DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 413 — DMEA NO. 2517

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [x] Terminated - Not Certified
- [x] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [x] Royalty Audits
- [x] Certification of Discovery
- [ ] Closing Letter
- [x] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [x] Contract with all exhibits and annexes
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final) — 7-15
- [x] Work Comoleted analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports
- [x] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [x] Field Team Semi-Annual Report for Certified Project
- [x] Field Team Interim Reports
- [x] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No. _____ : Maps (Use pocket folder or envelope)

Folders No. 3 : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

17963

MAY 25 1959
O.M.E.

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Executive Officer, OME Field Team, Region III, Denver, Colorado, pertaining to Contract Idm-8413, Docket No. DMEA 2517 (Lead-Zinc) dated September 10, 1952, with

Defender Mining Company, (Partnership)
c/o E. L. Stacy
Silver Cliff, Colorado

for the purpose of determining the amount of royalties due the United States Government on the sale of Lead-Zinc ores and Concentrates produced from the Blue Eagle Claim located in Custer County, Colorado, during the period September 10, 1952, through May 6, 1959.

The status of the project, scope of the review and reasons therefor are stated on page 2.

My review established the total sales of ores and concentrates for this period to be $4,779.10. (See Schedule No. 1 attached.) Royalty due the United States Government at the contract rate of 1½ to 5 percent is $219.44. The royalty paid and the balance due are as follows:

Total Royalty Due	$219.44
Total Royalty Paid	219.44
Balance of Royalty Due	$ 0.00

May 21, 1959

Donald T. Finch
Donald T. Finch
OME Auditor

DEFENDER MINING COMPANY, (PARTNERSHIP)

CONTRACT NO. I4m-2413 DOCKET NO. DMRA 2517

STATUS OF THE PROJECT, DESCRIPTION OF REVIEW AND REASONS THEREFOR

The exploration work was completed in April, 1953. A Certificate of Discovery or Development was issued April 17, 1953. A Report of Review in lieu of Final Audit dated April 26, 1953, indicates accepted cost of $4,799.60, with Government participation on a 50 percent basis being $2,399.80. Under the terms of the contract royalty is payable on any minerals mined or produced from the land described in Article 2, for a maximum period of 10 years from the date of the contract.

Semi-annual reports of inspection by examining engineers, United States Bureau of Mines, indicate property has been inoperative since 1955.

My review included a tabulation and recomputation of all ore or concentrate settlement sheets in the files of the Executive Officer, OME Field Team, Region III, for the period September 10, 1958, through May 6, 1959, reconciliation of all royalty paid with OME Finance Office, Denver, Colorado.

The review was made in lieu of an on-site audit of the prospector's accounts for the following reasons:

(a) All reported sales were adequately supported by copies of liquidation settlement sheets.

(b) The examining engineer is of the opinion all sales of production are accounted for.

(c) The administrative cost to the Government of an on-site audit at this time would be excessive in relation to the amount of possible additional royalty which might be disclosed.

Schedule No. 1

DEFENDER MINING COMPANY, (PARTNERSHIP)

CONTRACT NO. I4m-[illegible]13 DOCKET NO. [illegible] 2517

SUMMARY OF PRODUCTION, SALES AND ROYALTY
PERIOD SEPTEMBER 10, 1952, THROUGH MAY 6, 1959

Ore Sales to Resurrection Mining Company

Gross Weight, Pounds		247,560	
Less: Moisture Content, Pounds		12,449	
Dry Weight, Pounds		235,111	
Dry Weight, Tons		117.5555	
Gross Value Net of Treatment Charge		$1,729.50	
Allowable Deductions			
Haulage	$ 618.91		
Transportation Tax	18.57		
Assay Fees	18.00		
Sampling	7.50	662.98	
Net Value Subject to Royalty			$1,066.52
Average Value per Ton $9.07			
Average Royalty Percentage 3.17%			

Lead Concentrates sold to American Smelting & Refining Co.

Gross Weight, Pounds		37,460	
Less: Moisture Content, Pounds		2,113	
Dry Weight, Pounds		35,347	
Dry Weight, Tons		17.6735	
Gross Value, Net of Treatment Charge		$2,112.97	
Allowable Deductions			
Haulage	$ 110.70		
Switching Charge	15.57		
Assay Fees	5.00		
Sampling and Umpire Charges	10.00		
Frozen Ore Charges	14.00	155.27	
Net Value Subject to Royalty			$1,957.70
Average Value per Ton $110.77			
Royalty Percentage 5%			

[illegible] MINING COMPANY, ([illegible])

Lead concentrates sold to American Smelting & Refining Co.

Gross Weight, Pounds	62,400
Less: Moisture Content	3,557
Dry Weight: Pounds	58,843
Dry Weight: Tons	29.4215
Gross Value Net of Treatment	$1,765.88

Allowable Deductions

Assay Fees	11.00	
Net Value Subject to Royalty		$1,754.88
Average Value Per Ton $59.65		
Royalty Percentage 5%		

Semi-annual inspection report indicates estimated ore tonnage in concentrates at 400 tons.

Total Value subject to Royalty	$4,779.10

Mineral Content of Concentrates

	Lead Concentrates	Zinc Concentrates	Total
Gold	Trace	Trace	
Silver	345 Oz.	196.977 Oz.	541.977 Oz.
Lead	1729.29 Lb.	311.13 Lb.	2040.42 Lb.
Zinc	311.13 Lb.	265,088 Lb.	265,399 Lb.

Royalties	Ore	Lead Concentrates	Zinc Concentrates	Total
Royalties Due	$ 33.81	$ 97.89	$ 87.74	$219.44
Royalties Paid	33.81	97.89	87.74	219.44
Balance Due	$ 0.00	$ 0.00	$ 0.00	$ 0.00

CHECK SHEET OF EXAMINING ENGINEER

Operator's Name Defender Mining Company, (a Partnership)

Address c/o E. F. Stacy,

Silver Cliff, Colorado

Exploration Contract No. Idm-E 413 Docket No. DMEA2517

Blue Eagle Claim, Custer County, Colorado

	Check One	
	Yes	No
1. (a) Does the Operator stockpile ore subject to royalty repayment?		x
(b) If so, is segregation and identification procedure adequate?		
2. (a) Does Operator commingle production subject to DMEA royalties with exempt production?		x
(b) If so, do you consider the allocation of the commingled production equitable?		
3. (a) Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?		x
(b) If so, are adequate records maintained on such material to protect the Government's interest?		
4. Do you consider the assay controls in effect are adequate?	x	
5. Do you consider that the manner of disposing of production gives the Government its fair royalty returns?	x	
6. Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA royalties?		
7. Does the Operator buy from or sell to other Operators?		x

8. Comment on any item 2(b) to 6, if answer is No.

Property has been idle for 4½ years. Water is pumped every two weeks.

Date 5/7/59

Earl Behm
Mining Engineer

FILE COPY
SOURNAME:

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

CERTIFICATION BY THE UNITED STATES OF AMERICA
OF A DISCOVERY OR DEVELOPMENT UNDER
AN EXPLORATION PROJECT CONTRACT

To: Mr. Roy O. Pratt
Defender Mining Co.
P. O. Box 699
Enid, Oklahoma

Pursuant to the provisions of Exploration Project Contract No. Idm-E413, dated September, 10, 1952, Docket No. DMEA 2517, hereinafter called the "Contract" between you and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made, has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows: limited drifting and raising on the 225-foot level of the Defender mine have partly exposed small discontinuous lenses of lead-zinc ores, carrying minor amounts of gold and silver, in a fissure vein cutting rhyolite.

Dated APR 17 1953

THE UNITED STATES OF AMERICA

By C P Mittendorf
Administrator, Defense Minerals
Exploration Administration

WRGriswold/hmj
(4/14/53)
CC to: Docket
Contract Admin. & Audit Div.
Region IV (2)
Finance Office
Base Metals Division
Russell Forbes, Acting Adm. DMPA Mr. Griswold
Adm. R. File Chron.
Op. Committee
Mr. Hedges, Rm 4604
Mr. Thayer, Rm 5216, GSA Bldg
Mr. F. E. Johnson
Mr. Murkland

FILE COPY
SURNAME:
500

Griswold
Bramler
Rubin
Office

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

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OF A DISCOVERY OR DEVELOPMENT UNDER
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To: Mr. Roy O. Pratt
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The nature of said discovery or development is described broadly or indicated as follows: lead-zinc ores with auxiliary amounts of precious metals and existing above the 150 foot level, between the 225 foot and 150 foot levels, and below the 225 foot level of the Defender Mine.

Dated_____

WRGriswold/hmj
(3/30/53)

THE UNITED STATES OF AMERICA

By_____
Administrator, Defense Minerals
Exploration Administration

CC to: Docket
Contract Admin. & Audit Div.
Region IV (2)
Finance Office
Base Metals Division
Russell Forbes, Adting Admin.
Admin. R. File /DMPA
Op. Committee
Mr. Hedges, Rm. 4604
Mr. Thayer, Rm 5216, GSA Bldg
Mr. F. E. Johnson
Mr. Murkland
Mr. Griswold
Chron.

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 18 1953

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Defender Mining Company
A partnership consisting of Roy O. Pratt, W. L. Stephenson, W. L. Stephenson Jr., R. S. Baker, all of Enid, Oklahoma, and E. F. Stacy, W. H. Cody, and Garrett Cody, all of Red Cliff, Colo.

pertaining to Exploration Project Contract No. Idm-E413, Docket No. DMEA 2517, covering a project for exploration of Lead and Zinc, for the months of November 8, 1952 to January 22, 1953.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of costs claimed with the contract and pertinent schedules, and a consultation with the Executive Officer of the Field Team in charge of the project.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reason:

The contract provides for payment by the Government on the basis of agreed estimated costs of units of work actually performed.

The review disclosed the following facts in regard to the amount paid or to be paid the Contractor:

Total cost as billed by Contractor	$4,799.60
Exceptions:	None
Total Accepted Cost	$4,799.60

The contract calls for a 50 per cent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Two Thousand three hundred ninety nine and 80/100 Dollars

-$2,399.80-

is considered valid and proper.

Dated: April 28, 1953

T. H. Brading, Auditor

Extra Copy

EXPLORATION PROJECT CONTRACT
DEFENDER MINING COMPANY
DOCKET NO. DMEA-2517

AMENDMENT NO. 1

It is agreed this ___ day of _____, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Defender Mining Company, a partnership consisting of Roy O. Pratt, W. L. Stephenson, W. L. Stephenson, Jr., R. S. Baker, E. F. Stacy, W. H. Cody and Garrett Cody, each acting in consideration of the agreement of the other to the terms hereinafter set forth that Exploration Project Contract Idm-2413, Docket No. DMEA-2517, dated September 10, 1952, between the parties hereto be modified and amended as follows:

(1) This amendment shall be effective as of September 10, 1952.

(2) To the description of land in Article 1 the following is added: The Major Lode Mining Claim, Survey No. 1474.

In Article 2(b) the first line is replaced with the following: That the operator is a lessee, in possession and entitled to possession, and the Owner's Consent to Lien with respect to the Blue Eagle and Defender Lode Mining claims, and the Performance Bond of the operator are attached.

(3) In Article 3 the first sentence is replaced by the following: The operator shall continue work on a project of exploration for lead and zinc in or upon the described land and shall bring the project to completion prior to June 1, 1953.

(4) In Article 4 the figures $[illegible].00 and $4,7[illegible].00 are changed to $4,368.55 and $8,737.10 respectively.

(5) Exhibit "A" is revised to read as follows:

EXHIBIT "A"

Description of the Work

STAGE I

Extend the 225-foot level westerly along the vein a maximum distance of 80 feet. The starting point of the drift is shown at "A" on the maps, Figures 3 and 4 attached hereto and made a part hereof.

After part or all of the drifting is completed, raises not to exceed a total of 50 feet at locations acceptable to the DMEA representative may be driven. The tentative location of a raise is shown at "B" on the attached Figures 3 and 4.

Part of the footage allocated to drifting may be driven on a sub-level from the raise as indicated at "A" on Figures 3 and 4.

STAGE II

Drill six diamond core drill holes totalling 525 feet on the Major Claim north of the approximate outcrop of the vein and inclined so as to cut the vein at a depth of approximately 45 feet. The holes are to be spaced on approximately 50-foot centers. The locations of the proposed holes are shown on the attached map. All drill cores must be properly stored in acceptable core boxes. Cores must be split and one-half delivered to DMEA for its use. All drilling must be done with BX or AX size bits. The proposed location of the diamond drill holes is shown on Figure 4.

The sludge must be collected. The sludge from each core run shall constitute a sample, and at the end of each run the hole must be washed until clear water returns before coring is resumed. Sludge samples must be split and one-half delivered to DMEA.

ROUGH ESTIMATED PROJECT COSTS

STAGE I

[illegible] feet of drifting @ $30.[illegible] per foot		$2,[illegible]53.00	
50 feet of raising @ $30.[illegible] per foot		1,[illegible]4[illegible].00	$4,7[illegible].00

STAGE II

525 feet of diamond core drilling @ $7.50 per foot	$3,[illegible]37.50	$3,[illegible]37.50

S U M M A R Y

Total Estimated Cost - Stage I	$4,7[illegible].00	
Total Estimated Cost - Stage II	3,737.50	
Total Estimated Cost of Project		$8,737.10
Government Participation @ 50%		$4,368.55

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By_____
Executive Officer, LMSA
Field Team - Region IV

DEFENDER MINING COMPANY

By_____

Keller
Eg 4y

COMMENTS _____

APPROVED _____

MF-200 (A)
(February 1952)

SEP 15 1952
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
OCT 6 52

DOCKET NO. DMEA 2517

COMMODITY Lead-Zinc
Idm-E413

See

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this 10th day of September, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Defender Mining Company, a partnership consisting of Roy O. Pratt, W. L. Stephenson, W. L. Stephenson, Jr., R. S. Baker, all of Enid Oklahoma and R. F. Stacy, N. H. Cody and Garrett Cody, all of Silver Cliff, Colorado

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Colorado, County of Custer, described as follows:[3] BLUE EAGLE - Unpatented Lode Mining Claim recorded in Book 91 Page 455, DEFENDER - Unpatented Lode Mining Claim recorded in Book 91 Page 346, on file in the County Clerk & Recorder's Office, Custer County, Colorado

the Operator represents and undertakes:[4]

[redacted]

(*b*) That the Operator is a lessee, in possession and entitled to possession, and the Owner's Consent to Lien is attached.

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within -60- days from the date of this contract shall commence work on a project of exploration for[5] Lead & Zinc

in or upon the described land; and shall bring the project to completion within a period of 5 months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay -50- percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $2,399.80, which is 50 percent of $4,799.60, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operator shall provide the Government with monthly reports of units of work performed under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of units of work performed on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) *Compliance with requirements.*—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of the units of work performed, which the Government may inspect and audit at any time. The Government may at any time require a check of the work performed and an audit of the Operator's records and accounts, by a certified public accountant or otherwise, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account and statement of work performed to accompany his final report.

ARTICLE 6. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

(For instance: The percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales, or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be the gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

ARTICLE 7. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 8. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if, in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified.

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Defender Mining Company
(Operator)

By Roy Pratt
Attorney in Fact

By W. H. King
Executive Officer, DMEA
Field Team, Region IV

I, _____, certify that I am the _____ secretary of the corporation named as Operator herein; that _____, who signed this contract on behalf of the Operator, was then _____ of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Colorado, County of Custer, described as follows: 1/

Blue Bird uncontested mining claim recorded in Book 21, page 455, in the Custer County Recorder's office

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Defiance Mining Company, a partnership

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 1100.00, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 8th day of August, 1952.

J. J. Stoskik [Seal]

W. P. Kettle [Seal]

Willard A. Walker [Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

Repayment by Operator. (a) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

(b) As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(c) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(d) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Colorado, County of Custer, described as follows: 1/

Lefrder mentioned mining claim recorded in Book 2, page 34, in the Custer County Recorder's office

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Lefrder Mining Company, a partnership

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 150.00, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 8th day of August, 1952.

M. P. Belle [Seal]

Willard A. Walker [Seal]

[Seal]

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

Repayment by Operator. (a) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

(b) As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(c) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(d) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

EXHIBIT "A"

Description of the Work

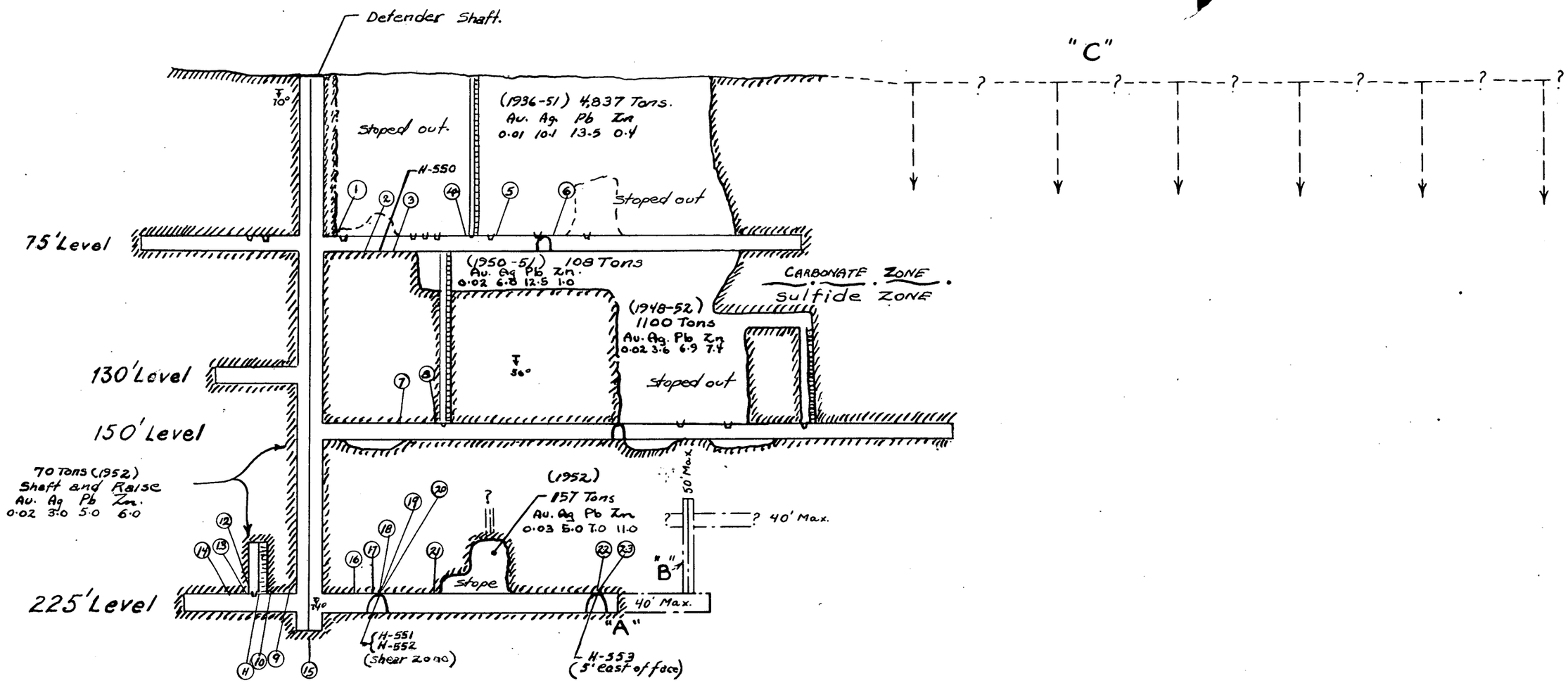
Extend the 225-foot level westerly along the vein a maximum distance of 80 feet. The starting point of the drift is shown at "A" on the attached maps, Figures 3 and 4.

After part or all of the drifting is completed, raises not to exceed a total of 50 feet at locations acceptable to the DMEA representative may be driven. The tentative location of a raise is shown at "B" on the attached Figures 3 and 4.

Part of the footage allocated to drifting may be driven on a sub-level from the raise as indicated at "B" on Figures 3 and 4.

Estimated Costs of the Project

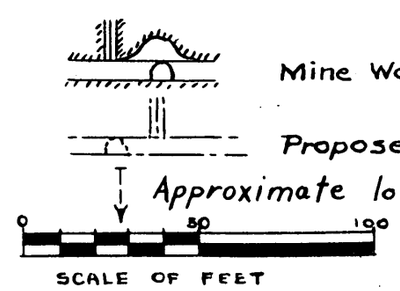
80 feet of drifting at $36.92 per foot	$2953.60
50 feet of raising at $36.92 per foot	1846.00
Total Cost of Project	$4799.60
Government's participation at 50%	$2399.80



SAMPLING DATA:-

		Oz/Ton		Percent		
No.	Width	Au	Ag	Pb	Zn.	
1	1.5'	–	15.2	8.7	4.0	75' Level.
2	0.5'	-	0.6	4.4	–	
3	2.0'	-	4.8	7.4	–	
4	0.3'	-	3.2	4.6	–	
5	1.3'	-	0.9	4.6	–	
6	1.0'	-	9.1	20.9	–	
7	0.3'	-	1.6	2.2	5.2	150' Level
8	0.3'	-	1.4	2.4	4.6	
9	0.5'	-	1.9	4.7	9.2	
10	1.9'	-	2.8	7.1	6.4	
11	1.7'	-	2.6	10.3	16.6	
12	0.9'	-	1.4	1.6	4.8	
13	0.3'	-	5.9	6.6	6.7	225' Level
14	0.25	-	2.6	6.5	8.0	
15	2.0'	-	2.4	4.6	10.3	
16	1.5'	-	0.9	4.6	3.5	
17	1.5'	-	1.4	1.6	2.8	
18	0.6'	-	1.2	1.4	6.0	In X.C. North
19	0.7'	-	1.1	1.8	5.2	
20	0.6'	-	1.1	1.8	5.2	
21	4.0'	-	6.0	13.8	28.0	stope.
22	0.2'	-	4.6	12.0	27.4	stringers in X C N.
23	0.2'	-	14.4	51.2	11.9	
H-550	0.8'	-	3.1	1.55	6.6	Bureau of Mines samples
H-551	0.7'	-	0.8	0.6	1.3	
H-552	1.5'	-	0.8	0.6	1.7	
H-553	0.9'	-	0.5	2.65	3.2	

Sos. 1-23 incl. by Defender Mining Co.



