - 16-cu.ft. mine cars at $160.00 each	3,200.00	20 - 16-cu.ft. mine cars	3,200.00
Miscellaneous tools and supplies for blacksmith shop	250.00	Miscellaneous equipment, tools, and supplies for blacksmith shop and mine	3,000.00
Wrenches and miscellaneous tools for mine	1,200.00		
10 tons 12-lb. rail with splice bars, bolts and spikes, enough for 2,500-ft. track	1,300.00	5,000 ft. 16-lb. rail (more suitable for motor haulage and mucking machine operation)	1,960.00
		Splice bars	150.00
		Spikes	88.00
		Ties	480.00
1 - 20-cu.ft. self dumping skip	400.00	1 - 20-cu.ft. skip	1,000.00
1 - 60-ft. head frame	4,800.00	1 - 60-ft. head frame with skip dumper	6,000.00
Hoist room, compressor room, and dry	4,000.00	Hoist room, compressor room, dry and storeroom	3,000.00
Blacksmith shop and storeroom	1,200.00	Blacksmith shop	500.00
Powder Magazine	450.00	Powder Magazine	450.00
Carbide shack	90.00	Carbide shack omit	

NEW EQUIPMENT (continued)

Applicants' Estimate		Bureau's Estimate	
3 - Transformers 6,600 to 440	$ 3,900.00	Transformers 500 KVA	$ 4,383.00
Power hookup	1,300.00	Power hookup (Public Service estimate)	1,000.00
Fluming creek 500 ft. to keep water out of fissures, veins, cutting pumping expense	3,200.00	Possibly omit; value unknown	
Labor overhead 19 months: 1 mine foreman, 3 hoist engineers, 1 blacksmith, 2 top men at $2,400.00 a month.	45,600.00	Labor 19 months, 2 shifts/day:	
		Mine foreman at $525.00 month	18,000.00
		2 hoistmen at $16.00 a day each	15,200.00
		2 top men at $11.60 a day each	11,020.00
		1 repair man at $18.00 a day	8,850.00
		1 watchman for graveyard at $12.00 a day	5,700.00
		Comp. Ins. and Social Security on above	5,000.00
Management 24 months	14,400.00	Management 24 months	14,400.00
Interpetation of drill cores and mapping of formations by independent geologist	8,000.00	Same (consulting geologist employed part time)	5,000.00
Mine Surveying	1,400.00	Mine surveying	1,400.00
		Assaying (wet and fire)	2,000.00
Accounting supervisor 24 months	1,200.00	Accounting supervisor	1,200.00
Bookkeeping and clerical 24 months	4,800.00	Bookkeeping and clerical storekeeper	6,000.00
Established cost of power labor involved in initial unwatering Hellena shaft	2,700.00	Freight and hauling on equipment and supplies	3,000.00
Foundation for deep well pump	600.00	Install hoist, compressor, and pump	2,500.00
		1 - 1-ton truck (second hand)	1,200.00
Total	$296,619.60	Total	$341,839.00
Estimated marginal funds	30,000.00	Add for contingencies	34,161.00
Grand Total	$326,619.60	Grand Total	$376,000.00

Referring to the cost estimates, it may be seen that the applicants' costs on many items are at variance with the prices shown in the Bureau's estimate. The Bureau figures are based on current equipment prices and local labor costs now in effect.

Some items which the applicant includes the Bureau has eliminated as of doubtful value. On some equipment the Bureau has suggested alternatives where it seems advisable.

Because of the possibility of increased water flow being encountered in exploration work at any time, the Bureau engineers recommend pump capacity of 1,500 G.P.M. as a safety precaution. Although it is recommended that diamond drilling be carried on from the 500-foot level, at least in the preliminary stages, the Bureau recommends a pump suitable up to a 700-foot head in order that it can be used for deeper work. For the same reason, 500 KVA transformer capacity is recommended, although not needed at first.

Some items may be obtained second-hand at lower prices with a considerable saving. For instance, it may be possible to dismantle and move a headframe from some local property. It may be possible to buy second-hand hoists, compressor, or transformers. The possibility of rental of some equipment has not been considered, as the accumulated rental on the major items for the period covered would be more than the outright purchase price. No road building will be necessary for this project. Man power requirements will be a maximum of 25 men, including heading crews and diamond drill crews. Water and power requirements are met by installations at hand or provided for.