COLORADO BRANCH - MINING DIVISION - REGION IV

BUREAU OF MINES

FIG.3-DIP SECTION LOOKING SOUTH, DEFENDER MINE, DEFENDER MINING CO., CUSTER COUNTY, COLORADO · DMEA-2517

POWER OF ATTORNEY

TO WHOM IT MAY CONCERN:

We, W. L. Stephenson, W. L. Stephenson, Jr., R. S. Baker of Garfield County, Oklahoma, E. F. Stacy, W. H. Cody, and Garrett Cody of Custer County, Colorado, (together with Roy O. Pratt (of Garfield County, Oklahoma) are sole partners doing business under the partnership name of "The Defender Mining Company", and reposing special trust and confidence in said Roy O. Pratt, have made, constituted and appointed and by these presents do make, constitute and appoint him our true and lawful attorney for us and in our name, place or stead, and for our sole use and benefit:

To execute all contracts, agreements or other written documents, supplements and amendments thereto with all bureaus, departments or agencies of the United States government involving the conduct and operation of all of the business activities and operations now carried on or to be carried on in the future by said partnership, The Defender Mining Company;

To carry on, manage and superintend and control all of the business activities of said mining company as our attorney shall see fit, empowering him to execute, acknowledge and deliver in usual and customary form conveyances, other instruments in writing with respect to said business, and to execute, acknowledge and deliver agreements, contracts, mortgages, leases, and assignments of real or personal property owned by said company or with respect to which said company has any right, title or interest whatsoever;

To receive payments of money due us or the said company, and to draw out any moneys or deposit with any bank from time to time, and to apply the same for any purpose, or from time to time to invest and reinvest the same at the discretion of our said attorney, and from time to time to sell, vary and dispose of any such investments;

To demand, sue for, compromise, and receive all debts, moneys, securities for money, goods, chattels, or other personal property to which we or the said company are now or may hereafter may become entitled or which is now or may become due, owing or payable to us or to said company from any person or persons whomsoever, and in our name or in the name of said company to give effectual receipts and discharges for the same;

To endorse or negotiate any check, draft, order, promissory note or other negotiable paper payable to us or to the said company and to receive the proceeds therefrom;

To negotiate, prepare, sign our name to, or the name of said company, and file all reports, returns, forms, contracts, agreements required by any city, state, or federal agency, board or department either for taxes or any other purpose;

To act generally as our agent and attorney with respect to all of the matters described above to the end that the property may be properly managed and operated in any way our attorney may see fit without requiring any further act on our part, and no persons or entities dealing with our said attorney shall be under any obligation to see to the application of any money or property delivered to our attorney or to inquire as to the authority for any action taken by our attorney in reference to any of the above matters;

Hereby giving and granting unto our said attorney full power and authority to do, and perform all and every act and thing whatsoever requisite and necessary to be done in and about the premises, as fully to all intents and purposes as we could do if personally present, it being expressly understood that our attorney shall have the broadest general powers to perform any act incident to the premises, and the specific designation of powers shall not be construed to limit any general grant or grants of power to our attorney, hereby ratifying and confirming all that our said attorney shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 13 day of August, A. D. 1952.

W. L. Stephenson

W. L. Stephenson Jr.

R. L. Bell

E. F. Stacy

W. H. Cody

Garrett Cody

STATE OF OKLAHOMA)
) ss
COUNTY OF GARFIELD)

I, a notary public in and for said county, in the state aforesaid, do hereby certify that W. L. Stephenson, W. L. Stephenson, Jr., and R. S. Baker, who are personally known to me to be the persons whose names are subscribed to the foregoing Power of Attorney, appeared before me this day in person and acknowledged that they signed, sealed, and delivered the said instrument as their free and voluntary act and deed, for the uses and purposes therein set forth.

Given under my hand and notarial seal this 13 day of Aug, A.D. 1952.

My commission expires: Sept 9 - 1955

Rosalee Luck
Notary Public

STATE OF COLORADO)
) ss
COUNTY OF CUSTER)

I, a ~~notary public~~ County Clerk in and for said county, in the state aforesaid, do hereby certify that E. F. Stacy, W. H. Cody, and Garrett Cody, who are personally known to me to be the persons whose names are subscribed to the foregoing Power of Attorney, appeared before me this day in person and acknowledged that they signed, sealed, and delivered the said instrument as their free and voluntary act and deed, for the uses and purposes therein set forth.

Given under my hand and ~~notarial~~ official seal this 7 day of August, A.D. 1952.

~~My commission expires:~~

Stella Burgess
~~Notary Public~~ Co Clerk

April 25, 1952

Defense Minerals Exploration Administration
224 New Custom House Building
Denver 2, Colorado

Attention: Mr. Connors

Re: The Defender Mining Company
Silver Cliff, Colorado

Dear Mr. Connors:

I am returning corrected Forms MF-105 in connection with the application for assistance to the Defender Mining Company. We have attempted to give you a very detailed breakdown of the information you requested, which I hope will be acceptable.

The only other information as to cost, I might furnish, is our cost per foot of drift work which is as follows:

Timber	$ 1.00
Labor	11.50
Fuses	2.10
Caps	.05
Powder	1.55

A total of $16.20 per foot.

This is the direct cost and, as you can see, does not include indirect costs such as power, overhead, supplies, etc.

We will appreciate very much the rapid processing of this application and would like to be as much assistance to you as possible. Our foreman is Ed Stacy at Silver Cliff, Colorado who will always be available to assist your inspecting team in furnishing actual data at the mine and in any other way.

Thanking you very much for your past courtesies, I am,

Yours very truly,

ROP:mc

Roy O. Pratt

COPY

April 9, 1952

Defense Minerals Exploration Administration
224 New Custom House Building
Denver 2, Colorado

Re: The Defender Mining Company
Silver Cliff, Colorado

COPY

Gentlemen:

We hand you herewith four copies each of Form MF-100 and MF-103 together with exhibits. This is our application for aid for an exploration project pursuant to Mineral Order #5 under the Defense Production Act of 1950.

The exhibits contain a complete record of our exploration efforts in the Defender Mine located in Custer County, Colorado. This operation was closed down April 1, 1952 on the account of lack of capital. We are requesting assistance be approved in the amount of $25,000.00, of which we will use the smallest amount possible. We are providing our participation from the following sources:

1. Donated labor by three of the actual working partners of a part of their salary.

2. Donation of the labor of Roy O. Pratt in the capacity of managing, accounting and clerical duties.

3. From ore produced during exploration.

4. Credit allowable for machinery, equipment, buildings, etc., owned.

Closing down this exploration operation has been a blow to the people in the Hardscrabble Mining District. It has deprived six men of their employment as well as income to the community for supplies, trucking, etc. There is quite an exploration project being performed by a major mining company in this area, whose activities are within one-quarter mile of this property at the present time. I was informed, a few days ago, by reliable sources of the reopening of the Passiflora Mine for further exploration and development. This property is approximately one-half mile west of the Defender. The assay sheet and past record of this property prove it to be a very potential producer of critical metals essential to the defense program.

Defense Minerals Exploration Administration April 9, 1952

This property can be placed into immediate production at no additional cost since it has been in operation until April 1, 1952.

We sincerely request the benefit of your recommendations and suggestions also your assistance in resuming exploration operations on this property at the earliest possible date.

We will gladly furnish additional information required for the prompt processing of this application.

Yours very truly,

THE DEFENDER MINING COMPANY

Roy O Pratt

Roy O Pratt
Box 669
Enid, Oklahoma

COPY

OSCAR A. FISCHER
MINING AND METALLURGICAL ENGINEER

Suite 250 Equitable Bldg
Denver, Colo
August 18 1951

Mr. Roy Pratt
Defender Mining Co
Box 669
Enid, Okla

Dear Sir:

The following is a resume' given you verbally, of my brief examination of the Defender claim, Custer County, Colorado, about a mile from the town of Westcliffe.

The region in general has produced some high grade ore in both the granite and volcanic rock but chiefly from the veins in rhyolite. The ore in the Defender claim where seen occurs in the rhyolite. As a general rule it is oxidized for some distance below the surface. The chief values are lead, silver, zinc with some gold copper values. The gold values appear to be minor.

The workings were examined as well as the records of the assays and verbal recommendations made.

Under present conditions you are restricted to shipping ore which will stand the cost of either smelting or custom milling. The most favorable location to ship at present is Leadville, Colorado. Since a certain shipping grade must be maintained, ore of a lesser value but of a milling grade becomes uneconomical. You are therefore confronted with the eventual construction of a mill to treat this lower grade. Since a mill should not be erected until sufficient ore is developed, further development is necessary. This has already been recognized and development is proceeding in a satisfactory manner both in depth and laterally. The sinking of the shaft and the lateral development in a westerly direction on the upper levels should be continued.

Several suggestions were made by the undersigned based on your records to increase the reserves of milling ore outside of the present workings, namely, dump ore on the Defender and adjoining groups where your indications

Mr. Roy Pratt
Enid, Okla

show possible values. Assays and tonnages of course are the most important. Sorting, screening and jig tests can be made as outlined. All assay records with widths should be incorporated on the working map you have. This will give you a more accurate "picture" of the reserves of milling ore so that reserves will be known before a mill is contemplated.

If it appears that jigging of the dump material may be successful, further tests should be made. I would advise sending a sample to

Mr. Andrew Sweet
Metallurgical Dept
U. S. Bureau of Mines
Federal Center
Denver, Colo

for further test and check work on jigging. The above suggestions were given as a preparation step preliminary to a possible flotation step on material which would not be economical to mill, directly.

As stated above, I have no suggestions relative to your underground development, the men on the job are earnest and doing good work, and are familiar with the possibilities in the mine.

If I can be of any assistance, please advise.

Yours very truly,

Oscar A. Fischer

Oscar A. Fischer, E. M.

OAF-R

MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DME A-2517
Metal or Mineral
Date Received 5-5-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 5 1952

THE BRUNNER MINING COMPANY
Silver Cliff, Colorado
Mailing address:
Box 669
Enid, Oklahoma

Name and address of applicant

Date April 7, 1952

If you have already filed MF-100, give date filed with this application, type of assistance requested exploration assistance,

DMA Docket Number (if available)

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

CERTIFICATION

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

The Defender Mining Co. (Name of company) By Roy Pratt (Signature of authorized official)

April 7-1952 (Date) Partner (Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Sheet #1 THE DEFENDER MINING COMPANY Form MF-105

Silver Cliff, Colorado

Supplemental Data to Form MF-105

1. a. The real property involved in this exploration project is:

Blue Eagle Lode Mining Claim, Hardscrabble Mining District, Custer County, Colorado. Location certificate recorded in Book 81, Page 455.

The Defender Lode Mining Claim, Hardscrabble Mining District, Custer County, Colorado. Location certificate recorded in Book 81, Page 346.

The Major and Bismuth Lode Mining Claims, Survey #18474, Hardscrabble Mining District, Custer County, Colorado.

All located in Section 8, Township 22, Range 72, Custer County, Colorado. This property includes The Defender Mine.

b. Photostatic copies of leases and purchase options are attached.

c. Answered under (a) above.

2. a. This property produces lead, zinc and silver ore.

b. The reasons for expecting commercial ore bodies is illustrated on the assay map and is proven by past production of the property.

3. a. The proposed work is shown on the attached map. Drift West on the 150' level at #4 250' and raise to the 75' level. Drift West on the 225' level at #1 a distance of 500'. Drift Southwest on High Grade Streak at #3, 50'. Drift North on the 150' level at #2. Core drill the bottom of the shaft 150' with three holes. This work summarizes as follows:

950' of drift.
500' of raises.
450' of core drill.

COPY

3. a. (Continued)

A breakdown of our estimate of the cost is as follows:

Powder	$ 2,175.00
Labor	16,100.00
Fuse	2,940.00
Caps	70.00
Timber	1,400.00
Blower pipe	80.00
Water pipe	500.00
Air pipe	400.00
Rails	750.00
Assaying	300.00
Power	500.00
Accounting & Management	5,000.00
Repairs	600.00
Misc. Supplies (Steel, coal, carbide, oil, etc.)	650.00
Supt.	1,500.00
Total	30,765.00
450 ft. core drill	13,500.00
	44,265.00

b. We are prepared to start the project immediately because all machinery and equipment is in operating condition and the crews are standing by. Estimated time to complete, nine months.

4. Map is attached.

5.

Buildings & frame	$5,000.00
Compressor-Motor, belt, switches, tanks, etc.	5,000.00
Hoist - motor - switches	2,000.00
Cable	500.00
Water pump	400.00
Blower	300.00
1300 ft. rails	800.00
5 mine cars	500.00
1 Skip	100.00
2 Hoisting buckets	50.00
Shop equipment	500.00
Air pipe	75.00
Water pipe	75.00
Blower pipe	175.00
Timber on hand	300.00
2 Drifters	850.00

COPY

5. (Continued)

3 Stopers	$ 750.00
Misc.-Bolts, rail splices, insulated cable	100.00
235 ft. cribbed and timbered shaft	7,500.00
420 ft. drift necessary to proposed exploration	6,700.00
Total	$30,575.00

6. None

7. Same as #5.

8. Full operation of this project will be as follows:

Two crews totalling two drillers, four trammers, two top men, two hoist men, one foreman. The miners and hoist men draw $10.00 per day, the others $8.00 per day and the foreman $250.00 per month. The total of this estimated labor cost is listed in 3 (a) above.

9. None.

10. We are prepared to invest the amount necessary to pay our share of this project.

11. Photostatic copies of our operating statements for the past year are attached.

a. We have already invested approximately $50,000.00 in this project. The results of this exploration will determine how much can be invested in the future.

b. Yes.

COPY

Know all Men by these Presents, That J. J. Stroebelke

of the County of Custer and State of Colorado, are held and firmly bound unto

Roy W. Pratt

in the penal sum of One Thousand and no/100 DOLLARS, lawful money of the United States, for the payment of which sum well and truly to be made we hereby bind ourselves, our heirs, administrators and assigns, firmly by these presents.

Witness my hand and seal this 6th day of October, A. D. 19 50.

The Conditions of the Above Obligation are Such, That, whereas, the above bounden, party of the first part, on the day of the date hereof, have agreed to sell to the said party of the second part the following described property, to-wit: an undivided one half interest in and to the Olive Eagle Lode Mining Claim

the locations and bounds of said property being marked and described more particularly in the Location Certificate or Patent thereof recorded in Book 91 on Page 455 of the Records of Custer County Colorado

said property being situated in Hardscrabble Mining District, in the County of Custer

and State of Colorado, for the sum of One Thousand DOLLARS,

which said sum of money is to be paid to the said party

of the first part, or deposited to his credit in the First National Bank of Canon City, Colo.

in the manner following, to-wit: On or before the October ~~day of~~ 6, 19 55, the sum of One Thousand and no/100

And the said party of the first part shall, within 30 days after demand in writing ~~days from the date hereof~~, make, execute and acknowledge unto the said party of the second part, a good and sufficient deed of all the foregoing property, ~~showing a clear and perfect title free from all incumbrance (except as against the United States)~~, which said deed shall be deposited

~~within~~ ~~days from the date hereof,~~ in the said First National Bank of Canon City

in escrow, to be delivered to the said party of the second part, or his assigns, on the payment in full of the aforesaid purchase money.

The Further Conditions of this Bond Are, FIRST—The said party of the second part, or his assigns, shall be placed in full and peaceable possession of said property, to mine, remove, and sell ore therefrom.

SECOND—That the said party of the second part, or his assigns, shall, ~~before the~~ perform at ~~day of~~ least five eight hour shifts each calendar month.

~~, Ut, expend the sum of DOLLARS,~~ in the development and improvement of said property.

THIRD—That the said party of the second part, or his assigns, shall, during the continuance of this Bond, deposit in the said First National Bank of Canon City, Colo to the credit of said party of the first part 1% of net smelter or Mill returns (not defined as freight and treatment charges deducted) of the proceeds of all ore taken from said property, ~~after deducting all the expenses incurred. (And said sum so deposited, shall be a part payment of the said purchase money.~~ but in no case shall said royalty be less than ~~FOURTH—~~ $1.00 for each dry ton taken from said premises; that said party of the second part or his assigns shall comply with the Mining Laws of Colo., and carry all necessary Compensation Insurance; that said second party or assigns will post notices at the main workings on the premises, stating that this Property is under lease and the said first parties will not be held responsible for any debts, damages or other liabilities.

Now, if the said party of the second part, or his assigns shall fail to comply with the aforesaid conditions, or any of them, and if the said party of the first part shall well and faithfully perform the covenants herein, then this obligation to be null and void, otherwise to remain in full force and effect.

Signed, Sealed and Delivered in Presence of

J. J. Stroebelke Seal

Seal

Seal

STATE OF COLORADO,
County of Custer } ss.

I, Stella Byrne, County Clerk in and for said County, in the State aforesaid, do hereby certify that J. T. Stroehlke personally known to me to be the person whose name is subscribed to the foregoing Bond and Lease, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said instrument of writing as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and official seal, this 6th day of October in the year of our Lord one thousand nine hundred and fifty

My Commission expires ..... /19.....

Stella Byrne
County Clerk, Custer Co., Colo.

COMPARED

No. 82469

TITLE BOND
AND
Lease for Mining Property

TO

STATE OF COLORADO,
County of Custer } ss.

I hereby certify that this instrument was filed for record in my office at 10 o'clock A M., Oct 6 1950 and duly recorded in Book 65 Page No. 59

Stella Byrne
CLERK AND RECORDER.

By .....
DEPUTY.

FEES, $ 1.50

WHEN RECORDED RETURN TO

Box 669 Enid Okla

OUT WEST PRTG. & STATY. CO., COLORADO SPRINGS D3563

Filed for record the_____day of_____, A. D. 19____, at_____o'clock____M. _____RECORDER.

Reception No._____ By_____DEPUTY.

Know All Men by These Presents, That W.J.Kettle by Willard A.Walker, his Attorney in fact and Willard A Walker of in the County of Custer and State of Colorado, of the first part, for and in consideration of One Dollar and other valuable considerations ~~DOLLARS~~, to them in hand paid, at or before the ensealing or delivery of these presents, by Roy O Pratt of Enid Okla of the second part, the receipt whereof is hereby acknowledged, have bargained and sold, and by these presents do grant and convey unto the said party of the second part, his executors, administrators and assigns the following goods and chattels:

1 hoist with cable,
1 hoist motor,with switch,and control box
1 Compressor,
1 Compressor motor,
1 leather belt for compressor
2 receiver tanks
1 I R electric pump with accessories,
1 I R Stoper,
1 I R Drifter with shell
1 drilling column
1 drilling bar
1 water tank,
1 motor and grinder,
1 blower,
1 lot air pipe (about 300')
1 electric motor for blower,
1 lot rails,
1 lot rail splices and bolts
1 rail bender,
4 mine cars
1 skip,
1 shive wheel
1 lot insulated cable

belonging to them and now in their possession at the Defender mine to have and to hold the same unto the said party of the second part, his executors, administrators and assigns forever. And the said parties of the first part do, for themselves, their heirs, executors and administrators, covenant and agree to and with the said party of the second part, his executors, administrators and assigns, to **Warrant and Defend** the sale of said property, goods and chattels, hereby made, unto the said party of the second part, his executors, administrators and assigns, against all and every person or persons whomsoever.

In Witness Whereof, We have hereunto set our hands and seals this 6th day of October, A. D. 19 50

Signed, Sealed and Delivered in Presence of

W. J. Kettle (Seal)
By Willard A. Walker Attorney in Fact
Willard A. Walker (Seal)

STATE OF COLORADO,
County of Custer } ss.

This Bill of Sale was acknowledged before me this 6th day of October, A. D. 19 50 by* Willard A Walker, Attorney in fact for W.J.Kettle and Willard A.Walker ~~for~~

My ~~commission expires~~ ~~, A. D. 19~~

Stella Byrne
County Clerk. ~~Notary Public.~~

*If given by individuals, insert name of Seller, and erase "for"; if by partnership or corporation, insert name of person acknowledging, and in case of corporation, name of official position as "President" and after "for" name of partnership or corporation.

INDEXED
COMPARED

No. 82471

Bill of Sale of Personal Property

TO

STATE OF COLORADO,
County of Custer

This instrument was filed for record at 10:10 o'clock A.M., Oct 6 1950 and duly recorded in Book 25 Page No. 298

Stella Rynne
Recorder.

By
Deputy.

FEES, $ 1.20 Pd.

WHEN RECORDED RETURN TO

OUT WEST PRTG. & STATY. CO., COLORADO SPRINGS H8377

Know all Men by these Presents, That O.D. Campbell and Mary Campbell, his wife of the County of Bradley and State of ~~Colorado~~ Arkansas, are held and firmly bound unto Roy O. Pratt, E.F. Stacy, W.H. Cody, Garrett Cody, W.L. Stephenson, R.S. Baker, and W.L. Stephenson Jr. doing business as The Defender Mining Company in the penal sum of One Thousand and no/100 Dollars, lawful money of the United States, for the payment of which sum well and truly to be made we hereby bind ourselves, our heirs, administrators and assigns, firmly by these presents.

Witness our hand and seal this 8th. day of August, A. D. 19 51

The Conditions of the Above Obligation are Such, That, whereas, the above bounden, party of the first part, on the day of the date hereof, have agreed to sell to the said parties of the second part the following described property, to-wit:

An undivided one half interest in and to The Major and Bismuth Lode Mining Claims Survey number 18474 situated in Custer County, Colorado

the locations and bounds of said property being marked and described more particularly in the Location Certificate or Patent thereof recorded in Book ..... on Page ..... of the Records of Custer County, said property being situated in Hardscrabble Mining District, in the County of Custer and State of Colorado, for the sum of One Thousand and no/100 ($1000.00) Dollars, which said sum of money is to be paid to the said party of the first part, or deposited to his credit in the Central National Bank of Enid, Oklahoma in the manner following, to-wit: On or before the 8th. day of August, 19 56, the sum of

. . . . One Thousand and no/100 Dollars . . . .

And the said party of the first part shall, within 10 days from the date ~~hereof~~ thereof, make, execute and acknowledge unto the said parties of the second part, a good and sufficient deed of all the foregoing property, showing a ~~good and perfect~~ title free from all incumbrance (except as against the United States), which said deed shall be deposited within 10 days from the date ~~hereof~~ thereof in the said Central National Bank of Enid, Oklahoma as may be vested in me on this date in escrow, to be delivered to the said parties of the second part, or their assigns, on the payment in full of the aforesaid purchase money.

The Further Conditions of this Bond Are, First—The said parties of the second part, or their assigns, shall be placed in full and peaceable possession of said property, to mine, remove, and sell ore therefrom.

Second—That the said parties of the second part, or their assigns, shall, before the ..... day of ....., 19..., expend the sum of ..... Dollars, in the development and improvement of said property.

Third—That the said party of the second part, or assigns, shall, during the continuance of this Bond, deposit in the said Warren ~~National~~ Bank of Warren, Ark to the credit of said party or directly to him or his heirs of the first part 10% of net smelter or mill returns (Net defined as freight, treatment, penalties and all charges deducted except mining costs) the proceeds of all ore taken from said property, after deducting all the expenses incurred. ~~And said sum so deposited shall be a part payment of the said purchase money.~~

Fourth— The said second parties or his assigns shall comply with the mining laws of Colorado, and carry all necessary Compensation Insurance; they will also post notices at the main workings on the premises stating that this property is under lease and the first party will not be held responsible for any debts, damages, or other liabilities. This lease is not to be assigned without written consent of first party.

No specified amount of work is required to be preformed on these claims but it is the mutual understanding of all parties concerned that they will be worked and developed as rapidly as the showings on them justifies, in the opinion of second parties, and to the best interest of all parties. This development to be by second parties or by approved sub lessees on all or part of the property whichever is to the best interest of the parties hereto.

Both claims under this lease are to be considered one property

First party shall have the right to inspect the property and all workings at any reasonable time. Now, if the said parties of the second part, or their assigns shall fail to comply with the aforesaid conditions, or any of them, and if the said party of the first part shall well and faithfully perform the covenants herein, then this obligation to be null and void, otherwise to remain in full force and effect.

Signed, Sealed and Delivered in Presence of

Roy O. Pratt (Seal)
E.F. Stacy W.H. Cody (Seal)
Garrett Cody (Seal)
W.L. Stephenson (Seal)
W.L. Stephenson Jr. (Seal)
R.S. Baker
O.D. Campbell
Mary Campbell

STATE OF COLORADO,
County of Custer } ss.

I, Inis B. Falkenberg, Dep. Co. Clk in and for said County, in the State aforesaid, do hereby certify that E.F. Stacy, W.H. Cody, and Garrett Cody

personally known to me to be the persons whose names are subscribed to the foregoing Bond and Lease, appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument of writing as their free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and official seal, this 14th day of September in the year of our Lord one thousand nine hundred and fifty-one

My Commission expires 1/19

Inis B. Falkenberg
Deputy County Clerk, Custer Co., Colo.

STATE OF OKLAHOMA SS
COUNTY OF GARFIELD
Before me, the undersigned, a Notary Public in and for said County and State on this 16th. day of August 1951, personally appeared Roy O. Pratt, W.L. Stephenson, R.A. Baker, and W.L. Stephenson J to me known to be the identical persons who executed the within and foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein set forth.
Given under my hand and seal the day and year last above written
My commission expires December 27-1953

Maureen J. Clark
Notary Public

STATE OF ARKANSAS }
COUNTY OF BRADLEY } ss.

BE IT REMEMBERED, That on this day personally appeared, O. D. Campbell and Mary Campbell, before me, the undersigned Notary Public within and for the county and state aforesaid, duly commissioned, qualified and acting, and acknowledged that they had signed the foregoing instrument for the consideration and purpose therein stated and se forth; that both of said parties are personally well known to me as the persons named in the within instrument.
Witness my hand and seal this the 28th day of August 1951.

My Com. Exp. 3-8-54

INDEXED COMPARED

No. 5227

TITLE BOND
AND
Lease for Mining Property

TO

STATE OF COLORADO,
County of Custer } ss.

I hereby certify that this instrument was filed for record in my office at 4:30 o'clock P. M., Sept. 14 1951 and duly recorded in Book 121 Page No. 212

Stella Byrne
CLERK AND RECORDER.

By Inis B. Falkenberg
DEPUTY.

FEES, $4.00 Pd. 254 ack.

WHEN RECORDED RETURN TO
Roy O. Pratt
Basso Bldg., Enid, Okla

OUT WEST PRTG. & STATY. CO., COLORADO SPRINGS G5966

Know all Men by these Presents, That W. J. KETTLE and WILLARD A. WALKER

of the County of Custer and State of Colorado, are held and firmly bound unto

J. T. STROEHLKE

in the penal sum of Three Thousand and No/100 Dollars, lawful money of the United States, for the payment of which sum well and truly to be made we hereby bind ourselves, our heirs, administrators and assigns, firmly by these presents.

Witness our hand s and seals this 27th day of March, A. D. 19 50

The Conditions of the Above Obligation are Such, That, whereas, the above bounden, parties of the first part, on the day of the date hereof, have agreed to sell to the said party of the second part the following described property, to-wit:

the Defender Lode Mining Claim; and an undivided one-half interest in and to the Blue Eagle Lode Mining Claim;

the locations and bounds of said property being marked and described more particularly in the Location Certificate ~~or Patent thereof~~ recorded in Book 91 (91) on Page 346 (455) of the Records of Custer County Colorado

said property being situated in Hardscrabble Mining District, in the County of Custer

and State of Colorado, for the sum of Three Thousand and No/100 Dollars,

which said sum of money is to be paid to the said parties

of the first part, or deposited to their credit in the First National Bank of Canon City

in the manner following, to-wit: On or before the 27th day of March, 19 55, the sum of Three Thousand and No/100 Dollars

And the said parties of the first part shall, within thirty days ~~/ days from the date hereof~~ after demand is made in writing make, execute and acknowledge unto the said party of the second part, a good and sufficient Mining deed of all the foregoing property, ~~showing a clear and perfect title free from all incumbrance (except as against the United States)~~, which said deed shall be deposited

~~within days from the date hereof~~ in the said First National Bank of Canon City

in escrow, to be delivered to the said party of the second part, or his assigns, on the payment in full of the aforesaid purchase money.

The Further Conditions of this Bond Are, First—The said party of the second part, or his assigns, shall be placed in full and peaceable possession of said property, to mine, remove, and sell ore therefrom.

Second—That the said party of the second part, or his assigns, shall, ~~before the~~ perform at ~~days~~ least ten eight hour shifts each calendar month, ~~, or, expend the sum of~~ Dollars, in the development and improvement of said property, and cause to be recorded in the office of the County Clerk and Recorder of Custer County, Colorado, proper Affidavits of Labor sufficient to hold said Claims.

Third—That the said party of the second part, or his assigns, shall, during the continuance of this Bond, deposit in the said First National Bank of Canon City, Colo. to the credit of said parties of the first part 10% of Net smelter or Mill Returns. (Net defined As Freight and Treatment charges deducted.) of the proceeds of all ore taken from said property, ~~after deducting all the expenses incurred. And said sum so deposited shall be a part payment of the said purchase money.~~ but in no case shall said royalty be less than $1.00 ~~Fourth~~ for each dry ton taken from said premises; that said party of the second part or his assigns shall comply with the Mining Laws of Colo., and carry all necessary Compensation Insurance that said second party or assigns will post notices at the main workings on the premises, stating that this Property is under lease and the said first parties will not be held responsible for any debts, damages or other liabilities.

Now, if the said party of the second part, or his assigns shall fail to comply with the aforesaid conditions, or any of them, and if the said parties of the first part shall well and faithfully perform the covenants herein, then this obligation to be null and void, otherwise to remain in full force and effect.

Signed, Sealed and Delivered in Presence of

Willard A. Walker (Seal)

W. J. Kettle (Seal)

(Seal)

STATE OF COLORADO,
County of Custer } ss.

I, Stella Byrne, County Clerk in and for said County, in the State aforesaid, do hereby certify that Willard A. Walker personally known to me to be the person whose name is subscribed to the foregoing Bond and Lease, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said instrument of writing as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and official seal, this 27th day of March in the year of our Lord one thousand nine hundred and fifty

My Commission expires ////////////////

Stella Byrne
County Clerk, Custer Co., Colo.

State of Colorado }
County of Fremont } ss.

The foregoing instrument was acknowledged before me this 30th day of March 1950, by W. J. KETTLE.

Witness my hand and notarial seal.

My commission expires July 1, 1951

Notary Public.

COMPARED
INDEXED

No. 82470

TITLE BOND
AND
Lease for Mining Property

TO

STATE OF COLORADO,
County of Custer } ss.

I hereby certify that this instrument was filed for record in my office at 10:05 o'clock A.M., Oct 6 1950

and duly recorded in Book 65

Page No. 60

Stella Byrne
CLERK AND RECORDER.

By
DEPUTY.

FEES, $ Pd.

WHEN RECORDED RETURN TO

OUT WEST PRTG. & STATY. CO., COLORADO SPRINGS G5966

State of Colorado } ss.
County of Custer }
I hereby certify that this instrument was filed for record in my office at 10:05 o'clock A.M. Oct 6 1950
Roy O Pratt
Witness my hand and seal the 6th day of Oct 1950
J. J. Chatten
Notary Public

Form MF-100
(May 1951)

DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2517

Date received 5-5-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 5 1952

THE DEFENDER MINING COMPANY
Silver Cliff, Colorado

Mailing Address:
Bx 669 Enid, Oklahoma

Name and address of applicant

Date April 7, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. yes by Defender Mining Company
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee. Propose to purchase property before expiration of lease
   - ☐ Contractor.

✓ 5. Number of years in production not known exactly but over 10 years
   If not in production or operation, estimated date when production will begin _____

✓ 6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.

✓ 7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Roy O. Pratt ¼ interest Bx 669, Enid, Oklahoma		none	25,000			none	
W.L. Stephenson 1/8 interest Central National Bank Enid, Okla		"	150,000			"	
W.L. Stephenson Jr. 1/8 interest Central National Bank, Enid, Okla		"	50,000			"	
R.S. Baker ¼ interest Bass Bldg., Enid, Oklahoma		"	200,000			"	
Ed Stacy 1/12 interest Silver Cliff, Colo		"	small			"	
W.H. Cody 1/12 interest Silver Cliff, Colo		"	"			"	
Garrett Cody 1/12 interest Silver Cliff, Colo		"	"			"	
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	~~1950 XXXX~~ Total (b)	1951 1949 Total (c)	1952 1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)	Lead, zinc, silver ore	29 dry T	264 dry T	110 dry T	35 dry T

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. yes, due to opening up more shipping ore with this exploration program

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

THE DEFENDER MINING COMPANY
Silver Cliff, Colorado

Form MF-100 GENERAL TECHNICAL DATA

1. Materials produced:

   a. The chief mine products produced are lead, zinc and silver ore.
   b. There are no byproducts.

2. Names and type:

   The name of the mine is The Defender. It is a shaft mine with wet drilling.

   a. 225 linear feet of shaft.
   b. 1050 linear feet of drifts and crosscuts.
      (Map attached)

   The mine is not flooded and there is no water difficulty. It does provide adequate water for drilling.

3. The property is located one mile north of Silver Cliff, Colorado. The closest shipping point is Texas Creek about 40 miles distant and Leadville which is 100 miles.

   b. It is located in the Hardscrabble mining district.
   c. Section 8, Township 22, Range 72.
   d. Custer County, Colorado.

4. The property was in operation until ~~March~~ April 1, 1952 when it was shut down for lack of capital. Provision has been made to protect the property and keep it in operating condition to eliminate reconditioning expense when reopened. Exploration work has been carried on for the past 18 months by The Defender Mining Company.
   b. We are operating it as lessee but expect to purchase the property before the expiration of the lease.

5. Number of years in production:

   This mine has been in operation, more or less, for the past twenty years and has been in fairly steady operation for the past six or seven years.

6. a. The Defender Mining Company was originated in October, 1950. Previous experience to that was three years operation under another name at the Cloverdale Mine, Hillside, Colorado.

   b. Ed Stacey, W. H. Cody and Garrett Cody, who are in direct charge of the operations, have all spent their entire lives as actual miners and operators.

THE DEFENDER MINING COMPANY
Silver Cliff, Colorado

7. History:

a. The attached maps show clearly the previous record of the property. The production is estimated to have exceeded $100,000.00. The reasons for the suspension of operations by the former owners and operators was due to the low price of metals, their age and the deaths of two of them.

b. The known production of neighboring properties is estimated as follows:

The Geiser Mine, Two and one-half million dollars.
Passiflora Mine, $150,000.00.
J. Gould, $100,000.00.
Lady Franklin, $300,000.00.
King of Carbonates, $200,000.00.
Bull Demingo, (not known).

c. Letter from Oscar A. Fischer, Mining and Metallurgical Engineer, is attached.

8-11. Completed on Form MF-100.

12. Ore or mineral reserves:

a. The production in the region is from granite and volcanic rock but chiefly from the veins in rhyolite. There are streaks of high grade lead, zinc, and silver ore throughout the entire mine. There are large quantities of mill ore exposed. Some portions of the mine has produced lead and silver ore while other parts produce lead, zinc and silver.

b. Letter from Oscar A. Fischer, Mining and Metallurgical Engineer, is attached.

1. Assay map attached, however, large quantities of ore was shipped from this mine by former operators and we do not have their assays or shipping returns. The production record of this property is a part of the recorded production record of Custer County.

2. We have not measured the ore reserves but have estimated that we have 20,000 tons of mill ore in sight in the mine and 10,000 tons in the dump.

THE DEFENDER MINING COMPANY
Silver Cliff, Colorado

13. Access Roads:

The mine is served by a good gravel road maintained by the county. There are good gravel and paved roads to Texas Creek and Leadville which are shipping and processing points, also to Pueblo. The distance is one mile to Silver Cliff and Westcliffe, 40 miles to Texas Creek, 100 miles to Leadville and 65 miles to Pueblo. Location map is attached.

14. Water Supply:

The town of Silver Cliff has a large water supply which is more than adequate for mining and milling operations.

15. Power:

Power is supplied by the Southern Colorado Power Company. There is a base rate on the various motors after which the charge is a sliding scale ranging from .015 to .0023476 per KWH. We average using about 2500 KWH per month and our bills average $65.00 per month.

16. Labor:

We have steadily used six men with occasional extra help. One hoist man, three miners, two muckers.

17. Equipment and Facilities:

Buildings: Power house including shop and office, hoisting frame, ore storage and sorting building, powder store house. The major equipment now in use is: Hoist with ample cable, motor, control boxes, etc., air compressor completely equipped with motor, tanks, etc., electric pump, air blower, mine cars, skip, rails, air pipe, complete shop equipment and operating equipment such as stopers, drifters, etc. All equipment and buildings are in excellent condition as they have been in steady use.

18. There are no particular conditions affecting our operations except that we thought we could finance this operation with our own funds until we had explored enough to uncover sufficient shipping ore to put it on a profitable basis.

Working conditions are excellent due to location of the property. The men live at home in Silver Cliff, one mile distant where all supplies are available. Location and good roads make it easy to operate the year around.

(*b*) If deposit is other than [redacted]:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

The Defender Mining Co
(Name of company)

By Roy A Craft
(Signature of authorized official)

April 7-1952
(Date)

Partner
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

DEFENDER MINING COMPANY

Operating Statement

October 9, 1950 - December 31, 1950

INCOME:

Capital Investment:

Roy O. Pratt	$ 3,300.00
Ed Stacy - Labor	310.00
Garrett Cody - Labor	310.00
W. H. Cody - Labor	315.00
Total Income	$ 4,235.00

EXPENSE:

Machinery & Equipment	$ 2,148.30	
Labor	380.50	
Supplies, Electricity & Misc.	55.95	
Repairs	36.57	
Assays	8.75	
Insurance	14.00	
Travel	200.00	
Legal Expense	20.00	
Capital Investment - Labor	935.00	
Total Expense	$ 3,799.07	
Balance in Bank-December 31, 1950	435.93	
	$4,235.00	$4,235.00

DEFENDER MINING COMPANY

Operating Statement

January 1, 1952 -- March 31, 1952

INCOME:

Bank Balance - January 1, 1952	$ 8.71
Income from Car Shipments	2,170.00
Capital Investment:	
Roy O. Pratt	1,083.33
Romayne S. Baker	1,083.34
W. L. Stephenson	1,083.33
Ed Stacy, Labor	170.00
Garrett Cody, Labor	140.00
W. H. Cody, Labor	100.00
Total Income	$5,838.71

EXPENSE:

Machinery & Equipment	$ 304.89	
Labor	3,899.62	
Capital Investment, Labor	410.00	
Supplies, Electricity & Misc	1,203.68	
Repairs	190.09	
Assays	50.50	
Insurance	270.93	
Travel	100.00	
Claims, Tax Certificates, Royalty Pmts	112.39	
Freight	5.85	
Total Expense	$6,547.95	
Bank Balance March 31, 1952		$ - 709.24
	$6,547.95	$ 6,547.95