PRODUCTION PLAN

The time schedule for the completion of the exploration phase suggested by the applicant - 19 months after the operating plant is ready to go - seems high. On a two shift basis, the 2,400 feet of lateral development should be accomplished in 8 months. This is only 300 feet per month. The underground diamond drilling, totaling 7,500 feet as shown in the revised Bureau's estimate, should be completed within 10 to 12 months with two crews. This is only 750 to 625 feet per month.

The surface plant is adequate for a production of 75 tons per shift. An initial mill capacity of 150 tons, which can be stepped up by installation of some additional equipment, is indicated if the exploration work proves sufficient ore reserves.

SUMMARY: COST OF PROJECT

The Bureau's estimated cost of $376,000.00 is $49,380.40 higher than the applicants and covers only the exploration stage. It does not provide for the development of any ore bodies discovered nor for the installation of any milling facilities. Thus, plans of the applicants should include means of obtaining the capital for such work by other means, perhaps a Defense Minerals Administration development loan. The additional capital required could total as much as $500,000.00 if deep development is included.

PROPOSED FINANCING

No details of methods of raising the applicants' share of the estimated cost of exploration are indicated in the application.

CONCLUSIONS

The proposals of the applicants are entirely feasible and logical. The applicants are not known to the Bureau office in Leadville but Robert Elder, who acts as their consultant, was formerly a Leadville attorney and mine operator.

RECOMMENDATIONS

These recommendations are based on the belief that the chances of finding substantial bodies of milling-grade lead-silver-zinc ores are possible under the proposed exploration plan, and that at present prices and costs this ore can be mined and milled at a small profit under the mining conditions likely to be encountered. The possibility of finding lenses of richer ore along with the low-grade material is likely in the exploration of an undeveloped ore horizon and this possibility provides the chance for more than a small profit on operations.

Because of the probable high cost of reaching and developing the ore horizons of the Leadville Blue limestone below the bottom of the Hellena shaft, this project is not included except for preliminary drill holes from the 500 foot level, if and when the shaft is in operation.

Because of the high cost of equipping and rehabilitating the Hellena shaft, it is recommended that the exploration be planned in two stages.

The first stage will consist of preliminary exploration by diamond drilling from the surface. Four thousand feet of drilling in angle holes from points along the west side of the Hellena vein would indicate the extent of mineralization in the undeveloped portion north of the Hellena shaft workings.

Four thousand five hundred feet of drilling in 10 vertical holes west of the Weston fault would outline, at least roughly, the extent and grade of the Blue limestone ore horizon tapped by the one churn drill

hole drilled by the Golden Rod Mining and Smelting Corporation which indicated lead-zinc mineralization. Four thousand five hundred feet was the amount suggested in the applicants' estimate and is double that suggested by the Bureau for the same purpose. The Bureau's estimate was to be supplemented by simultaneous underground development. With the latter deferred, the original estimate seems more logical.

An estimate of $75,000.00 for this work is made consisting of $63,750.00 for drilling 8,500 feet of hole at $7.50 per foot, and $11,250.00 for supervision, geological consultation, assaying, and general overhead.

Utilizing two drill crews, the surface work can be done in 7 months under favorable conditions. If a winter drilling campaign is instituted the difficulties and resulting costs will be greater.

The above program may not necessarily provide enough information on which to base an application for a Defense Minerals Administration development loan. However, if the information obtained from the first stage is favorable, it would probably justify the recommendation of the second stage and an exploration loan for the amount required to equip and rehabilitate the property and do enough further exploration underground to provide the basis for obtaining development capital, either from a Defense Minerals Administration loan or from other sources.

Recommendations for exploration of the deep lying Leadville Blue limestone in the down-faulted block below the Hellena shaft by 1,200-foot drill holes from surface is probably not justified because of the difficulty and expense of drilling such holes in the formations likely to be encountered and will be deferred until later.

No specific locations for diamond drill holes on surface are advisable on the basis of this brief preliminary examination. The sites should be determined and located on the ground after careful geological and engineering investigation.

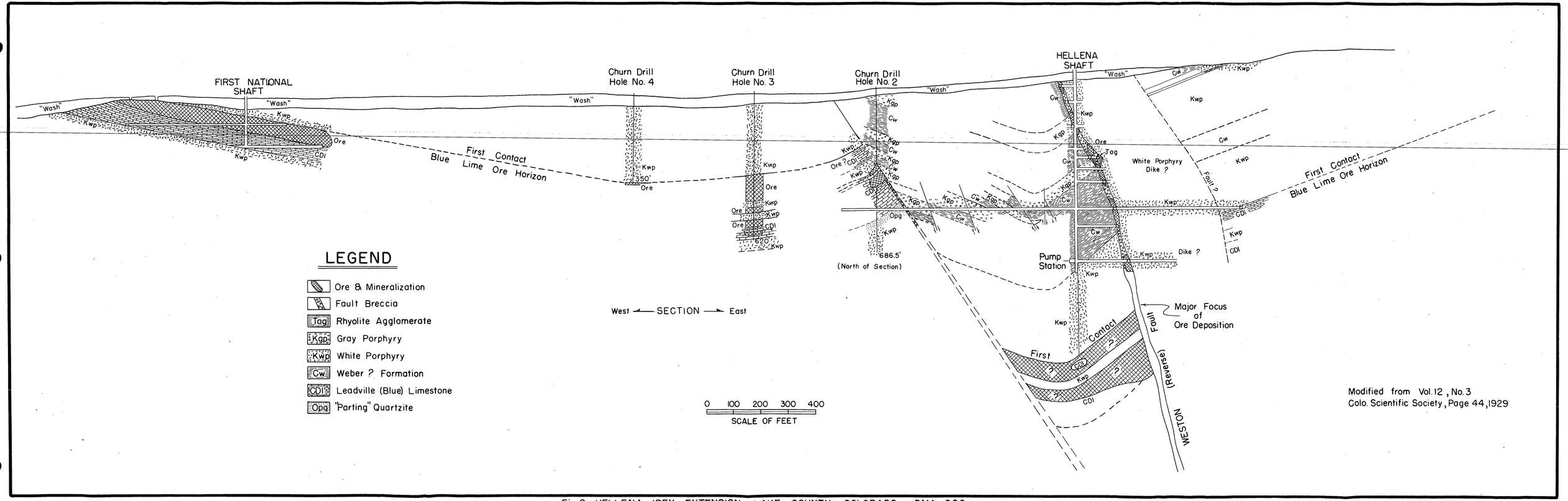

Fig. 2 - HELLENA IBEX EXTENSION, LAKE COUNTY COLORADO. DMA-860

August 17, 1951

AIR MAIL

Memorandum

To: George Holderer, Chief, Tungsten Branch
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 8998, Plateau Mines, Inc., Lone Mountain Mine, Lemn County, New Mexico

This is in reply to your telephone request of August 17, 1951, regarding the status of the above application. Re-valuation was completed August 13 and the report will be ready about August 22, 1951. Denial of the direct loan will be recommended and it has been determined that applicant does not need an exploration loan.

The company is building a mill at Deming and expects to buy custom manganese ore as well as mine from the Lone Mountain claims held on lease.

J. E. Hunt, Jr.

jd

cc: Bureau
DMA Files
Alliance

Mining Division
Date Rec'd.
AUG 20 1951
BUREAU OF MINES
Denver, Colorado

Bureau of Mines

W. R. Storms, Tucson, Arizona

August 17, 1951

Silver City, New Mexico Field Office

Docket DMA 859X, American and Luna Mines (Manganese), Little Florida Mountains Mining District, Luna County, N. Mex.

Attached is a rough draft (very hurried) of the above application. Perhaps you can brush up this report a little.

Enclosed is also the original docket-being returned to you via Registered mail.