DEFENDER MINING COMPANY

Operating Statement

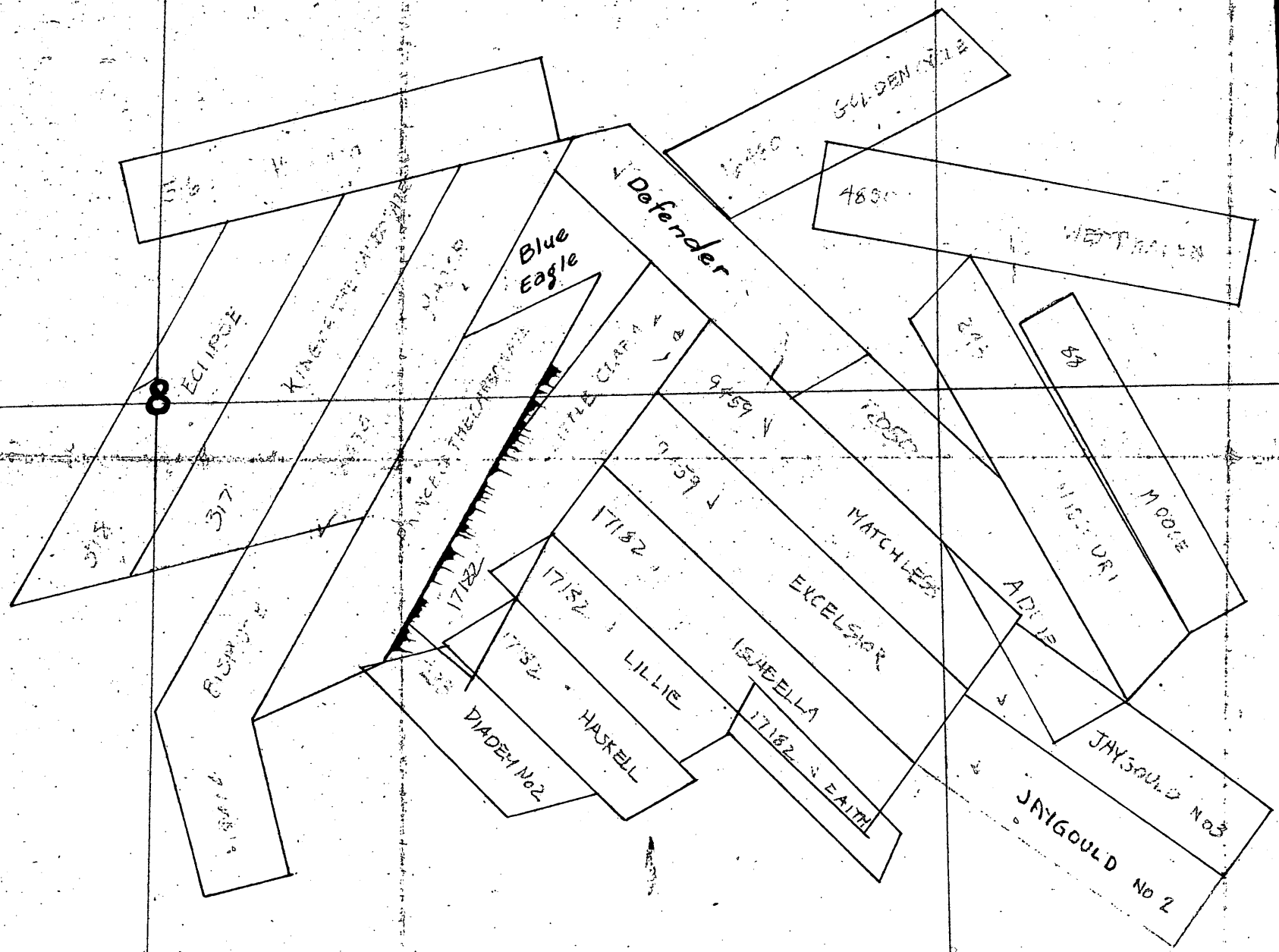
January 1, 1951 - December 31, 1951

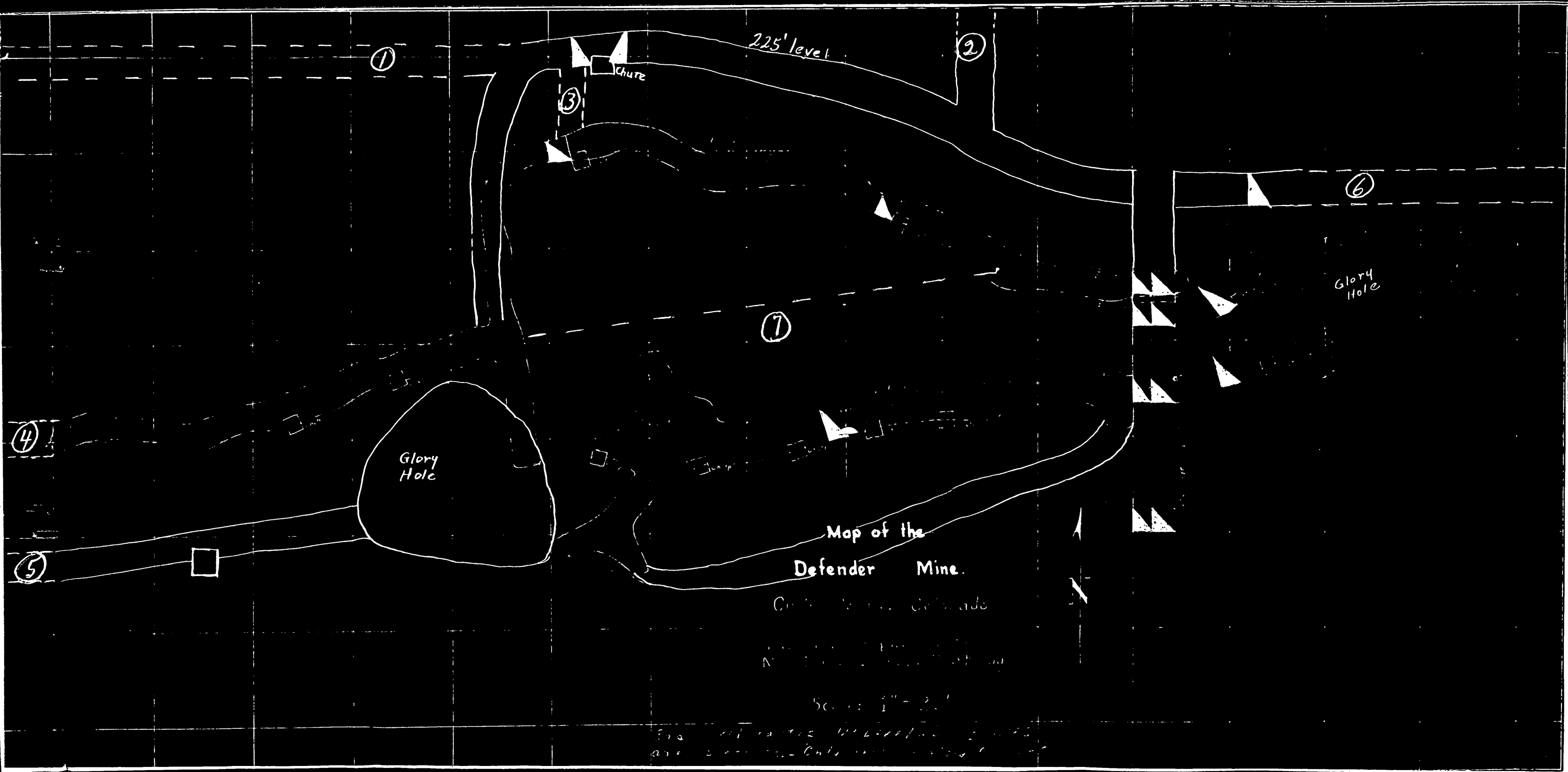
INCOME:

Bank Balance - January 1, 1951	$ 435.93
Income from Car Shipments	1,985.39
Capital Investment:	
Roy O. Pratt	1,250.00
Romayne S. Baker	5,000.00
W. L. Stephenson	5,000.00
Ed Stacy - Labor	1,560.00
Garrett Cody - Labor	1,535.00
W. H. Cody - Labor	1,535.00
Total Income	$ 18,301.32

EXPENSE:

Machinery & Equipment	$ 125.48	
Labor	8,352.85	
Capital Investment..Labor	4,630.00	
Supplies, Electricity & Misc	2,890.05	
Repairs	109.80	
Assays	386.25	
Insurance	1,009.32	
Travel	342.30	
Legal Expense	10.00	
Claims, Tax Certificates,	84.24	
Freight	352.42	
Total Expense	$ 18,292.71	
Balance in Bank - Dec. 31, 1951	8.61	
	$ 18,301.32	$18,301.32


8
ECLIPSE
317
Blue Eagle
Defender
9459
17182
LILLIE
HASKELL
DIADEM No2
ISABELLA
EXCELSIOR
MATCHLESS
MISSOURI
MOOSE
ADLIS
JAYGOULD No 2
JAYGOULD No3


225' level
Chute
Glory Hole
Glory Hole
Map of the
Defender Mine.

Form 7
(-56)

OFFICIAL FILE COPY

Date	Surname	Code

PROJECT SUMMARY REPORT

By: J. W. Alt July 15, 1958

1. Docket No. DMEA-2517 (Lead-Zinc)
Contract No. Idm-E413
Property: Defender Mine
Custer County, Colorado

Operator: Defender Mining Company
Silver Cliff, Colorado

Operator's Property Rights: Lessee
Lease dated October 6, 1950
Lease dated August 8, 1951
Lease dated March 27, 1950
Owner's consent to Lien dated August 8, 1952
Owner's consent to Lien dated August 8, 1957

2. Contract dated September 10, 1952. To complete - 15 months.

Work Authorized (Short Form Contract)

Extend the 225-foot level westerly along the vein a maximum distance of 80 feet.
After all or part of the drifting is completed, raise not to exceed a total of 50 feet.

Estimated Cost of the Project

80 feet of drifting @ $36.92/ft.	$2,953.60
50 feet of raising @ $36.92/ft.	1,846.00
Total Estimated Cost of the Project	$4,799.60
Government Participation @ 50%	$2,399.80

Amendments

None.

Work Completed

44 feet of drifting on the 225-foot level @ $36.92/ft.	$1,624.48
50 feet of raising above the 225-foot level @ $36.92/ft.	1,846.00
36 feet of drifting on a sublevel 42 feet above the 225-foot level @ $36.92/ft.	1,329.12
Total Cost of the Project	$4,799.60

Work on the project was started on November 8, 1952.
The work was completed on January 22, 1953.

3. Report of Review dated April 28, 1953.

Total Cost as billed by Contractor	$4,799.60
Exceptions	0.00
Total Accepted Cost	$4,799.60
Government Participation @ 50%	$2,399.80

Operator's final report dated March 30, 1953.
Field Team final report dated August 25, 1953.

4. Certification date: April 17, 1953.

The discovery may be described as lead-zinc ores containing auxiliary amounts of precious metals and occurring in a vein exposed so far on two levels, the 120 and the 225. The grade of the ore is estimated to be from 8 to 10 percent lead and from 5 to 6 percent zinc. Indicated tonnage from work is stated to be 600.

5. Comments

The downward extension of the ore shoot mined above the 150-foot level of the Defender Mine has been located by exploration completed under the terms of the contract, and a small tonnage of low grade lead-zinc ore has been developed. Inferred ore reserves are about 750 tons, with an estimated metal content of about 6% lead, 4% zinc, and 1 oz. of silver per ton. It is not possible to mine this material at a profit under present economic conditions, but with higher metal prices a small tonnage of ore could be produced from the Defender Mine.

Government participation in further exploration of this property is not warranted. The chances for significant additions to the nation's lead-zinc ore reserves are poor.

J. W. Alt

JWAlt/ss 7/14/58
Copy to: Docket
Mr. Johnson
Chron.

☒ Audited

☒ Certified

RK ANALYSIS SHEET - DMEA PROJE

Analysis as of 12/13/54.
Incl. Voucher for January 1953

☐ Actual Cost

☒ Agreed Unit Costs

Name Defender Mining Co.

State Colorado

Commodity Lead-Zinc

Docket No. DMEA-2517

Idm-E No. 413

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	80'	$2,953.60	80'	$2,953.60	$2,953.60
Raising	50'	1,846.00	50'	1,846.00	1,846.00
Shafts					
Winzes					
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		$4,799.60		$4,799.60	$4,799.60

Prepared by [illegible]

71626

OFFICIAL FILE COPY

Date	Surname	Code
	Swanson	500
11/9	Talbot	800
	Selby	120
11/9	Johnson	110
"	Boulware	100
		220

NOV 9 1962

Mr. J. T. Streehlke
Silver Cliff
Colorado

Re: DMEA-2517 (Lead-Zinc)
Defender Mining Company
Blue Eagle Claim
Custer County, Colorado
Contract Idm-EA13

Dear Mr. Streehlke:

By the terms of the subject Exploration Project Contract and the certification of discovery or development dated April 17, 1953, all minerals mined or produced from September 10, 1952, to September 10, 1962, were subject to the Government's percentage royalty as set forth in the said contract.

This is in reference to the Consent to Lien signed by you on August 8, 1952.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract.

Sincerely yours,

(signed) FRANK E. JOHNSON

ACTING Director

WEGriswold/mm
11-9-62
cc: Director's Reading File
Region III (2)
CA&A Division
Docket
Code 500

Identical letter sent to Mr. Willard A. Walker and Mr. W. J. Kettle, both of Silver Cliff, Colorado

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Griswold	500
		800
		120
		110
		100
		220

To Walker
Kettle & Stroehlke

Defender Mining Company
P. O. Box 699
Enid, Oklahoma

Re: DMEA-2517 (Lead-Zinc)
Defender Mining Company
Blue Eagle Claim
Custer County, Colorado
Contract Idm-E413

Gentlemen:

By the terms of the subject Exploration Project Contract and the certification of discovery or development dated April 17, 1953, all minerals mined or produced from September 10, 1952, to September 10, 1962, were subject to the Government's percentage royalty as set forth in the said contract.

A

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract. [redacted]

Sincerely yours,

Director

WRGriswold/mm
01-8-62
cc: Director's Reading File
Region III (2)
CA&A Division
Docket
Code 500
Messrs. W. J. Kettle, W. A. Walker, and J. T. Stroehlke,
all of Silver Cliff, Colorado

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E
RECEIVED NOV 5 1962
DATE
11/5 800
120
Grunwald 500

November 2, 1962

Memorandum

To: George C. Selfridge, Chief
Division of Field Operations, OME
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: DMEA-2517 (Lead-Zinc)
Contract No. Idm-E413
Defender Mining Company, Partnership
(Blue Eagle claim)
Custer County, Colorado
EXPIRATION OF DMEA ROYALTY

The subject contract's royalty expiration date was September 10, 1962. Today I called Bud Franz, State Mine Inspector, who looked up his records on this property and he informed me that according to their records no work has been done on the property since 1955. His deputy inspector goes by the property at least once every two months and he reports no activity. I have no knowledge of any work being done on this property and I recommend that the files be closed on this contract without a field inspection. It is my belief that the $219.44 in royalty, which has been paid during the certification period, is the correct amount of royalty due the Government and that no ore or concentrates have been shipped from the property on which royalty has not been paid the Government.

This property is not along routes we usually take in our inspections of other properties and I doubt if the additional expense of making a final inspection is justified.

Hugh M. Connors

Hugh M. Connors

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
5/26	Alley	800
5/26	a	220
		500

MAY 26 1959

Memorandum

To: Mr. Donald T. Finch, OME Auditor

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: Docket No. DMEA-2517 (Lead-Zinc)
Defender Mining Company
Contract No. Idm-E413

Your Report of Royalty Review on the above-cited contract is acceptable and normal distribution is authorized.

AMAlley/ama
May 26, 1959

Copy to: Docket
Director's Reading File
CA & A Division

43683

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

RECEIVED
JUN 21 1956

June 18, 1956

Betty

224 New Customhouse
Denver 2, Colorado

Mr. Ray O. Pratt
Defender Mining Company
Box 699
Enid, Oklahoma

Re: Royalty payments, Docket DMEA 2517 (Lead-Zinc) Contract Ida-E413, Defender Mining Company (Defender mine), Custer County, Colorado

Dear Mr. Pratt:

We have received and return herewith the three settlement sheets sent with your letter of June 15, 1956 in response to our inquiry of recent production from the Defender mine. The appropriate number of copies have been made for our files.

The royalties due the Government on the basis of the settlement sheets submitted are calculated at your request as follows:

A.S.& R. dated	Sept. 26, 1955	Jan. 19, 1956	June 6, 1956
Value	$885.40	$1,227.57	$1,765.88
Less Deductions	58.24	97.03	11.00
Net Value	827.16	1,130.54	1,754.88
Net dry tons	6.30	11.38	29.48
Value/ton	131.39	99.36	59.65
Royalty at 5%	41.36	56.53	87.74

Total Amount of Royalties	$185.63
Less previous overpayment	19.82
Balance of Royalties Due	$165.81

Your check for $165.81 should be made payable to the Defense Minerals Exploration Administration and sent to the Executive Officer, DMEA Field Team, Region III, Room 224 New Customhouse, Denver 2, Colorado.

We will be glad to answer any questions you may have concerning the computation of royalty on these or previous settlements.

Yours very truly,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

Enclosure
MEM:vj
cc: Reg. File E413
Sec. Op. Comm. (2)
Shaw (2)
Marshall
Chron.

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

Grossold
Betty

RECEIVED
MAY 23 1956

224 New Customhouse
Denver 2, Colorado

May 21, 1956

Mr. Roy O. Pratt
Defender Mining Company
Box 699
Enid, Oklahoma

Re: Royalty payments, Docket DMEA 2517 (Lead-Zinc)
Contract Idm-E413, Defender Mining Company
(Defender mine), Custer County, Colorado

Dear Mr. Pratt:

We have recently been informed of production from the Defender mine which has not been reported to this office. Record of the last sales reported to us was dated May 5, 1953, for shipments dated April 27-28, 1953.

Please furnish four copies of the settlement sheet and the applicable royalty for all subsequent sales to the Executive Officer, DMEA Region III, Room 224 New Customhouse, Denver 2, Colorado.

Enclosed is DMEA Order 1-Amended, Section 10e of which explains the means for computing the Government's royalty. All checks are to be made payable to the Defense Minerals Exploration Administration.

Yours very truly,

J. W. Townsend

J. W. Townsend
Acting Executive Officer
DMEA Field Team,
Region III

Enclosure

cc: E. F. Stacy, Silver Cliff, Colo.

MHM/vj
cc: Royalty File E413
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Chron.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 31 1953

224 New Customhouse
Denver 2, Colorado

August 26, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket No. DMEA-2517 (Lead-Zinc), Contract Idm-E413, Defender Mining Co., Custer County, Colorado

Enclosed are the following final reports pertaining to work performed under the subject contract:

1. Original and one copy of the operator's report.

2. Original and three copies of the final geologic report by the Geological Survey.

3. Original and three copies of the final engineering report by the Bureau of Mines.

Final payment was made to the operator April 28, 1953, which was in conformance with the final report of review by the Contract Administration and Audit Division, dated April 28, 1953.

The contract was prepared on the short form MF-200(A) and involved 80 feet of drifting and 50 feet of raising at a total expenditure of $4,799.60, in which the Government participated in the amount of 50 percent or $2,399.80. The operator applied for additional funds to enable performance of 525 feet of diamond core drilling, however he could not provide the Owner's Consent to Lien on the ground involved.

Amendment No. 1 was prepared in Washington, which in part provided that the operator could supply a performance bond in lieu of the Owner's Consent to Lien. The execution of the amendment was contingent on receipt of the performance bond, which the operator did not deliver. Therefore, the amendment was never executed and the contract was considered as complete with the performance of the work originally authorized.

The Certification of Discovery or Development was forwarded to the operator by the Administrator's letter of April 17, 1953.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Reviewed by
DMEA OPERATING COMMITTEE
9-9-53
(date)

Enclosures

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

August 25, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2517, Defender Mining Company, Silver Cliff, Custer County, Colorado

Attached are 8 copies of the final geological report by E. N. Harshman covering exploration contract Idm-E413 (DMEA Docket 2517), Defender Mining Company, Silver Cliff, Custer County, Colorado.

Exploration under the contract resulted in the discovery of a small low grade body of lead-zinc ore. Reserves are estimated at 750 tons of inferred ore averaging 10% combined lead and zinc.

An amendment to permit diamond drilling for additional ore on the Mud vein was cancelled at the request of the applicant and no further exploration is recommended.

A certification of discovery was issued by the Defense Minerals Exploration Administration on April 17, 1953.

E. N. Harshman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (8)

Reviewed by
DMEA OPERATING COMMITTEE
9-9-53
(date)

[illegible]
[illegible]
[illegible]
[illegible]

DEFENDER MINING COMPANY

SILVER CLIFF, CUSTER COUNTY, COLORADO

DMEA DOCKET 2517

Final Geologic Report

Reviewed by
DMEA OPERATING COMMITTEE

9-9-53
(date)

By E. N. Harshman
U. S. Geological Survey

DEFENDER MINING COMPANY
SILVER CLIFF, CUSTER COUNTY, COLORADO

INTRODUCTION

The Defender Mining Company, Silver Cliff, Colorado, represented by Roy A. Pratt, P. O. Box 669, Enid, Oklahoma, applied for a Defense Minerals Exploration Administration loan of $44,265.00 to explore for lead and zinc in the Defender Mine 1-1/2 miles northwest of Silver Cliff, Custer County, Colorado.

The property was examined in May 1952 and the examining team recommended a much reduced program of exploration estimated to cost $8,300.00. This program included 50 feet of raising, 80 feet of drifting, and 500 feet of diamond drilling.

Contract Idm-E-413 was signed on September 10, 1952, and exploration started shortly thereafter. The applicant failed to furnish bond, in lieu of the owner's consent to lien, to protect the Government's interest in any ore that might be discovered by drilling on the major claim, and the recommended drilling was not included in the exploration contract.

In January 1953, after completing the work authorized in the contract, the applicant applied for an amendment to allow 200 feet of additional underground exploration. An examination of the property was made on January 29, 1953, in company with M. H. Salsbury, U. S. Bureau of Mines. Additional exploration was not recommended at that time pending completion of the drilling recommended in the early report.

Amendment No. 1 to Contract Idm-E413, granting an extension of time and authorizing the 6 diamond drill holes previously recommended by the examining team, was transmitted to the applicant on February 25, 1953. This amendment was to become effective when a suitable performance bond

was provided. Such bond has not been provided, the applicant has verbally expressed his unwillingness to continue exploration, and work under Contract Idm-E413 is considered complete.

On April 17, 1953, as a result of the underground exploration completed in January 1953, a Certification of Discovery was issued by the Defense Minerals Exploration Administration.

EXPLORATION AND GEOLOGY

Exploration by the Defender Mining Company includes 60 feet of drift on the 225-foot level, 62 feet of raise on the Mud vein between the 225-foot level and the 150-foot level, and 40 feet of sub-level drift 42 feet above the 225-foot level (figure 4). Under Contract Idm-E413 the Government participated in 44 feet of the 225-foot level drift, 50 feet of the raise, and 36 feet of the sub-level drift.

Geologic conditions remain as described in the report, DMEA Docket 2517, transmitted to the Field Team June 25, 1952. The 225-foot level drift was extended 50 feet on the Mud vein, which in this portion of the mine consists ofa silicified, sheared, and brecciated zone 1/2 to 2 feet wide. No galena or sphalerite are found in the vein. At a point 11 feet from the west face of the 225-foot level drift a split from the Mud vein was prospected by a 21-foot drift (figure 4). This exploration exposed a 3-foot gouge and breccia zone containing numerous narrow stringers and lenticular masses of sulfides (galena and sphalerite). Although the individual stringers are high grade, they form a relatively insignificant part of the vein, and the material appears too low grade to mine.

The prospect raise starts in barren silicified breccia and gouge. At a point about 25 feet above the 225-foot level the vein contains minor amounts of galena, sphalerite, and pyrite. From this point upward, the

sulfide content of the vein increases and at a height of 35 feet the vein material is considered to be ore. The raise remains in ore to the 150-foot level.

At a point 42 feet above the 225-foot level a 40-foot sub-level drift was driven southwesterly along the Mud vein. This drift remains in ore to a point 12 feet west of the raise; beyond this point the ore cuts into the hanging (north) wall and the drift follows a barren foot-wall split (figure 4). A small "dog hole" crosscut in the hanging wall, at a point 17 feet west of the raise, cuts about 18 inches of ore.

The foot-wall splits on the 225-foot level and in the sub-level drift appears to correlate and the occurrence of ore along the foot-wall split on the lower level is believed to be a local condition.

SAMPLES AND ORE RESERVES

Six samples of the ore discovered as a result of the exploration program were taken by the U. S. Bureau of Mines. The sample locations are shown on Figure 4 and the assay results follow:

Sample No.	Description	% Pb	% Zn	oz. Ag
S-18	18-inch cut Mud vein, east wall of raise 49 feet above back of 225 foot level	11.30	10.70	2.6
S-19	24-inch cut of altered rhyolite between S-18 and footwall	2.05	2.55	0.5
S-20	Grab of 3/8-inch screenings in ore bin	4.20	3.50	1.2
S-21	Composit of two 28-inch cuts face of S.W. split on 225-foot level	4.50	1.70	1.0
S-22	Grab of vein material in "dog-hole" on sub-level	2.75	5.05	0.8

S-23	2-foot cut across back of sub-level 8 foot west of raise	2.20	3.45	1.0

The calculation of the ore reserves in that portion of the Defender mine explored with Government assistance is complicated by the erratic character of sulfide mineralization. Inferred ore is considered present in a block 75 feet long, 60 feet high, and 2 feet wide. If a factor of twelve cubic feet of ore to the ton is used and the total reduced by one half, to account for barren areas in the vein, inferred ore reserves are about 750 tons, with an estimated metal content of 6% Pb, 4% Zn, and 1 oz. Ag. Hand sorting will reduce considerably the tonnage of ore available for shipment and will improve its average metal content.