John H. Soule'
Acting Supervising Engineer

cc Allsman, Denver
reader
file

STANDARD FORM No. 14
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

FROM Walter R. Storms

BUREAU of Mines

CHG. APPROPRIATION Day Letter DMA

Tucson, Arizona August 17, 1951

U. S. GOVERNMENT PRINTING OFFICE 10—1723

Mining Division
Date Rec'd.
AUG 20 1951
BUREAU OF MINES
Denver, Colorado

Phoned 9:50 A.M. frj

Mr. Paul T. Allsman
U.S. Bureau of Mines
224 New Customhouse
Denver, Colorado

Retel Soule examined 859X on thirteenth. Recommends denial of ~~a~~ production loan lack of ore. Company does not want exploration. Company is building mill at Deming and expects to buy custom ores as well as some from its lease on American Manganese claims. Lawrence Yacamo has Luna mine. Company lease is for American. Report probably in Denver about twenty-second.

Walter R. Storms

WRS

CC Confirmation
Soule'
DMA 859X
DF
Stapleton (2)

V

OPR TUCSON 2841 PLS OK VVTO ZEP TS PLS OK VBL

TS 2841 PLS OK

TSN 2841 GA PLS

TGIS SIS DENVER BUREAU MINES WILL U RELAY MSG TO OUR TUCSO OFFIECE PLS

OK WIL DO GA PLS

DN 235 BUR MINES 8-17-51 9-10 AM

W R STORMS

REURTELXXXXXXX

WASHINGTON ADVISES THEY ARE BEING PRESSED FOR ACTION ON 859 X FLORIDA MINES, LUNA COUNTY, NEW MESICO. LAST INFORMATION INDICATED EXAMINATION WEEK OF AUGUST 6. WAS IT MADE A D WHEN CAN WE EXPECT REPORT.

P. T. ALLSMAN

END MSG ACK PLS AND THANKS BMH

R 1 OK TNX

Sent - Denver

V

OPR TUCSON 2841 PLS OK VVTO ZEP TS PLS OK VBL

TS 2841 PLS OK

TSN 2841 GA PLS

TGIS SIS DENVER BUREAU MINES WILL U RELAY MSG TO OUR TUCSO OFFIECE PLS

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END MSG ACK PLS AND THANKS BMH

R 1 OK TNX

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

Mining Division
Date Rec'd.
AUG 17 1951

WESTERN UNION

1201

(15)

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

BUREAU OF MINES
Denver, Colorado

LA 081

1951 AUG 17 AM 10 36

L TSA 177 DL PD GOVT=TUCSON ARIZ 17 955A=

PAUL T ALSMAN=

US DUR OF MINES 224 NEW CUSTOM HOUSE DVR=

RETEL SOULE EXAMINED 859X ON 13TH RECOMMEND DENIAL OF ANY PRODUCTION LOAN LACK OF ORE. COMPANY DOES NOT WANT EXPLORATION. COMPANY IS BUILDING MILL AT DEMING AND EXPECTS TO BUY CUSTOM ORES AS WELL AS SOME FROM ITS LEASE ON AMERICAN MANGANESE CLAIMS. LAWRENCE YACAMO HAS LUNA MINE COMPANY. LEASE IS FOR AMERICAN. REPORT PROBABLY IN DENVER ABOUT 22=.

WALTER R STORM=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

August 17, 1952

AIR MAIL

Memorandum

To: George Melderer, Chief, Tungsten Branch
Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 8998, Florida Mines, Inc., Luna Manganese Mine, Luna County, New Mexico

This is in reply to your telephone request of August 17, 1951, regarding the status of the above application. Examination was completed August 13 and the report will be ready about August 22, 1951. Denial of the direct loan will be recommended and it has been determined that applicant does not want an exploration loan.

The company is building a mill at Deming and expects to buy wolfram manganese ore as well as mine from its American Manganese claim held on lease.

J. H. Eash, Jr.

lb

cc: Steven
DMA Files
Allemann

BUREAU OF MINES
DENVER
REGION IV
2 1951
BUREAU OF MINES
DENVER, COLORADO

MINING DIVISION
REGION IV

July 31, 1951

Memorandum

To : J. H. Soule' Silver City, New Mexico

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

Subject : DMA Dockets 859X and 1387X

As per our telephone conversation of this afternoon, I am sending you DMA Docket 859X, Florida Mines, Inc., Luna Manganese mine, Luna County, N. Mex. and DMA Docket 1387X, Potter and Sins, Upper Dolores Area, Ortiz Mine Grant, Santa Fe County, N. Mex.

I have talked to Andy Shride and we have decided that you will not need a geologist to help you with the Luna mine. As you know, the Bureau has a large amount of information on this property.

John Faick will come to Silver City on Monday with Andy Shride (Andy will examine DMA-1294X), then will go to the Ortiz Grant with you on Tuesday. He also will go with you to Santa Fe to discuss the San Pedro exploration application with Williams (DMA-15).

Walter R. Storms

CC P. T. Allsman
C. A. Anderson
DMA-859X
DMA-1387X
F

WRStorms:frj

8394

July 31, 1951

Mr Edmund Newton
Florida Mines, Inc
Deming, New Mexico

Dear Mr. Newton:

This will acknowledge your letter of July 27, 1951 relating to Docket, DMA-659X.

Your request will be forwarded to Mr. Walter R. Storms, Chief, Arizona-New Mexico Branch, Mining Division, Region IV, at Tucson, Arizona.

We will inform you of the date of the examination.

Very truly yours,

P. T. Allmann, for
J. H. Kent, Jr.
Executive Officer
DMA Field Team, Region IV

cc: W. R. Storms

WDM:fwo

Form 6-95

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REFERENCE SLIP

DATE 7/30/51

REFERRED TO:

1. Allsman
2.
3.
4.

FOR:

..... Action	..... Recommendation
..... Approval	..... Record
..... Comment	of .....
..... Conference	..... Referring
..... Consideration	to .....
..... Filing	..... Reply for signa-
..... Instructions	ture of .....
..... Investigation	..... Rewriting
..... Initials	..... Signature
..... Mailing	..... Suggestions
..... Previous correspondence	..... Your information

REMARKS: Please adknowledge.
(letter from Edmund Newton, Re: 859X)

Check (X) before the items needing attention.

JHF
Initials of sender.

GPO 16—51162-1

Admin
Ack

FLORIDA MINES, INC.

DEMING, NEW MEXICO

BOX 851

July 27, 1951

REGIONAL DIRECTOR'S OFFICE
REGION IV
JUL 30 1951
BUREAU OF MINES
DENVER, COLORADO

Reference: DMA 859X
Manganese

Mr. J. H. East, Jr.
Executive Officer
Defense Minerals Administration
224 New Customhouse Building
Denver 2, Colorado

Dear Mr. East:

A letter from Mr. Tom Lyon, Director of the Supply Division of the Defense Minerals Administration, dated July 18, 1951, has been forwarded by Mr. Charles M. Upham to me here.

I note that a field examination has been requested for our property near Deming, Luna County, New Mexico. We shall be glad to cooperate in every way possible with your field representative designated to make such examination. I would appreciate your advising, however, when the examination will be made so that I will definitely be here.

Very truly yours,

Edmund Newton

Edmund Newton

EN/pa

July 25, 1951

Memorandum

To: W. R. Stearns (with brochure)

(Through Chief, Mining Division)

Charles Anderson

From: DMA Field Team, Region IV

Subject: DMA Docket 659M, Florida Mines, Inc., Luna Manganese Mine, Luna County, New Mexico

Enclosed herewith are applications of the above applicant dated respectively March 29, 1951; April 9, 1951, and May 28, 1951, with copy of a letter to Mr. J. H. Hart, Jr., from the Supply Division.

This application is for shaft sinking and drifting on virgin parts of the Luna Vein between the Luna Mine and Manganese Valley Mine at an estimated cost of $100,000. The Supply Division suggests preliminary trenching.

Please arrange for an examination of this project at your convenience.

J. H. Hart, Jr.

J. H. Koschman

Enclosures
As
cc: Manganese
DMA

J.Z.S.