CONCLUSIONS AND RECOMMENDATIONS

The downward extension of the ore shoot mined above the 150-foot level of the Defender mine has been located by exploration completed under Contract Idm-E413, and a small tonnage of low grade lead-zinc ore has been developed. It is not possible to mine this material at a profit under present economic conditions, but with higher metal prices a small tonnage of ore could be produced from the Defender mine.

The Mud vein, west of the present mine workings, is still considered as a potential source of lead-zinc ore. Although exploration of that area by diamond drilling from the surface was approved in Amendment No. 1, the applicant subsequently withdrew his request for this work. No additional underground exploration is recommended and work under the subject exploration contract, Idm-E413, should be considered complete.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
May 4, 1953

Mining Division
Date Rec'd
MAY 5 - 1953
BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 2517, Contract Idm-E413 (Lead-zinc), Defender Mining Company, Custer County, Colo. - Final engineering report

Submitted herewith are the original and eight copies of a final engineering report prepared by M. H. Salsbury on the project at the Defender mine. An ore discovery certification has been recommended previously.

W. M. Traver

W. M. Traver

enclosures

WMT/amh

cc: 8
E413
DMEA Chron.

Reviewed by
DMEA OPERATING COMMITTEE

9-9-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

FINAL ENGINEERING REPORT

DMEA 2517, Exploration Project Contract Idm-E413

Defender Mining Company, Contractor

Custer County, Colo.

Lead-Zinc

M. H. Salsbury
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE

9-9-53
(date)

April 27, 1953

DMEA 2517
Contract Idm-E413

DEFENDER MINING COMPANY
CUSTER COUNTY, COLO.

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Summary and introduction 1
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Conclusions 7
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ILLUSTRATIONS

Figure — Follows Page

1. Location map, Defender mine, Defender Mining Company, Custer County, Colo. 3
2. Claim map, Defender Mining Company, Custer County, Colo.. 3
3. Defender Mining Company, Custer County, Colo. 6

same as on Oct. 8, 1952
on March 5, 1953

DMEA 2517
Contract Idm-E413

DEFENDER MINING COMPANY
CUSTER COUNTY, COLO.

FINAL ENGINEERING REPORT

by

M. H. Salsbury

SUMMARY AND INTRODUCTION

Early in 1952, the Defender Mining Company, represented by Roy A. Pratt, P. O. Box 669, Enid, Okla., applied for a Defense Minerals Exploration Administration loan of $44,265.00 for underground exploration at the Defender lead-zinc mine, Hardscrabble Mining District, near Westcliffe, Colo.

The property was examined in May 1952 by an examining team for the Defense Minerals Exploration Administration which recommended a revised exploration program at an estimated cost of $8,300.00, covering underground work and surface diamond drilling.

On September 10, 1952, a short-form contract, Idm-E413, was signed, calling for 80 feet of drifting and 50 feet of raising on the 225-foot level at a contract price of $36.92 per foot or a total of $4,799.60, Government participation 50 percent, or $2,399.80.

The diamond drilling was not included because a guarantee by the applicant-lessee, in lieu of an owner's consent to lien, was not obtained to protect the Government's interest in ore which might be found on the Major claim, the drilling site.

All the work under the contract was completed by January 22, 1953, together with some additional exploration by the operator not authorized or paid for under the Defense Minerals Exploration Administration contract. The work was under the direction of E. F. Stacy, the superintendent and one of the partners. A small block of lead-zinc ore, the downward extension of an ore shoot previously mined above the 150-foot level, was partially outlined, and shipment of about 120 tons of low-grade ore has been made.

An examination of the property was made January 29, 1953, by M. H. Salsbury, of the Bureau of Mines, and E. N. Harshman, of the Geological Survey, to check the contractor's request for an amendment to the contract to permit an additional 200 feet of underground exploration. On the basis of the information obtained from work done to that date, further exploration was not recommended unless the surface diamond drilling suggested in the original revised report was completed first.

A memorandum by M. H. Salsbury, dated February 11, 1953, recommended certification of a discovery based on the ore exposed by exploration completed with Government participation under contract Idm-E413.

On March 30, 1953, the contractor submitted a final report covering the work done under contract Idm-E413.

LOCATION AND OWNERSHIP

The Defender Mining Company is a partnership consisting of Roy O. Pratt, W. L. Stevenson, W. L. Stevenson, Jr., and R. S. Baker, all of Enid, Okla., and E. F. Stacy, W. H. Cody, and Garrett Cody, all of Silver Cliff, Colo.

The holdings of the Defender Mining Company consist of four mining claims in sec. 8, T. 22 S., R. 72 W., sixth principal meridian, Hardscrabble Mining District (fig. 1). The Defender shaft is located on rising ground 2 miles northeast of Westcliffe, Custer County, Colo. The claims, shown on figure 2, are held under lease and bond with option to purchase. The ownership is as follows:

Claim	Kind	Owner	Interest	Expiration date of lease	Royalty
Defender	Location	W. J. Kettle) W. A. Walker) Silver Cliff, Colo.	All	March 27, 1955	10 percent of net but not less than $1.00 per ton
Blue Eagle	Location	J. T. Stroehlke	1/2	October 6, 1955	same
		W. J. Kettle) W. A. Walker)	1/2	March 27, 1955	same
Major	Patented survey 18474	O. D. Campbell) Mary Campbell) Bradley, Ark.	All	August 8, 1956	same
Bismuth	Patented survey 18474	same	All	August 8, 1956	same

The contract just completed covered exploration on the Blue Eagle and Defender claims only. The ore discovery was on the Blue Eagle claim.

HISTORY AND PRODUCTION

The Defender mine has been operated at intervals since 1936, with a recorded production of both oxide and sulfide lead-zinc ore tabulated as follows:

Years	Dry tons	Ounces/ton Au	Ounces/ton Ag	Percent Pb	Percent Zn	Type of ore
1936 through 1951	3,507	0.01	10.1	13.5	0.4	Carbonate (sorted)
1948 through 1952	1,330	.02	3.6	6.9	7.4	Sulfide (sorted)
1953 - contract Idm-E413	120 (estimate)	.03	2.58	8.4	7.1	Sulfide (sorted)

The above table indicates the production of 4,957 dry tons of ore has contributed 65.3 ounces of gold, 43,167 ounces of silver, 1,150,522 pounds of lead, and 244,285 pounds of zinc to the nation's metal requirements.

Ore from the Defender mine is upgraded for shipment by screening and hand sorting. Approximately one-third of the mined product is discarded.

The present lessees have operated the property since 1948.

DESCRIPTION OF THE DEPOSITS

The lead-zinc veins of the Hardscrabble Mining District occur in rhyolite which overlies pre-Cambrian granite and gneiss. The ore shoots occur at vein intersections or where there are changes in dip or strike. The ore minerals are galena and sphalerite carrying small amounts of gold and silver, accompanied by a cemented fault breccia in fault fissures in the rhyolite. The vein width on the lower levels varies from a few inches to over 3 feet.

In the oxidized zone there were enrichments where the ore was mined as much as 30 feet wide, but, on the lower levels in the sulfide zone, the ore occurrences are small and discontinuous. The ore streak may be on either the hanging wall or the footwall side of the vein and occasionally on both. In the best parts of the ore shoots, the brecciated rhyolite between foot and hanging walls is considered as low-grade ore. The vein has a tendency to split going westward. The mineralization at splits appears to follow only one of the branches.

The Defender mine has been developed by an incline shaft 210 feet deep sunk on the Defender or Mud vein and by three levels, totaling about 1,000 feet, at approximately 75 feet, 150 feet, and 225 feet vertically below the shaft collar.

The mine is equipped with a 40-foot headframe, an ore house arranged for screening and sorting, a small electrified hoist with a 1-ton skip, and an electrically driven compressor. A maximum production of 25 tons daily could be made.

WORK COMPLETED UNDER CONTRACT

The work accomplished with Government assistance under contract Idm-E413 consisted of 44 feet of drifting on the 225-foot level, 50 feet of raising on the Mud vein above the 225-foot level, and 36 feet of drifting on a sublevel 42 feet above the 225-foot level (fig. 3). These footages were the maximum allowed under the contract. The company did some additional work at its own expense.

Inspecting engineers certified 80 feet of drifting and 50 feet of raising, both at a unit price of $36.92 per foot, or a total of $4,799.00, of which the Government's participation was $2,399.80, or 50 percent.

DESCRIPTION OF THE DISCOVERY

The discovery is defined as having a horizontal extent of 72 feet on the Defender or Mud vein, from a point 125 feet west of the shaft to a point 197 feet west of the shaft, and a vertical extent of 68 feet between the 150- and 225-foot levels (fig. 3). It is the downward extension of an ore shoot previously mined above the 150-foot level.

No ore was encountered in the Government-assisted work on the 225-foot level. Later, a low-grade stringer was found on a southwest split of the vein being followed (sample S-21, fig. 3). The raise driven with Government assistance encountered ore 25 feet above the 225-foot level and was driven the balance of the 50 feet in ore (samples S-18 and S-19, fig. 3). This raise was later driven, at the operator's expense, through to the 150-foot level. On the sublevel, the ore was followed westward for 12 feet and then lost in the wall, the drift following a barren southwest split. Later, the ore was exposed at a point 17 feet west of the raise by driving a short crosscut into the hanging wall (sample S-22, fig. 3).

Since the inspection of January 29, 1953, the operator has driven a 16-foot sublevel drift on the vein east of the raise. The company has mined approximately 120 tons of ore from the ore shoot, of which 20 tons remains to be shipped. In the final report, the operator states that this is all the mineable ore which was found. Lot 9, the first of two lots which have been settled, returned the shippers, after deduction of treatment charges, freight, and owners' and Defense Minerals Exploration Administration royalties, $8.93 per ton; lot 10, the second, returned $6.73 per ton. The Government has received to date royalties of $51.14.

M. H. Salsbury, in a memorandum dated February 11, 1953, recommending certification of a discovery, estimated a maximum ore reserve for the block of 600 tons of ore assaying from 8 to 10 percent lead and 5 to 6 percent zinc, with actual production probably considerably less. Because of the erratic nature of the ore occurrence, no accurate estimate of ore reserves is possible prior to actual mining.

EXPENDITURES

The expenditure under contract Idm-E413 was the maximum amount authorized, $4,799.60, of which the Government's share was 50 percent, or $2,399.80. The short-form contract price was $36.92 per foot for both drifting and raising.

CONCLUSIONS

The ore which has been mined to date is certainly marginal at present metal prices--Aprill, 1953, zinc, $0.115 per pound, and lead, $0.130 per pound.

The return from the last shipment, $6.73 per ton, could not have paid the mining cost under prevailing conditions.

No evidence to date indicates that further work in the sulfide zone would disclose ore of better grade.

The best possibility for finding better ore appears to lie in exploring the oxidized zone farther west where diamond drilling was recommended. Production records show that previous oxidized ore shipments were of somewhat better grade, with low zinc content. The shallower ore occurrences appear also to have been larger.

The contractor's statement that all the ore in the deposit discovered by Government-assisted exploration had been mined is correct under present conditions. There are probably streaks of ore in the ends of the stopes, however, which might be profitably mined at higher metal prices.

RECOMMENDATIONS

(1) Government participation in further exploration is not recommended. The chances for significant additions to the nation's lead-zinc ore reserves are poor. Exploration of the oxidized zone to the west of present workings as suggested in the original report might be successful financed either by private capital or by the Government.

(2) An ore discovery should be certified to protect the Government's interest in any ore shipments from the discovery which might be made under more favorable economic conditions at a later date. It should be considered, however, that, even under the most favorable conditions, only a small percentage of the Government's expenditure is likely to be returned.

(3) Production of the grade of ore shipped so far in 1953 is not economically feasible under present conditions.

amh

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

224 New Customhouse
Denver 2, Colorado

May 7, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 11 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2517, Contract Idm-E413, Defender Mining Company (Lead-Zinc)

Reference is made to your letter dated April 29, 1953, in which you question the assays included in the report by M. H. Salsbury dated December 24, 1952.

You are correct in assuming that the assays reported as ounces of gold should have been reported as ounces of silver.

Thank you for calling this error to our attention.

W. H. King

W. H. King

FILE COPY
SURNAME:

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

APR 29 1953

Mr. [illegible] H. King, Executive Officer
DMA Field Team, Region IV
224 New Custom House Building
Denver 2, Colorado

Re: Docket No. [illegible] 2517 (Lead-Zinc)
Defender Mining Company
Defender Mine
Custer County, Colorado
Contract No. [illegible]-413

Dear Mr. King:

Referring to the above project, certification was made in spite of the apparent limited size of the ore body. Otherwise it would have been necessary to return to the operator such royalty payments as had been made.

A review of the Docket shows that under date of December 24, 1952, Mr. [illegible] Salsbury rendered a report to you of his December 19 inspection of the project. On the top of page 2 of this report Mr. Salsbury has listed some very high gold value, 2.6 ozs., 0.9 ozs., 3.1 ozs. and 1.5 ozs. We are reasonably sure that he had intended to report ounces of silver, rather than gold ounces; however, as a matter of record we should be advised, so that misleading and incorrect data are not allowed to remain in the docket.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

MRGriswold/hmj
(4/27/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

FILE COPY
SURNAME:
500

Griswold
Chandler
Rubin
Carter
Kinsel
Hedges
Sedlacek
Johnson

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

Mr. Roy O. Pratt
Defender Mining Co.
P. O. Box 699
Enid, Oklahoma

APR 17 1953

Re: Docket No. DMEA 2517 (Lead-Zinc)
Defender Mining Co.,
Defender Mine
Custer County, Colorado
Contract No. Idm-E413

J.C. 4/7/53

Dear Mr. Pratt:

Transmitted herewith is a "Certificate of Discovery or Development" related to the Contract No. Idm-E413 on the subject mine.

By the terms of the Exploration Project Contract and of the Certification, all production from the property described in the contract, after September 10, 1952, the date of the contract, is subject to the Government's percentage royalty as set forth in the said contract until such sums as the Government may advance as its participating interest have been repaid or until September 10, 1962.

Payments should be made to Mr. W. H. King Executive Officer, DMEA Field Team, Region IV, 224 New Customhouse Building, Denver 2, Colorado. Checks should be drawn in favor of the Treasurer of the United States. The purchaser should be advised to deduct the royalties from the amount due on each shipment and forward the checks to the Executive Officer.

Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser and the price and charges, certified to be correct by your company.

You are requested to notify Mr. King of any changes in ownership or production rights that might affect the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period, please notify Mr. King at six-month intervals that such is the case.

Sincerely yours,

C. G. Rattenbury

Administrator

Enclosure

WRGriswold/hmj
(3/30/53)
CC to: Docket
Cont. Admin. & Audit Div.
Region IV (2)
Base Metals Div.

Russell Forbes, Act. Admin. DMPA
Admin. Reading File
Op. Committee
Mr. Hedges, Rm 4604
Mr. Thayer, Rm 5216, GSA Bldg.
Mr. F. E. Johnson

Mr. W. R. Griswold
Chron.

FILE COPY
SURNAME:

500

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

Mr. Russell Forbes, Acting Administrator
Defense Materials Procurement Agency
General Services Administration Building
Washington 25, D. C.

APR 17 1953

Re: Docket No. DMA 2517 (Lead-Zinc)
Defender Mining Co.
Defender Mine
Custer County, Colorado
Contract No. Idm-E413

4/17/53

My dear Mr. Forbes:

Enclosed is one copy each of a "Certification of Discovery or Development" related to Exploration Project Contract No. Idm-E413 and of an interim report by the Field Team.

The contract was dated September 10, 1952, with the Government participating to the extent of 50 per cent in an exploration project estimated to cost $4,799.60. Of such amount $2,510.56 had been expended through November 1952, the Government's share being $1,255.28.

By reason of the contract, the total program of work for the project consisted of 80 feet of drifting and 50 feet of raising. Work of drifting and raising has been completed. Ores were encountered between the 225 foot and the 150 foot levels of the mine.

The discovery may be described as lead-zinc ores containing auxiliary amounts of the precious metals and occurring in a vein exposed so far on two levels, the 150 and 225. The grade of the ore is estimated to be from 8 to 10 per cent lead and from 5 to 6 per cent zinc. Indicated tonnage from work is stated to be 600.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

WRGriswold/hmj (4/6/53)
CC to: Docket
Cont. Admin. & Audit Div.
Region IV (2)
Base Metals Division
Adm. R. File
Op. Committee
Enclosure Mr. Hedges, Rm 4604
Mr. Thayer, Rm 5216, GSA Bldg.
Mr. F. E. Johnson
Mr. Griswold
Mr. Murkland
Chron.

FILE COPY
SURNAME:

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

$00
Griswold
Chambers
Fahrin
Oakes

april 17, 1953

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Certification of Discovery or Development,
Docket No. DMEA 2517, (Lead-Zinc)
Defender Mining Co., Defender Mine
Custer County, Colorado

The exploration project contract was executed September 10, 1952, with a total estimated cost of $4,799.60 -- $2,510.56 had been expended through November, 1952.

The contract provided for 80 feet of drifting and 50 feet of raising. Raising and drifting are now complete.

Such work opened up a small lead-zinc ore body lying between the 225 and 150 mine levels, grade is estimated to be 8 - 10 per cent lead and 5 - 6 per cent zinc, with a strike length of 72 feet. Ore width is reported as variable, ranging from a few inches to three feet.

Indicated tonnage is estimated at 600.

W. R. Griswold

W. R. Griswold

Attachments

WRGriswold/hmj
4-6-53

CC to: Docket
Adm. R. File
Op. Committee
Base Metals Div.
Mr. Griswold
Mr. Hedges
Mr. Thayer
Region IV (2)
Mr. Chambers
Chron.

FILE COPY
SURNAME:

UNITED STATES 500
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

April 3, 1953

BW

Memorandum

n.s. in R.v R.

To: Chief Counsel

From: Chief, Base Metals Division

Subject: Defender Mining Company, Docket No. DMEA 2517, Contract No. Idm-E413

The subject Operator has terminated his project. Formerly he had requested an amendment allowing for additional work of diamond drilling. Such amendment was prepared and sent to the field, but the Operator has recently decided not to do the work and has not signed the amendment.

The original project discovered a small bunch of ore. Mr. King states that 103½ tons have been shipped and $51.14 in royalties paid. It is stated that only 20 tons remain to be shipped, after which ore will be exhausted. Presumably such 20 tons would likely pay another ten dollars or so of royalty.

We do not consider that the total tonnage of 123½ tons is worth a formal certification, but we are not clear as to whether the royalty funds paid can properly be retained by the Government unless certification is made. Would you be kind enough to advise us.

W. R. Griswold

Attachments

WRGriswold/hmj
4/3/53
CC to: Docket
Adm. R. File
Op. Committee
Mr. Chambers
Base Metals Division
Chron.

Mr. W. R. Griswold
4-2-53
12:53 P.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 2 1953

DN 235 BUREAU MINES 4-2-53 10-47 AM

W R GRISWOLD
DMEA

REURTEL DOCKET NUMBER DMEA 2517, CONTRACT NUMBER IDM-E413, DEFENDER MINING COMPANY. OPERATOR WILL NOT EXECUTE AMENDMENT NUMBER 1 AND HAS REQUESTED TERMINATION OF CONTRACT. WORK AUTHORIZED UNDER ORIGINAL CONTRACT COMPLETED. OPERATOR S FINAL REPORT RECEIVED.

OPERATOR HAS SHIPPED 103½ TONS OF ORE AND HAS 20 TONS AVAILABLE FOR SHIPMENT. OPERATOR S. FINAL REPORT STATES THAT NO MORE ORE REMAINS AS A RESULT OF EXPLORATION WORK. GOVERNMENT HAS RECEIVED $51.14 IN ROYALTIES. IS CERTIFICATION JUSTIFIED /Q/

W H KING

Denver, Colo.

APR 2 1 19 PM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

FILE COPY
SURNAME:

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

BL

n.s. in R. & R.

BASE METALS, DMEA

W. R. Griswold/bjl
3669 2616

April 2, 1953

. . King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Re Docket No. DMEA-2517, Defender Mining Company, Contract No. Idm-E413. Certification of discovery cannot be executed until information is received as to status of Amendment No. 1 transmitted to you February 19. Please notify if Amendment No. 1 has been executed.

/s/
W. R. Griswold, Chief
Base Metals Division, DMEA

WRGriswold/bjl

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Accounts
Confirmation
Chron.

SENT
APR 2 1953
Clerical Service Section

Mining Division
Date Rec'd.
APR 1 - 1953
BUREAU OF MINES
Denver, Colorado

Department of the Interior
Defense Minerals Administration
Received
AUG 31 1953

March 30, 1953

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Custom House Building
Denver 2, Colorado

Attention: Mr. W. H. King

Re: Docket DMEA 2517
Contract IDM-E 413

Dear Mr. King:

We have completed the project covered by the above contract and are enclosing our final reports as required.

We request you to process the closing of this contract and remit the balance due us at your earliest convenience.

Yours very truly,

DEFENDER MINING COMPANY

Roy Pratt

By: Roy O. Pratt

Operation Report

RECEIVED
AUG 31 1953

FINAL REPORT

Docket DMEA 2517
Contract IDM-E 413
Defender Mining Company

Summary of Work and Cost of the Project

This contract provided for 80 feet of drifting and 50 feet of raising at locations acceptable to DMEA.

The cost for 80 feet of drifting at $36.92 per foot was..... $2,953.60

The cost of the 50 feet of raising at $36.92 per foot was..... 1,846.00

Total cost of the project.....$4,799.60

Government's participation at 50%.....$2,399.80

Engineering

We started from the designated starting point November 8, 1952, completed January 22, 1953. We drove the drift west along the exposed vein a distance of 43 feet. The drift was 4 x 7 measured inside the timbers. After properly timbering the drift a raise measuring 4 x 8' inside was started at approximately a point 30 feet from the starting point. We continued this raise a distance of 50'7". At this point, an intermediate drift was driven west along the vein a distance of 37 feet. Since this completed the drifting and raising, we then started a stope at a point of approximately 10 feet above the 225 foot level. This stope was approximately 30 feet wide. After this was done we stoped out all the ore from this point to the intermediate drift.

In addition to this, at our own expense, we drove a drift east of the raise at a point level with the west intermediate drift. This drift was driven a distance of approximately 16 feet at which point the ore pinched out. We stoped up in this drift an approximate distance of 10 feet as long as we had ore. We then moved our operations to the west drift and stoped out all the ore from the intermediate to the 150 foot level. The ore at the starting point of the stope was about 2 feet wide and broadened to 25 feet wide at the intermediate then pulled back in to approximately a 12 foot width at the 150 foot level. This vein is stoped out above the 150 foot level. We extended our stope in all locations to the full extent of the ore.

Geology

The ore in the Defender Mine occurs in the Rhyolite. All of the drifting, raising and stoping in this project was done following the vein through the Rhyolite. We encountered no unusual formation and the vein would vary in width from a small streak to 30 inches to 36 inches in width.

Production and Ore Reserves

In all locations we have stoped to the full extent of the ore. We have shipped 103½ tons and have ready for shipment approximately an additional 20 tons, making a total of approximately 123½ tons, which completes the mining of the entire ore body uncovered by this exploration. This leaves no undeveloped ore body. The ore produced, as taken from the mill returns, averages gold .03 oz; Silver 2.55 oz; lead 7.62%; zinc 7.00%.

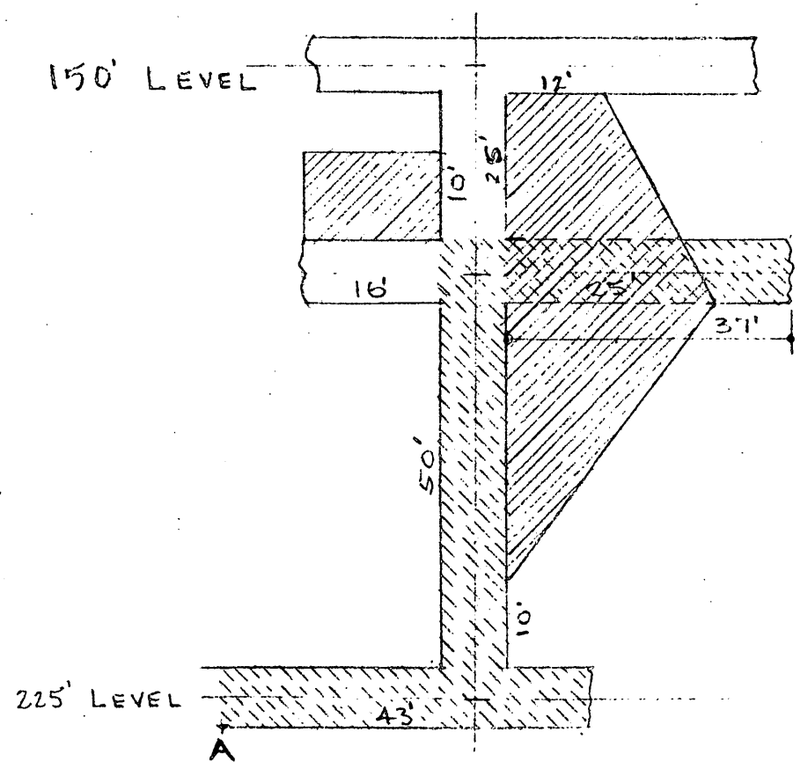
General Data

We have fully completed this contract according to its terms and our work has been checked and approved by DMEA Engineers. Our footage report and dollar amounts either paid, or approved for payment, agree with the terms of the contract.

Yours very truly,

DEFENDER MINING COMPANY

March 30, 1953



ORE REMOVED 123.5 TONS

WORK PERFORMED UNDER DMEA CONTRACT

" " AT COMPANY EXPENSE

AVERAGE ASSAY ORE REMOVED

GOLD .030 OZ SILVER 2.55 OZ LEAD 7.62% ZINC 7.00%

RESURRECTION MINING COMPANY

LEADVILLE, COLORADO, March 21, 1953

Purchased From: Roy D. Pratt
Enid, Oklahoma

Shipped by: E. F. Stacy
From: Defender Mine - Silver Cliff

Class Ore: Crude

Date Shipped: March 10-14, 1953

Quotations - Gold: 34.9125 Silver: .90¢ Lead: 13.417¢ Zinc: 11.00¢ Copper:

ASSAYS	Gold Ozs. Per Ton	Silver Ozs. Per Ton	Lead Per Cent	Zinc Per Cent	Copper Per Cent		Non-Sulphide Lead	Non-Sulphide Zinc
Resurrection	.02	2.20	7.80	6.60			.40	.40
Shipper Smith	.03	2.70	8.30	7.10	.40		.20	.20
Umpire								
Less Non Sulphide			.30	.30				
Settlement Assays	.025	2.45	7.75	6.55			.30	.30

WEIGHT	
Gross Weight, Lbs.	113,990
Truck Tare, Lbs.	37,760
Wet Weight, Lbs.	76,230
Less - Moisture 5.1 %	3,888
Dry Weight, Lbs.	72,342

VALUE - PER TON	
Gold — 50%	.44
Silver — Less 1.0 oz x 75%	.98
Lead — 71% Less 2.5¢	12.01
Zinc — 61% @ 40%	3.52
Total Metal Value	16.95
Less - Treatment	3.50
Net Value Per Ton	13.45

PAYMENT 36.1710 Dry Tons @ 13.45 Per Ton		486.50
Less - Haulage - Gale Carper - 38.1150 Tons @ $5.00	190.58	
3% Tax	5.72	196.30
- Royalty - Willard A. Walker - 10%		29.02
Treas. of the U. S. - 4%		11.61
Control Assay - C. H. Smith		6.00
NET PAYMENT		243.57

Figured: MI Checked: FRB Shipper Lot No. 10 Our Lot No. 4700

①

RESURRECTION MINING COMPANY

413

LEADVILLE, COLORA

Feb. 23, 1953

Purchased From: Roy Pratt
Bass Building - Enid, Oklahoma

Shipped by: Roy Pratt
From: Defender Mine - Silver Cliff, Colo

Class Ore: Crude

Date Shipped: Feb. 2-14, 1953

Quotations - Gold: 34.9125 Silver: .90 Lead: 13.50¢ Zinc: 11.50¢ Copper:

ASSAYS	Gold Ozs. Per Ton	Silver Ozs. Per Ton	Lead Per Cent	Zinc Per Cent	Copper Per Cent		Non-Sulphide Lead	Non Sulphide Zinc
Resurrection	.03	2.40	8.80	7.60			.40	.50
Shipper -- Smith	.04	2.90	9.20	8.00	.50		.20	.20
Umpire --								
Less - Non-Sulphide			.30	.35				
Settlement Assays	.035	2.65	8.70	7.45			.30	.35

WEIGHT		
Gross Weight, Lbs.		210,740
Truck Tare, Lbs.		68,830
Wet Weight, Lbs.		141,910
Less - Moisture	5.1 %	7,237
Dry Weight, Lbs		134,673

VALUE - PER TON		
Gold -- 75%		.92
Silver -- Less 1.0 oz x 75%		1.11
Lead -- 72% Less 2.5¢		13.59
Zinc -- 61% @ 40%		4.18
Total Metal Value		19.80
Less - Treatment	3.50	
Non-Sul Pen. in 20¢	.20	3.70
Net Value Per Ton		16.10

PAYMENT 67.3365 Dry Tons @ 16.10 Per Ton 1084.12

Less - Haulage - Gale Carper - 70.9550 Tons @ 35.00 354.78

3% Tax 10.64 365.42

- Royalty - Gillard Walker - 10% 71.87

Treas. of the U. S. - 5½% 39.53

Control Assay - W. F. Smith 6.00

NET PAYMENT 601.30

Figured WM Checked ERB Shipper Lot No. 9 Our Lot No. 1645

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

224 New Customhouse
Denver 2, Colorado

March 5, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Certification of Discovery, Docket DMEA 2517, Contract Idm-E413, Defender Mining Company

Enclosed are the original and ~~three~~ 2 copies of a memorandum from a Bureau of Mines engineer recommending a certification of discovery under Contract Idm-E413. [Lead, Zinc]

W. H. King

W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
3-13-53
(date)

Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Date Rec'd:
FEB 27 1953
BUREAU OF MINES
Denver, Colorado

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
February 24, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 2517, Contract Idm-E413 (Lead-Zinc), Defender Mining Company, Custer County, Colorado - Certification of ore discovery

Please find enclosed the original and eight copies of M. H. Salsbury's memorandum concerning an ore discovery on the subject project for use in making your recommendations.

W. M. Traver

W. M. Traver

enclosures

WMT/amh

cc: 8
E415
DMEA Chron.

Reviewed by
DMEA OPERATING COMMITTEE
3-13-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mineral Resources Branch
Mining Division
Region IV

Leadville, Colorado
February 11, 1953

Memorandum

To: Chief, Mineral Resources Branch, Mining Division, Region IV

From: M. H. Salsbury

Subject: DMEA 2517, Contract Idm-E413 (Lead-Zinc) Defender Mining Company, Custer County, Colorado

Operations under the subject contract in November and December, 1952, have resulted in an ore discovery on the principal or Defender vein, also called the Mud vein, in the Defender mine, Custer County, Colorado. The ore is on the Blue Eagle claim, a location, in sec. 8, T. 22 S., R. 72 W., sixth principal meridian.

The discovery has a vertical extent of 68 feet between the floors of the 225-foot and 150-foot levels of the Defender shaft. The horizontal extent is 72 feet from a point 125 feet west of the shaft to a point 197 feet west of the shaft.

Production from within the above-described block is subject to the Government's percentage royalty (fig. 1).

The ore consists of galena and sphalerite, with small amounts of gold and silver, with a gangue of brecciated rhyolite as

fissure filling in a vein striking S. 75° W. to N. 80° W. and dipping 70°-75° north. The streaks of ore are erratic and discontinuous and the ore width varies from a few inches to 3 feet. The discovery is a downward continuation of an ore shoot previously mined above the 150-foot level.

The vein is very irregular in strike. It splits, going westward on the 225-foot level and the sublevel. This split is not visible on the 150-foot level and may be obscured by timber.

On the 225-foot level, 44 feet of drift was driven with Government assistance on the vein east of the split and on the right-hand (west) split without encountering any ore. Later, low-grade ore was found on the lefthand (southwest) split in a drift turned off from the Government-assisted work.

A raise with Government assistance was driven 50 feet from a point 24 feet west of the start of the drift on the 225-foot level. It was later driven the remaining 10 feet to connect with the 150-foot level. No ore was encountered until a point about 25 feet above the 225-foot level was reached.

At a point 42 feet above the floor of the 225-foot level, a sublevel was driven 39 feet west and southwest from the raise. The first 12 feet is on the ore, but beyond this point the ore goes into the north or hanging wall, while the drift follows a barren split to the

southwest. Later, the ore in the hanging wall was exposed by driving a crosscut one round at a point 17 feet west of the raise.

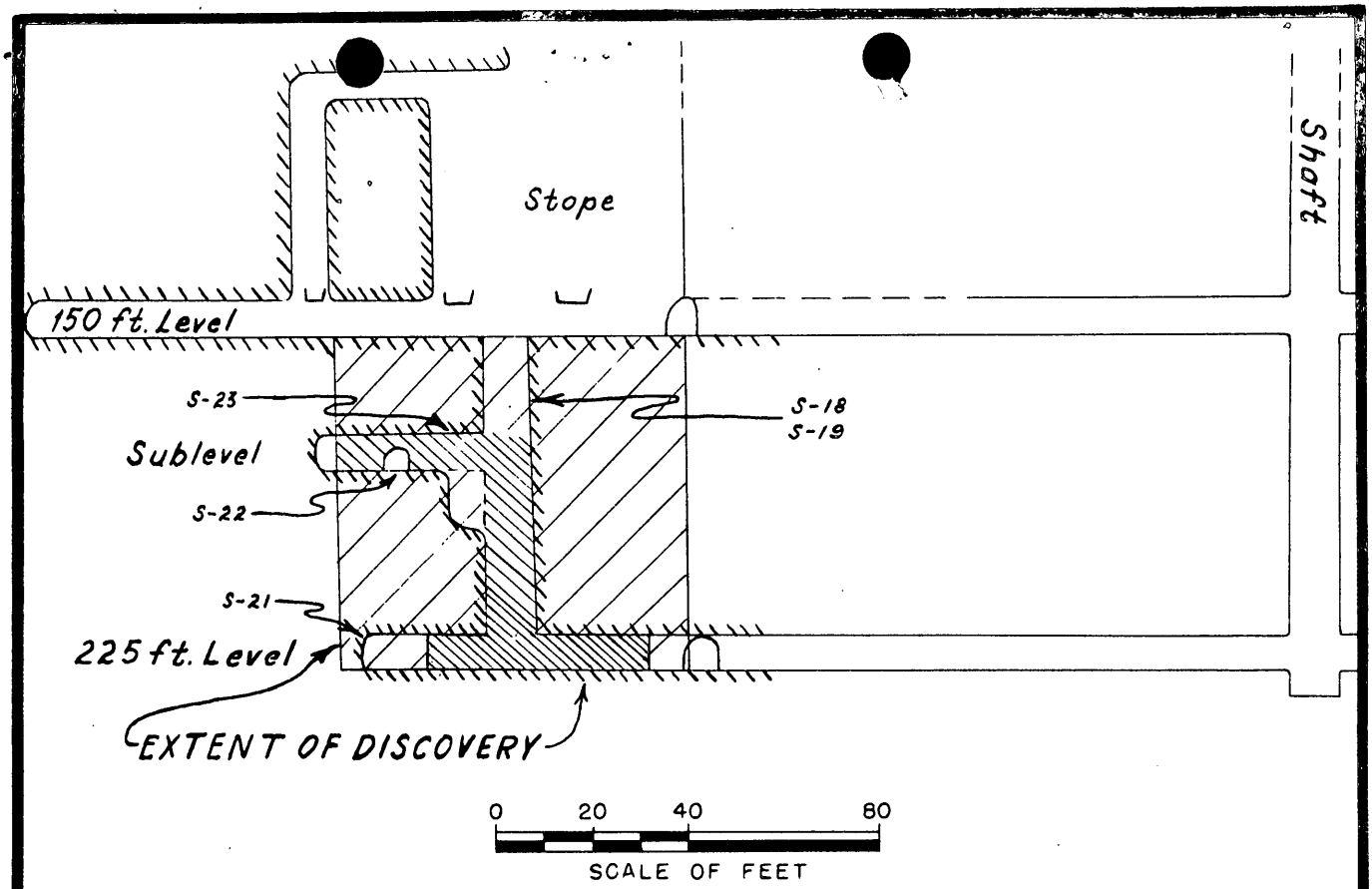
Ore is exposed in both ends of the raise from a point 25 feet above the 225-foot level to the 150-foot level. The ore in the bottom of the 150-foot level is approximately 50 feet long. The ore in the sublevel extends at least 18 feet west of the raise. The operator is now stoping the ore in the west end of the raise and below the sublevel.

The ore going below the sublevel may connect with the low-grade mineralization at the west end of the 225-foot level, even though it appears to be on a different split. Five samples taken by the examining engineer are listed in a table on figure 1.

Because of the spotty character of the mineralization, it is not possible to block out the ore prior to actual mining. The fact that the ore must be upgraded by sorting before shipment also adds to the difficulty of estimating grade and tonnage. The maximum production which can be expected is estimated at 600 tons of ore which may assay from 8 to 10 percent lead and from 5 to 6 percent zinc. Actual production will probably be considerably less than 600 tons.

Lloyd H Everett for

M. H. Salsbury
Mining Engineer



LONGITUDINAL SECTION IN PLANE OF DEFENDER VEIN
LOOKING NORTH
(Drawing pertains to Certification of Discovery)

LEGEND

WORK UNDER CONTRACT Idm E-413

EXTENT OF ORE DISCOVERY

SAMPLE AND ASSAY DATA

SAMPLE NO.	DESCRIPTION	PERCENT		OZS/TON
		Pb	Zn	Ag
S-18	18-Inch cut, footwall streak, west end raise, 49 feet above back of 225-foot level.	11.3	10.7	2.6
S-19	24-Inch cut soft, decomposed rhyolite from S-18 to hanging wall.	2.05	2.55	0.5
S-20	Grab of -3/8 inch screenings in ore bin from raise round 45 feet to 49 feet.	4.2	3.5	1.2
S-21	Two 28-inch cuts across face of Southwest split in 225 foot-level west.	4.5	1.7	1.0
S-22	Grab of vein matter in north crosscut sublevel	2.75	5.05	0.8
S-23	2-Foot cut across back of sublevel at 8-feet west of raise.	2.2	3.45	1.0

FIGURE 1 - DEFENDER MINING COMPANY, CUSTER COUNTY, COLO. DMEA 2517

FILE COPY
SURNAME:

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

140

Corbett
ackone
Hofflund
Keating
Griswold
Chamlin
Selfridge

FEB 19 1953

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

Re: Defender Mining Company
Docket No. DMEA-2517
Contract No. Idm-E413
(Lead-Zinc)

Dear Mr. King:

Reference is made to your memorandum of February 3, 1953, to the Administrator enclosing an amended contract for our approval. In place of this, we are returning for execution by the operator and yourself six copies of an amendment to the original contract, drawn in this office, which I trust meets with your approval.

The regular Government Performance Bond, Standard Form 25, Revised November 1950, will be acceptable. A sample copy thereof is enclosed for your information.

Sincerely yours,

George C. Selfridge (NB)
Chairman, Operating Committee

Enclosures

Approved:

J. H. Hedges (NB)
Member, Bureau of Mines

S. M. Lemmon (NB)
Member, Geological Survey

AEKane/ema/2-13-53
cc: Mails & Files
Adm. R. File
Op. Comm.
Mr. Hedges
Mr. Thayer
J. L. Hofflund
A. E. Kane
Chron.
Pending
W. R. Griswold

J.H. 2-19-53

FILE COPY
SURNAME:

Keating

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

N.S. in P.R.

DMEA-Base Metals Div.

3669 AGKeating/bjl 2616

February 12, 1953

W. H. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado

Reurtt February 11, 1953 regarding status amendment to contract No. Idm-E413, Docket No. DMEA-2517, Defender Mining Company. An amendment is being prepared by the Chief Counsel and we will expedite it as much as possible; probably be ready to send out first of next week.

W. R. Griswold, Chief
Base Metals Division
Defense Minerals Exploration Administration

AGKeating/bjl

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals Div.
Audits
Chron.

Mr. C O Mittendorf
Feb 11, 1953
10:45 A.M.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 11 1953

DN 235 BUREAU MINES 2-11-53 8-45 AM

C O MITTENDORF

OPERATOR HAS REQUESTED INFORMATION REGARDING STATUS OF OUR REQUEST FOR APPROVAL OF AMENDED CONTRACT IDM-E413, DOCKET NUMBER DMEA 2517 DEFENDER MINING COMPANY WHICH WAS SUMXXXX SUBMITTED ON FEBRUARY 3,1953. PROJECT OPERATIONS ARE SUSPENDED AND IMMEDIATE ACTION IS NECESSARY.

W H KING

Denver, Colo.

FEB 11 11 09 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON D. C.

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

RECEIVED
FEB 6 - 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

February 3, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 5 1953

Memorandum

To: C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2517, Contract Idm-E413, Defender Mining Company

Enclosed for your approval are six copies of an amendment to Contract No. Idm-E413. Also enclosed is a copy of a letter, dated January 29, 1953, from Mr. Roy O. Pratt, Defender Mining Company, regarding a bond.

The Defender Mining Company was unable to obtain Owner's Consent to Lien on the "Major Claim"; therefore the core drilling was excluded from the original contract. The Defender Mining Company desires to obtain a bond to guarantee performance by the operator, all of its obligations, and undertakings under the Exploration Project Contract.

In a letter, dated, December 17, 1952, the Chief Counsel states as follows:

> "All that Mr. Pratt has to do is to go to whatever bonding company he selects, present a copy of his proposed exploration contract, and ask the company to issue a suitablebond to guarantee performance by the operator, all of its obligations, and undertakings under the Exploration Project Contract."

The bonding company has requested specific information regarding the contract which is to be made part of the bond. We, therefore, request that you approve the enclosed contract subject to the receipt of a satisfactory bond. Please advise if the regular Government Performance and Payment Bond, Standard Form 25 and 25A, would be acceptable.

The Defender Mining Company has completed all of the work athorized to date under the terms of Contract No. Idm-E413, and would appreciate a prompt decision.

John F. Shaw, for
W. H. King

Enclosure

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

[redacted]

Keating
Belly

224 New Customhouse
Denver 2, Colorado

January 30, 1953

Mr. Roy O. Pratt
Defender Mining Company
P. O. Box 699
Enid, Oklahoma

Re: Docket DMEA 2517
Contract Idm-E413

Dear Mr. Pratt:

This is in reply to your letter dated January 26, 1953, regarding core drilling on the Major claim.

You cannot commence work on the Major claim under this contract until such time as you produce a suitable bond to guarantee performance of all your obligations and undertakings under the exploration project contract. We do not believe that a 7/8 inch core would be suitable for doing the proposed diamond drilling. It would be preferable to use a BX bit. The driller should be familiar with methods recommended for coring in soft material. It may be necessary to use a special type core barrel which is adapted to coring in soft material. If suitable equipment is not used for drilling these holes you will not obtain satisfactory core recovery and will not be eligible for reimbursement of our pro rata share of the expenses.