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

REGIONAL DIRECTOR'S
OFFICE
REGION V
JUL 23 1951
BUREAU OF MINES
DENVER, COLORADO

July 18, 1951

Mr. J. H. East, Jr., Executive Officer
224 New Customhouse Building
Denver 2, Colorado

In reply please refer to
DMA 859X Manganese

Dear Mr. East:

A field examination is requested for the property controlled by the Florida Mines, Incorporated. The project calls for a 100 foot shaft with drifting at the bottom on a section of virgin vein. If this is successful a second 100 foot lift with lateral drifting is contemplated. It has been suggested that a preliminary trench and/or shallow pit program would be more feasible as a start. The cost of the lesser program should not exceed $10,000. Development to depth will depend on the results obtained during the preliminary phase. Please arrange for the examination with this view in mind.

Enclosed herewith are two copies of form MF 103, one copy of an amended proposal and one copy of a new proposal.

Very truly yours,

Tom Lyon

Tom Lyon
Director, Supply Division

Enclosure

Approved:

Lowell B. Moon
Bureau of Mines

Olof T. Rose
Geological Survey

JUL 18 1951

July 13, 1951

Mr. J. H. East, Jr., Executive Officer
224 New Customhouse Building
Denver 2, Colorado

In reply please refer to
DMA 959X Manganese

Dear Mr. East:

A field examination is requested for the property controlled by the Florida Mines, Incorporated. The project calls for a 100 foot shaft with drifting at the bottom on a section of virgin vein. If this is successful a second 100 foot lift with lateral drifting is contemplated. It has been suggested that a preliminary trench and/or shallow pit program would be more feasible as a start. The cost of the lesser program should not exceed $10,000. Development to depth will depend on the results obtained during the preliminary phase. Please arrange for the examination with this view in mind.

Enclosed herewith are two copies of form MP 103, one copy of an amended proposal and one copy of a new proposal.

Very truly yours,

Tom Lyon

Tom Lyon
Director, Supply Division

Enclosure

Approved:

Lowell B. Moon

Bureau of Mines

Max N Rove

Geological Survey

JUL 18 1951

July 12, 1951

Mr. Charles M. Upham, President
Florida Mines, Inc.
606 Cafritz Building
Washington 6, D. C.

In reply please refer to
DMA 259X Manganese

Dear Mr. Upham:

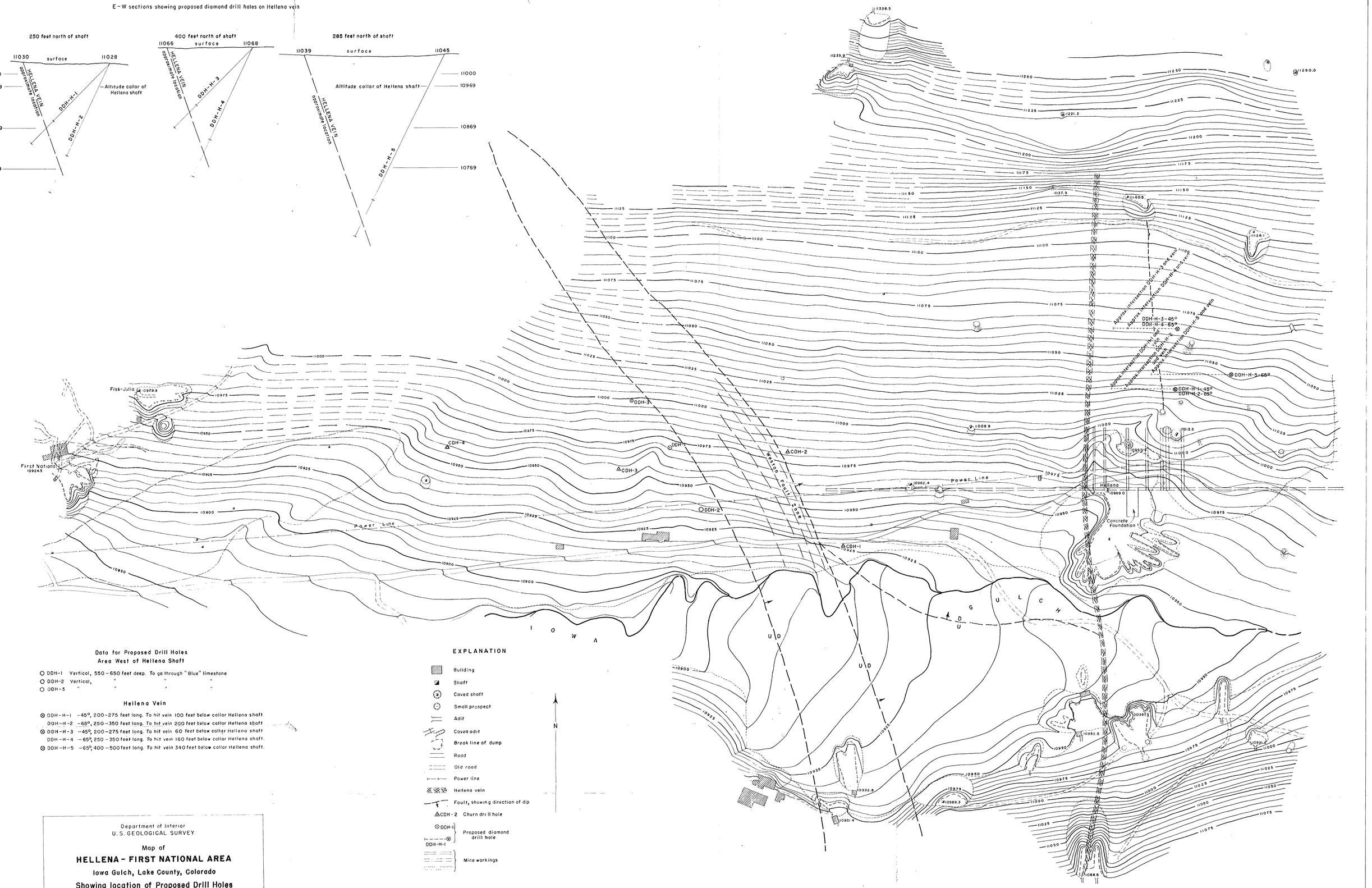
A field examination has been requested for your property near Deming in Luna County, New Mexico. The examination is to supply us with additional information. The request has been made to Mr. J. H. Bast, Jr., Executive Officer, 224 New Customhouse Building, Denver 2, Colorado. The cooperation of your field representatives during the proposed examination will be appreciated.

Very truly yours,

Tom Lyon

Tom Lyon
Director, Supply Division

E-W sections showing proposed diamond drill holes on Hellena vein



Data for Proposed Drill Holes
Area West of Hellena Shaft

- ○ DDH-1 Vertical, 550 – 650 feet deep. To go through "Blue" limestone
- ○ DDH-2 Vertical, " " "
- ○ DDH-3 " " " "

Hellena Vein

- ⊗ DDH-H-1 –45°, 200–275 feet long. To hit vein 100 feet below collar Hellena shaft.
- DDH-H-2 –65°, 250–350 feet long. To hit vein 200 feet below collar Hellena shaft
- ⊗ DDH-H-3 –45°, 200–275 feet long. To hit vein 60 feet below collar Hellena shaft
- DDH-H-4 –65°, 250–350 feet long. To hit vein 160 feet below collar Hellena shaft.
- ⊗ DDH-H-5 –65°, 400–500 feet long. To hit vein 340 feet below collar Hellena shaft.

EXPLANATION

- Building
- Shaft
- Caved shaft
- Small prospect
- Adit
- Caved adit
- Break line of dump
- Road
- Old road
- Power line
- Hellena vein
- Fault, showing direction of dip
- △CDH-2 Churn drill hole
- ⊙DDH-1 / DDH-H-1 — Proposed diamond drill hole
- Mine workings