When contract Idm-E413 is amended to provide for the core drilling we will also extend the life of the contract.

Very truly yours,

W. H. King

W. H. King
Executive Officer, DMEA
Field Team, Region IV

JFS:jp
cc Contract
Chron
COMittendorf (2) w/copies incoming ltr
WMTraver " " "
HHKoschmann (2) " " "

January 26, 1953

United States Department of the Interior
224 New Custom House Building
Denver 2, Colorado

Re: Docket #DMEA-2517
Contract IDM-E 413
Defender Mining Company

COPY

Attention: Mr. W. H. King

Dear Mr. King:

I received your letter concerning the expiration date of the above contract. As you know, we have completed the underground portion of this contract but have been delayed in beginning the core drilling exploration due to difficulties encountered in securing the Owners' Consent to Lien. This difficulty has been corrected but we are now having trouble locating a drill and competent operator.

We would like to request an extension of this portion of the above contract until May 10, 1953. While we were in Colorado last week the only available drill we were able to locate takes a 7/8" core instead of the 1 1/8" core we discussed with you. We contacted people who had used this smaller drill for this type of exploration and are informed that it is entirely adequate for the purpose. Assays are made both from the core and from the screening.

Would you please give consideration to amending our contract permitting the use of this smaller drill since we do have one with an operator located and could begin our work much sooner.

Yours very truly,

THE DEFENDER MINING COMPANY

ROP:mc

By: Roy O. Pratt

ROY O. PRATT

REAL ESTATE — LOANS — INSURANCE

BASS BUILDING
ENID, OKLAHOMA

[redacted]

January 29, 1953

Defense Minerals Exploration Administration
224 New Custom House Building
Denver 2, Colorado

Attention: Mr. W. H. King

Re: Contract #IDM-E413
Docket #DMEA 2517

Dear Mr. King:

We have secured approval on the bond to cover our work on the Major Claim. The bonding company proposes to issue the regular Government Performance and Payment Bond, standard form 25 and 25A. If you are acquainted with these bonds and they are not satisfactory, would you please advise me of the proper forms which have been used on similar cases.

The bonding company needs some specific information which is to be made a part of the bond and which we do not have, such as, the new contract number, the date of the contract covering this portion of the work and the amount. They suggested it might be possible for you to prepare this new contract and mail it to us for our signatures at which time it can be presented to them for examination then returned to you together with their bond to cover.

Yours very truly,

THE DEFENDER MINING COMPANY

ROP:mc

By: Roy O. Pratt

JJS

FILE COPY
SURNAME:

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

DEC 17 1952

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

Re: Defender Mining Company
Docket No. DMEA-2517
Contract Idm-E413
(lead-zinc)

Dear Mr. King:

Reference is made to your memorandum to the Administrator dated December 12, to which is attached a letter from Mr. Roy O. Pratt of Defender Mining Company to you dated December 9. Mr. Pratt wants to procure a surety company's bond in lieu of an Owner's Consent to Lien, and you ask to be notified "of the proper procedure for Mr. Pratt to follow in obtaining this bond."

All that Mr. Pratt has to do is to go to whatever bonding company he selects, present a copy of his proposed exploration project contract, and ask the company to issue a suitable bond to guarantee performance by the operator of all of its obligations and undertakings under the exploration project contract.

Very truly yours,

J. L. Hofflund

J. L. Hofflund
Chief Counsel

12/17/52
JLHofflund/mef/ema
cc: Mails & Files
H. F. Keller
Adm. R. File
J. L. Hofflund
Chron.

12-17-52

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

224 New Customhouse
Denver 2, Colorado

December 12, 1952

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA - 2517, Contract Idm-E413, Defender Mining Company (Lead-Zinc)

Enclosed is a copy of a letter from Roy O. Pratt requesting information on obtaining an acceptable bond in lieu of Owner's Consent to Lien. The field examiners approved the diamond drilling referred to on the Major Claim; however, it was excluded from contract Idm-E413 because the operator could not obtain the Owner's Consent to Lien.

Please notify us of the proper procedure for Mr. Pratt to follow in obtaining this bond.

W. H. King

W. H. King

Enclosure

RECEIVED
DEC 16 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

ROY O. PRATT

REAL ESTATE — LOANS — INSURANCE

BASS BUILDING
ENID, OKLAHOMA

[redacted]

December 9, 1952

Mr. W. H. King
United States Department of the Interior
DMEA 224, New Custom House Building
Denver 2, Colorado

Dear Mr. King:

We had a conference with Mr. Shireman Saturday morning concerning the lease we have from Dr. O. D. Campbell on the Major Claim which was a part of our original exploration project. Mr. Shireman approved the lease and it has now been mailed to Custer County for recording. We have photostatic copies to furnish you at the proper time.

We are anxious to have our original contract amended to again include the core drilling on the Major with us furnishing an acceptable bond in lieu of the Owner's Consent to Lien. We would like to furnish this bond through General Casualty Company of Seattle, Washington or the Maryland Casualty Company. Would you please advise us of the next step in getting this underway?

Yours very truly,

Defender Mining Company

s/ Roy O. Pratt

ROP:mc

Roy O. Pratt

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION 500

WASHINGTON 25, D. C.

NOV 17 1952

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

Re: Docket No. DMEA-2517 (Lead-Zinc)
Contract No. Idm-N413
Defender Mining Co.

Dear Mr. King:

We have your letter of October 31, 1952 concerning the request of Mr. Roy O. Pratt that the contract be amended to include the proposed drilling on the Major Claim which was excluded from the contract since the applicant was unable to obtain a suitable lease and Owner's Consent to Lien.

This administration may waive the required Owner's Consent to Lien on properties leased by mining companies when by so doing the Government's interests are fully protected by the other means such as a third person's guarantee of payment by the applicant or by the applicant obtaining a bond in the amount of the Government's participation. The applicant's own guarantee is accepted only when his financial standing and resources are such as to insure payment of the Government's claim in case of a default on royalty payments after a certificate of discovery has been issued.

In this case where nothing is known of the resources of the applicant, he should be requested to obtain a bond in the amount of $1,750.00 which is equivalent to the Government's participation in drilling 500 feet of diamond drill holes at $7.00 per foot. If the Applicant obtains the bond, the contract can be amended to include the 500 feet of drilling on the Major claim originally approved by the Field Team.

Sincerely yours,

Frank E. Johnson (NB)

Chairman, Operating Committee

APPROVED:

W. H. Hedges (NB)
Member, Bureau of Mines

E. L. McKnight (NB)
Member, Geological Survey

HFKeller/bw (written 11/13/52)
Copy to: Docket
Am. R. File
Op. Comm.
H. F. Keller (2)
Mr. Bishop
Mr. McKnight
Chron.

11-17-52

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 5 1952

224 New Customhouse
Denver 2, Colorado

October 31, 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMEA Docket 2517, Contract Idm-E413, Defender Mining Company (Lead-Zinc)

Enclosed is a copy of a letter dated October 24, 1952, from Roy O. Pratt, a partner in the Defender Mining Company. The work which Mr. Pratt refers to on the Major Claim was approved by the Field Team. However, he did not have a suitable lease on the property and was unable to obtain an Owner's Consent to Lien, therefore the Major Claim at Mr. Pratt's request was excluded from the contract.

We do not know anything regarding the resources of the Defender Mining Company and would not recommend waiver of the Owner's Consent to Lien unless they could obtain bond in the amount of the Government's participation on the Major Claim.

Please advise us as to the proper procedure in handling a request for waiver of Owner's Consent to Lien. We would also appreciate having your recommendations as to whether it would be more advisable, in the event the Owner's Consent to Lien was waived, to have the work on the Major Claim included in the present contract or a new contract.

W. H. King

W. H. King

Enclosure

October 24, 1952

United States Department of the Interior
Defense Minerals Exploration Administration
224 New Custom House Building
Denver 2, Colorado

Attention: Mr. W. H. King

Re: DMEA 2517
Defender Mining Company

Dear Mr. King:

You will recall my telephone conversation with you sometime ago concerning a part of the above project involving the work on the Major Claim. We are absolutely unable to secure the signature of the owner of this claim, to the Owner's Consent to Lien. We have a valid lease and option to purchase on this property, of which you have copies. We would like very much to do the core drilling work as approved under our application. I would like to submit the following proposals for your consideration and the approval of the Department which would enable us to complete this part of the project.

#1. Would you consider a signed agreement acceptable to the Department whereby the Defender Mining Company would be responsible for the repayment of the amount of the funds advanced in case ore was produced from this claim as a result of this exploration.

#2. We have an option to purchase one-half interest in this claim. Would the Department accept our Consent to Lien on this one-half interest.

We would prefer not to be forced to purchase this one-half interest at this time so request that, if possible, you accept our #1 proposal.

Yours very truly,

ROP:me

Roy O. Pratt

COPY

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

224 New Customhouse
Denver 2, Colorado

October 8, 1952

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2517, (Lead-Zinc) Defender Mining Co., Custer County, Colorado

Enclosed are the original and three copies of the final report on DMEA 2517.

The contract has been signed and is in effect.

John F. Shaw
for W. H. King

A. H. Koschmann

Enclosures

M-Site
Mem Rpt

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

Mining Division
Region IV

July 16, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2517, (Lead-Zinc) Defender Mining Co., Custer County, Colorado

Enclosed are nine copies of the final report on DMEA-2517 by C. M. Harrer of the Bureau of Mines.

The revised estimated cost of the project is $8,300.00. The proposed work consists of drifting 80 feet and raising 50 feet to explore a favorable area between the 225 and 150-foot levels of the mine as phase One. Phase Two, which would be carried on concurrently with Phase One, consists of diamond drilling six surface holes, a total of 500 feet to test the possibility of a repetition of the mineralized zone previously mined.

The examining engineer recommends approval of this project and we concur in his recommendation.

W. H. King

Reviewed by
DMEA OPERATING COMMITTEE
10-17-52
date

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

200 New Customhouse
Denver 2, Colorado

June 25, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2517, Defender Mining Company, Silver Cliff, Custer County, Colorado

Attached are 8 copies of the geologic report by E. N. Harshman ~~and 8 copies of the Summary, Conclusions, and Recommendations by E. N. Harshman and C. M. Harrer~~, covering DMEA Docket 2517--Defender Mining Company, Silver Cliff, Custer County, Colorado.

The Defender mine, worked almost continuously from 1936 to date, consists of a 232-foot inclined shaft and 1200 feet of lateral workings on 4 levels. The applicant proposes to explore the 150-foot and 225-foot levels of the mine to the west of the present workings by drifts and raises and do 450 feet of diamond drilling from the bottom of the shaft.

Lead-zinc veins occur in rhyolite that overlies pre-Cambrian granite and gneiss. Most of the production has come from a small area where at least four veins intersected, but small ore bodies have also been found where there was a significant change in either dip or strike of a vein. Harshman believes that exploration in the area west of the present workings may lead to the discovery of ore bodies either at points of significant change in either dip and/or strike, or at vein intersections. He, therefore, recommends that an exploration loan be approved, but recommends a modified and less expensive exploration program than that proposed by the applicant.

I concur in this recommendation.

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

Enclosures (8)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado

July 14, 1952

Memorandum

To: Acting Chief, Mining Division, Region IV

From: Chief, Colorado Branch, Mining Division, Region IV

Subject: DMEA 2517 (Lead-zinc), Defender Mining Company, Custer County, Colorado

Please find enclosed the original and eight copies of the revised "Summary, Conclusions, and Recommendations" on the above docket, by C. M. Harrer and E. N. Harshman; and of Harrer's revised engineering report.

Harrer in his revision recommends 80 feet of drifting and 50 feet of raising to explore a favorable area between the 225- and 150-foot levels of the mine as phase one, to be carried on currently with phase two of diamond drilling 500 feet in six surface holes to test the Mud vein westerly for possible repetition of mineralized zone previously mined. This is a considerable modification, both in amount of work and estimated cost requested by the applicant, and may not be acceptable. The revised estimated cost of the two phases is $8,300.00.

I concur with the recommendations.

The brochure furnished with the Region IV Field Team's instructions to make an examination is also enclosed.

W. M. Traver, Jr.

W. M. Traver, Jr.

Enclosures

WMT/bam

cc: 8
DMEA
Chron.

Board of Director
Data Bank
1952
Bureau of Mines
Denver, Colorado

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 2517, Defender Mining Company

Custer County, Colorado

Lead-zinc

C. M. Harrer, Mining Engineer
Bureau of Mines

E. N. Harshman, Geologist
U. S. Geological Survey

June 26, 1952

DMEA 2517

DEFENDER MINING COMPANY
CUSTER COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By C. M. Harrer
Mining Engineer
Bureau of Mines

and

E. N. Harshman
Geologist
U. S. Geological Survey

DMEA 2517

DEFENDER MINING COMPANY
CUSTER COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By C. M. Harrer and E. N. Harshman

The Defender Mining Company, Silver Cliff, Colo., has applied under the Defense Minerals Exploration Act of 1950 for assistance in exploring for new lead-zinc ore bodies in the Defender mine. The company has four claims under lease, located in sec. 8, T. 22 S., R. 72 W., Custer County, Colo. The mine workings consists of a 232-foot inclined shaft and 1,200 feet of lateral workings on four levels.

The mine is in an area of early Tertiary volcanic rocks underlain by pre-Cambrian granite and gneiss. Mineralization occurred in rhyolite along a well-defined fault known as the Mud vein. Ore-bearing solutions deposited galena, sphalerite, pyrite, quartz, and minor amounts of gold, silver, copper, and barite. The ore minerals occur in narrow stringers along fault zones or as cementing material in brecciated rock. An oxidized zone extends from the surface to a depth of about 80 feet. Structural control was dominant in ore emplacement.

The Defender mine has been worked almost continuously from 1936 to date. Available records show that 3,507 tons of hand-sorted lead carbonate ore and 1,330 tons of hand-sorted lead and zinc sulfide ore have been produced. The carbonate ore averaged 0.01 ounce gold and 10.1 ounces silver per ton, 13.5 percent lead, and 0.4 percent zinc. The sulfide ore averaged 0.02 ounce gold and 3.6 ounces silver per ton, 6.9 percent lead and 7.49 percent zinc; it contained 0.5 percent non-sulfide lead and zinc.

The Defender mine workings are close to the northern boundary of the property, and, consequently, only a limited amount of prospecting is advisable.

The applicant proposed an exploration program, in Defense Minerals Exploration Administration docket 2517, which included 950 feet of drifts, 500 feet of raises, and 450 feet of diamond-drill holes at a total cost of $44,265.00. This program has been reduced to 80 feet of drift, 50 feet of raise, and 500 feet of diamond drilling. The estimated cost of the revised program is $8,300.00 and the Government's share will be $4,150.00. It should be completed within 1 month's operation. It appears unlikely that exploration in the Defender mine will lead to discovery of large quantities of lead-zinc ore. At best, the mine will be in the 1,000-tons-a-year class, shipping hand-sorted ore to the nearest custom mill or smelter. However, in view of the past production or ore from the carbonate and sulfide zones and the possibility of discovering small ore bodies west of the present workings, it is recommended that a loan of $8,300.00 (Government participation--50 percent) be granted.

DEFENDER MINING COMPANY

SILVER CLIFF

CUSTER COUNTY, COLORADO

DMEA DOCKET 2517

Geologic Report

By E. N. Harshman
U. S. Geological Survey

DEFENDER MINING COMPANY
SILVER CLIFF, CUSTER COUNTY, COLORADO

INTRODUCTION

The Defender Mining Company, Silver Cliff, Colorado, has applied for assistance in exploring for new lead-zinc ore in the Defender mine. The company has 4 claims under lease in Sec. 8, T. 22 S., R. 72 W., about 1½ miles northwest of Silver Cliff, Custer County, Colorado.

The property was examined on May 19-20, 1952, in company with M. R. Brock of the U. S. Geol. Survey and C. M. Harrer of the U. S. Bureau of Mines. At the time of examination all mine workings shown on fig. 5 were accessible.

The Defender mine is developed by a 232 foot shaft, inclined 70° to 74° northward, and about 1200 feet of lateral workings on 4 levels (fig. 5). The applicant proposes to explore the ground to the west of the present mine workings by 250 feet of drifting on the 150 foot level, 700 feet of drifting on the 225 foot level, 500 feet of raising at unspecified points, and 450 feet of diamond drilling from the bottom of the shaft. The applicants' estimated cost of this exploration is $44,265 (Government participation 50%). This program has been revised to include a total of 80 feet of drifting, 50 feet of raising, and 500 feet of diamond drilling estimated by the U. S. Bureau of Mines to cost $8,300.

GEOLOGY

The Defender mine is located on the west central edge of the Silver Cliff Plateau, a low rolling plateau-like elevation lying between the

town of Silver Cliff and the Blue Mountains. According to Whitman Cross (1895-96), this plateau occupies the site of a former lake basin eroded in pre-Cambrian granite and gneiss. Early Tertiary volcanic activity gave rise to a thick series of tuffs and rhyolitic flows which filled the lake basin and formed a volcanic cone. Subsequent erosion reduced the area to its present low relief.

S. F. Emmons (1895-96) reports that vein deposits occur in the rhyolite and in the underlying rocks but that no ore has been mined from the granite or gneiss. Most of the ore mined prior to the Emmons report had come from the oxidized zone which extends from the surface to a depth of about 80 feet. Since that time some production has resulted from exploration of primary sulfide ore bodies.

The Defender mine is in an area of rhyolitic flows, 150 to 250 feet thick and dipping 10° to 20° to the south. The flows overlie a thick series of pyroclastic rocks which occupy much of the Silver Cliff area. All of the present mine workings appear to be in rhyolite although the westernmost workings on the 225 level may have penetrated rhyolitic tuff. Mineralization occurred along a well defined fault, locally called the "Mud vein," and along the many branches or splits from it (fig. 5). The Mud vein dips 60° to 80° north and has an average strike of N. 80° E. Abrupt changes of dip and strike are common.

The veins were formed by at least two stages of mineralization. During the first stage the wall rock was silicified and some pyrite was deposited. The known orebodies were formed during the second stage when ore bearing solutions deposited galena, sphalerite, quartz, and minor amounts of copper, gold, silver, and barite. Vein widths range from a

fraction of an inch to several feet and in the glory hole area where several veins intersect (Section A-A fig. 5) an ore body 20 or more feet wide was mined.

Sulfides occur as narrow stringers rarely over 2 to 3 inches wide. In the wide portions of the veins the sulphide stringers are separated by quartz gangue, gouge, or altered rhyolite. One exception was noted on the 150 foot level, beneath the glory-hole, where galena and sphalerite occurred as a cementing material in brecciated rock.

Ore deposition was controlled by structure, rather than rock composition, and replacement was unimportant. The only sulfide mineralization of economic importance was found at vein intersections or at points where there was a significant change in dip or strike of the vein. There appears to be no decrease in the strength of the vein, or change in the character of the sulphide ore, between the 75 foot and 225 foot levels.

ORE RESERVES

Essentially all ore developed by past exploration has been mined. By careful mining and hand sorting a few hundred tons of carbonate and sulfide ore might be recovered from some of the old stopes.

CONCLUSIONS AND RECOMMENDATIONS

The Defender mine has produced about 5,000 tons of lead-zinc-silver ore from the oxidized and sulfide zones. This ore averaged 8.3 ounces Ag per ton, 11.7% Pb, and 3.5% Zn. Detailed production figures are given in the engineering report. Most of the production has come from

the glory hole area where at least four intersecting veins combined to produce an ore body 5 to 20 feet wide and some 100 feet long. Minor ore bodies have been found where there was a significant change in either the dip or strike of a single vein. It is probable that exploration in the area to the west of the present workings will lead to the discovery of minor ore bodies on the Mud vein at points of change in dip or strike. Moderate sized ore bodies may be found if geologic conditions similar to those in the glory hole area are encountered in the unexplored area to the west of the present workings.

The following 2 stage exploration program is recommended:

A. First stage

1. Extend the 225 foot level westerly along the vein for a distance of 40 feet ("A" figs. 3 and 4).

2. Raise from the 225 foot level in the vicinity of point "B" (figs. 3 and 4) to explore the vein below the ore on the 150 foot level. A Maximum of 50 feet of raise is allowed. If ore is encountered in the drift extension on the 225 foot level, no raise will be allowed.

3. If no ore is found in the 225 foot level drift extension but is encountered in the proposed raise, 40 feet of sub-level drifting in the lower part of the ore body is allowed. However, if ore is encountered in the raise immediately above the 225 foot level, no sub-level drifting will be allowed.

4. Explore the oxidized zone of the Mud vein, west of the 75 foot level workings, by 6 diamond drill holes as shown at "C" on figs. 3 and 4. Holes should be drilled to intersect the vein at a depth of about 45 feet. The combined length of all drill holes should not exceed 500 feet.

B. Second stage

If significant quantities of ore are found by drilling in the oxidized zone of the Mud vein, exploration below such ore should be accomplished by drifting west on the 150 foot level; funds to be made available in a subsequent loan.

Although the Defender mine will never be other than a small producer the above program will probably lead to the discovery of some lead-zinc ore. It is, therefore, recommended that a loan for $8,300 (Government participation 50%) be granted to the Defender Mining Company.

REFERENCES

Cross, Whitman, Geology Silver Cliff and the Rosita Hills, Colorado: U. S. Geological Survey 17th Annual Report, pp. 263-403, 1895-96.

Emmons, S. F., The Mines of Custer County, Colorado: U. S. Geological Survey 17th Annual Report, pp. 405-472, 1895-96.