Department of Interior
U.S. GEOLOGICAL SURVEY

Map of

HELLENA - FIRST NATIONAL AREA

Iowa Gulch, Lake County, Colorado

Showing location of Proposed Drill Holes

DMA Docket 860

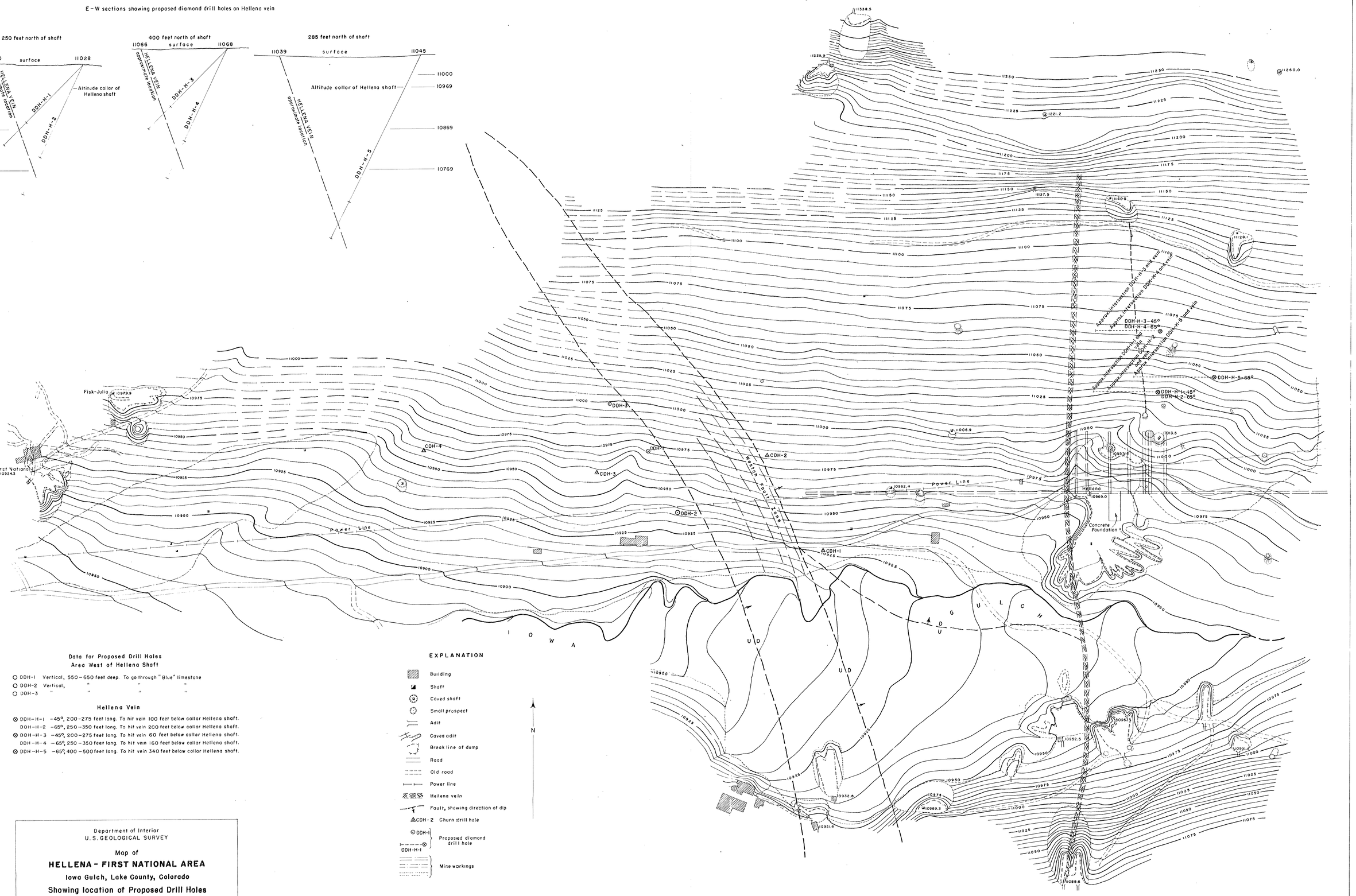
SCALE

0 50 100 200 300 FT

Contour Interval: 5'

Plane table map by H.T. Schossberger and M.R. Brock October, 1951

E-W sections showing proposed diamond drill holes on Hellena vein



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- ⊙DDH-1 / DDH-H-1 — Proposed diamond drill hole
- Mine workings

Department of Interior
U.S. GEOLOGICAL SURVEY

Map of

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Iowa Gulch, Lake County, Colorado

Showing location of Proposed Drill Holes

DMA Docket 860

SCALE

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Contour Interval: 5'

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