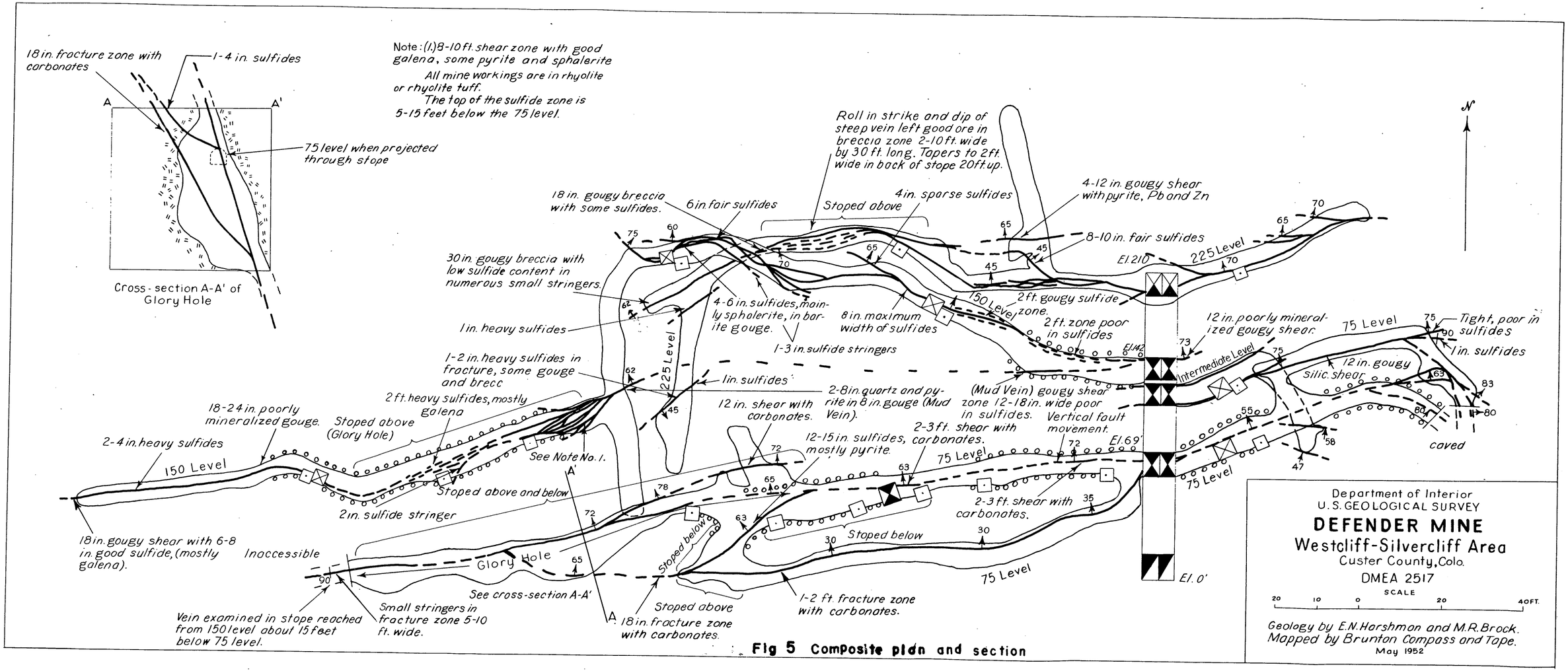


Fig 5 Composite plan and section

DMEA 2517

DEFENDER MINING COMPANY
CUSTER COUNTY, COLORADO

Engineering Report

By C. M. Harrer
Mining Engineer
Bureau of Mines

DMEA 2517

DEFENDER MINING COMPANY
CUSTER COUNTY, COLORADO

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* See figure following geologic report.

DMEA 2517

DEFENDER MINING COMPANY
CUSTER COUNTY, COLORADO

ENGINEERING REPORT

By

C. M. Harrer

INTRODUCTION

R. O. Pratt, partner-lessee in the Defender mine, Custer County, Colo., has applied for an exploration loan of $44,265.00 under the Defense Minerals Exploration Act of 1950. The applicant, a partnership known as the Defender Mining Company, proposed to explore the 150- and 225-foot levels of the Defender mine for lead-zinc-silver ore with 950 feet of drift and crosscut, 500 feet of raise, and 450 feet of underground core drilling. Site of the proposed exploration is near the north boundary of the property.

The mine was examined by a Bureau of Mines - Geological Survey examining team on May 20, 1952.

ACKNOWLEDGMENTS

The examination was made jointly with E. N. Harshman and M. R. Brock, of the U. S. Geological Survey. E. F. Stacy, partner in the Defender Mining Company, was very helpful both as a guide and as a source of information. Statistics on production were obtained from Stacy and the Statistics Branch, Economics Division, Region IV, Bureau of Mines.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Defender mine is in the east half of sec. 8, T. 22 S., R. 72 W., 6th P. M., Hardscrabble Mining District, Custer County, Colo., (fig. 1) at about 8,000 feet altitude. It is one mile north of Westcliffe, county seat of Custer County, and 40 miles from Texas Creek, the nearest shipping point on the Denver and Rio Grande Western Railroad. It is also about 140 miles over good highways from Leadville, site of the Resurrection Mining Company mill and the American Smelting and Refining Company smelter. The terrain in the vicinity of the mine is gently rolling and devoid of timber. Snowfall is very moderate and year-around operations can be readily maintained.

HISTORY AND PRODUCTION

The property has been worked more or less continuously from 1936 to date, first as a source of argentiferous lead carbonate ore and later for galena and sphalerite which appears prominently about 80 feet below the surface. Total verified production from 1936 to date is about 5,000 tons of sorted ore averaging 0.013 ounce gold and 8.3 ounces silver per ton, 11.7 percent lead, 3.5 percent zinc, and a trace of copper. Production was predominantly lead carbonate ore above the 75-foot level.

During the period 1948 through 1952 operation, 1,330 tons of sorted sulfide ore, galena-sphalerite, from the shaft and the 150- and 225-foot levels averaged 0.02 ounce gold and 3.6 ounces silver per ton, 6.9 per cent lead and 7.4 percent zinc. This was milled by the Resurrection Mining Company at Leadville, Colo.

The following table lists production from the Defender and Blue Eagle claims.

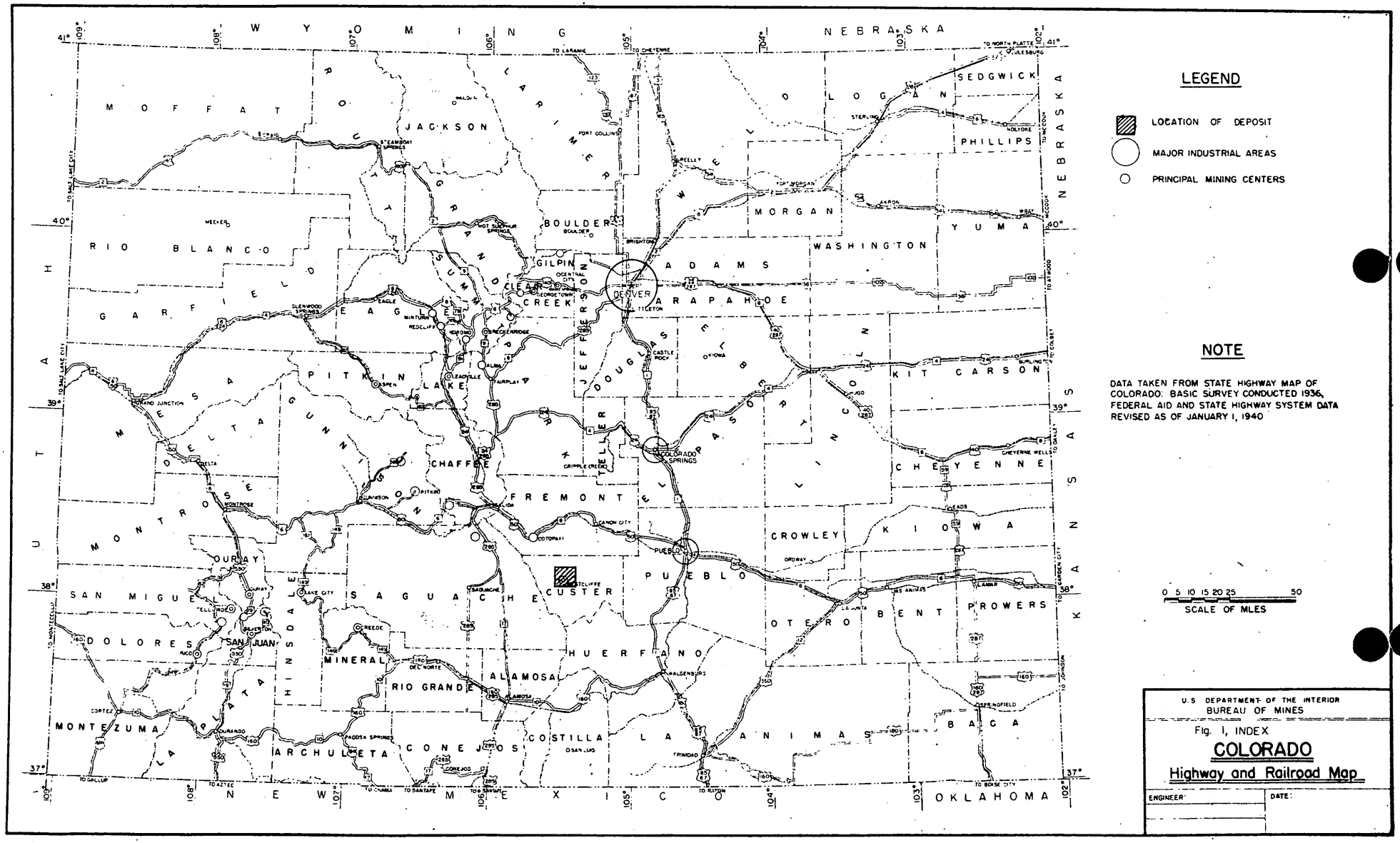


FIG. 1 – LOCATION MAP, DEFENDER MINE; DEFENDER MINING CO., CUSTER CO., COLO., DMEA-2517

Year	Dry tons ore	Au	Ag	Pb	Zn	Cu	Description
1936	107	3.92	2,513	38,705	-	545	Blue Eagle carbonate ore
1937	330	5.63	6,419	111,699	2,633	-	Defender carbonate ore
1938	45	2.80	1,399	23,787	-	-	Defender carbonate ore
1939	45	-	1,284	17,843	-	-	Defender carbonate ore
1940	59	-	1,180	31,919	1,500	-	Defender carbonate ore
1941	168	-	2,221	68,324	3,538	-	Defender carbonate ore
1943	20	-	149	7,458	118	-	Defender carbonate ore
1944	120	3.40	2,217	63,588	-	-	Defender carbonate ore
1945	795	5.00	6,118	208,353	-	187	Defender carbonate ore
1946	907	3.00	5,695	185,328	20,000	238	Defender carbonate ore
1947	438	3.00	3,000	79,728	-	-	Defender carbonate ore
1948	386	7.00	1,455	66,922	55,814	-	Defender sulfide ore
1948	238	3.00	1,571	53,891	-	-	Defender carbonate ore
1949	707	12.00	2,348	89,344	97,708	-	Defender sulfide ore
1949	98	2.00	510	16,439	-	-	Defender carbonate ore
1950	29	1.00	322	9,995	-	-	Defender carbonate ore
1951	80	2.37	253	8,942	9,705	-	Defender sulfide ore
1951	108	2.50	693	29,513	2,122	-	Defender carbonate ore
1952	157	5.08	724	18,584	34,107	-	Defender sulfide ore
16 years	4,837	61.70	40,071	1,130,362	227,245	970	

Total

Carbonate 3,507 (1936 to 1947 and 1948, 1949, 1950, and 1951)

Sulfide 1,330 (1948 through 1952)

OWNERSHIP AND EXTENT

The Defender Mining Company was organized in 1950 as a partnership whose principals and interests as shown in the application are as follows:

Partner	Address	Interest
R. D. Pratt	Enid, Okla.	1/4
W. L. Stephenson	Enid, Okla.	1/8
W. L. Stephenson, Jr.	Enid, Okla.	1/8
R. S. Baker	Enid, Okla.	1/4
E. F. Stacy	Silver Cliff, Colo.	1/12
W. H. Cody	Silver Cliff, Colo.	1/12
Garrett Cody	Silver Cliff, Colo.	1/12

The company controls four mining claims (fig. 2), known as the Defender, Blue Eagle, Major, and Bismuth, through lease and bond agreements with option to purchase. Royalties are stipulated as 10 percent of the net smelter returns but not less than $1.00 per dry ton. Pertinent data follows:

Claim	Kind	Owner-lessor	Interest	Lessee	Termination of Lease
Defender	location	W. J. Kettle W. A. Walker Silver Cliff, Colo.	Entire	Defender Mining Company	March 27, 1955
Blue Eagle	location	J. T. Stroehlke Silver Cliff, Colo.	1/2	Defender Mining Company	October 6, 1955
Blue Eagle	location	W. J. Kettle W. A. Walker Silver Cliff, Colo.	1/2	Defender Mining Company	March 27, 1955
Major	Patented survey no.18474	O. D. Campbell Mary Campbell Bradley, Ark.	Entire	Defender Mining Company	August 8, 1956
Bismuth	Patented survey no.18474	O. D. Campbell Mary Campbell Bradley, Ark.	Entire	Defender Mining Company	August 8, 1956

All title bonds and leases are recorded in the Custer County court house.

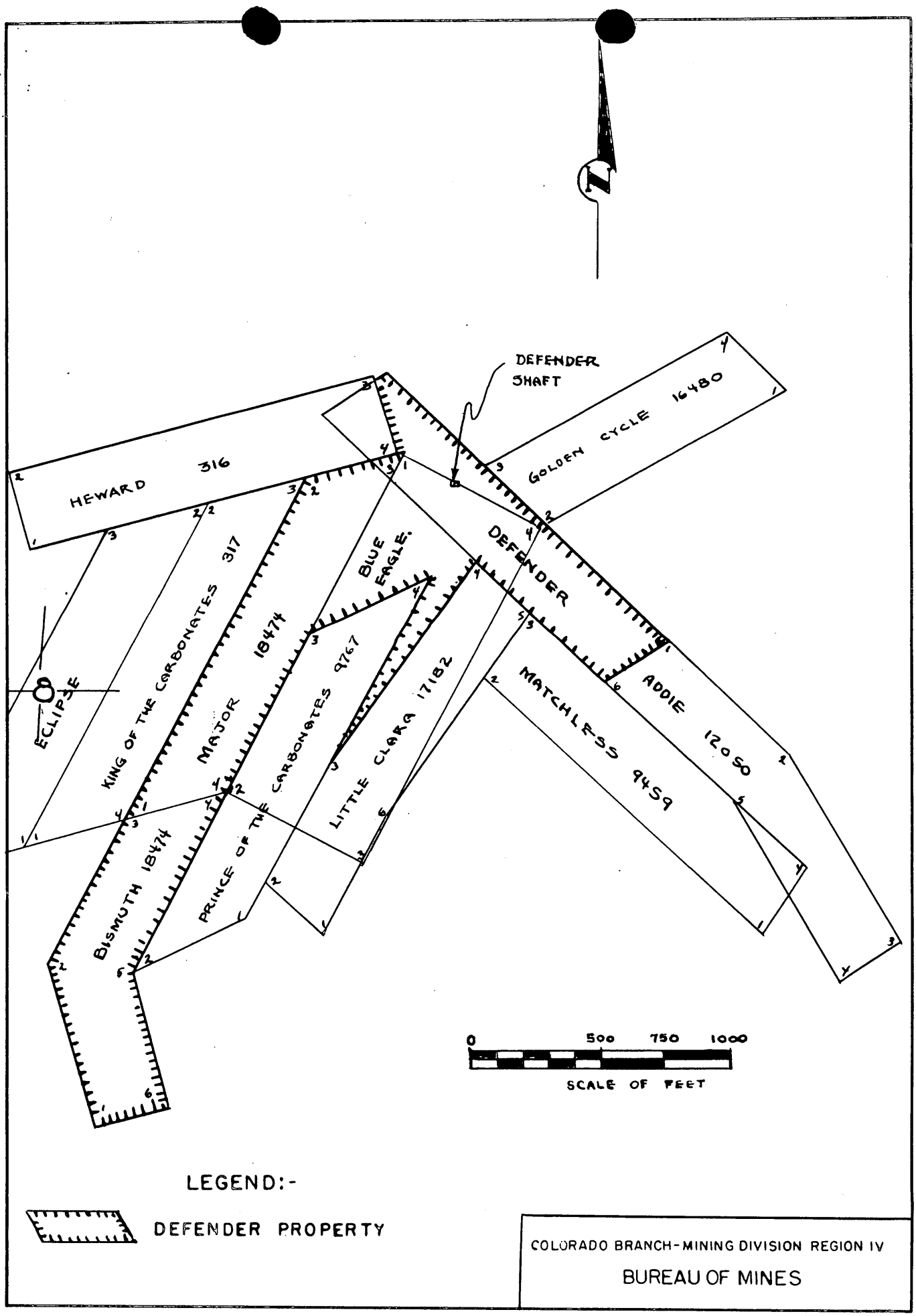


FIG. 2- CLAIM MAP, DEFENDER MINING CO., CUSTER CO., COLO., DMEA-2517.

DESCRIPTION OF THE DEPOSITS

Mineralization along the main vein develops ore shoots at changes in dip and strike and at vein intersections. A distinct carbonate-oxide zone is traceable from the surface to a depth of about 80 feet. Ore above this 80-foot horizon was predominantly lead carbonate with a minor amount of zinc carbonate, gold, and silver. The verified production of 3,507 tons of sorted ores from this zone averaged 0.01 ounce gold and 10.1 ounces silver per ton, 13.5 percent lead, and 0.4 percent zinc, with a trace of copper.

Below the 80-foot horizon, ore occurs chiefly as galena, sphalerite, and pyrite with minor amounts of gold and silver in a sulfide zone which has produced 1,330 tons of sorted ore averaging 0.02 ounce gold and 3.6 ounces silver per ton, 6.9 percent lead, and 7.4 percent zinc.

Figure 3 shows the origin of ore shipments and sampling by the operator (samples 1-23, inclusive) and the Bureau of Mines (samples H550-H553, inclusive).

Ores occur as fissure filling with some cementing of local breccia in the enclosing rhyolite.

The width of the vein as a simple structure is indefinable and varies from less than 1 inch to 20 feet or more, depending on the development of the controlling structure. Ore is generally soft and moist throughout and readily mineable in open stopes with occasional stull support and backfilling with waste rock. Ore in the sulfide zone is generally soft and wet, with clayey gouge.

MINEABLE ORE RESERVES

Only a few hundred tons of mineable ore of possible milling grade are indicated under the present status of development. The future of the mine hinges on the results of proposed exploration.

PRESENT STATUS

Exploration and Development

The Defender Mining Company ceased operations as of April 1, 1952, due to lack of funds necessary to continue exploration. The last ore shipments, totaling 157 tons, were made in 1952 and consisted of sorted development rock in shaft excavation and a stope west of the shaft on the bottom or 225-foot level.

The mine (figs. 3 and 4 and fig. 5 with geologic report) is developed through a two-compartment shaft, 232 feet deep, which inclines 70° to 74° to the north, and is in very good condition. Mining operations were conducted on four levels through a total of 1,200 feet of drifts and crosscuts, as shown on figures 3 and 4. Underground equipment consists of 8-pound track, 2-inch air line, 1 1/4-inch water line and 8-inch metal fan pipe in place.

The 150-foot and 225-foot levels from which exploration is proposed are in good conditions, and faces from which exploration will begin can be cleaned up and placed in operating condition at small expense.

Mining and Milling Equipment and Other Facilities

The Defender Mining Company is well equipped to carry on the proposed exploration program with a minimum of additional expenditure on equipment. The surface plant is complete with substantial headworks and buildings and is in operating condition.

Ore is hoisted from the mine in a skip and dumped in a sorting bin. From this bin it is fed to a sorting table where it is carefully separated by hand. Sorted ore is dropped to a shipping bin while waste rock is sorted into mine cars and transferred to the dump. Ore is trucked to the nearest custom mill or smelter at Leadville, 140 miles distant.

PROJECT PROPOSALS, WITH COSTS

Exploration and Development

Proposals by the Defender Mining Company

The Defender Mining Company proposed to explore the property through the Defender shaft, at a total cost of $44,265.00, with about 950 feet of drifts and crosscuts, 500 feet of raises, and 450 feet of diamond drilling. The company's description of intent, totals, and costs are not in harmony or accurate.

Essentially, the company proposed exploration of the western extension of the 150-foot level by drifting on the vein for 250 feet and raising towards the 75-foot level at favorable locations. The company also expected to crosscut the hanging wall on the 150-foot level above a similar crosscut on the 225-foot level.

The 225-foot or bottom level would be extended 500 feet westerly in a search for sulfide ore and raises put up from the level at favorable locations. The company will also explore a narrow high-grade stringer of galena and sphalerite southwesterly for 50 feet.

In addition, the extensions of the vein below the bottom or 225-foot level will be tested with three 150-foot diamond drill holes in the vein from the shaft bottom.

The following exploration program is recommended by the examining team instead of the operator's proposal and is outlined on figures 3 and 4.

Two-Stage Exploration Program Recommended by the Examining Team

A. First Stage

1. Extend the 225-foot level westerly along the vein a distance of 40 feet as shown at "A" (figs. 3 and 4).

2. Raise from the 225-foot level in the vicinity of point "B" (figs. 3 and 4) to explore the vein below the showing of ore on the 150-foot level. A maximum of 50 feet of raise is allowed. If ore is encountered in the drift extension on the 225-foot level, no raise should be allowed.

3. If no ore is found in the 225-foot level drift extension but is encountered in the proposed raise, 40 feet of sublevel drift is allowed in the lower portion of the ore body; however, if ore is encountered immediately above the 225-foot level, no sublevel drifting is allowed.

4. Explore the oxidized zone of the Mud vein west of the 75-foot level workings at a depth of 45 feet below the surface with six diamond drill holes as shown at "C" (figs. 3 and 4), total drillings not to exceed 500 feet which is believed to be a minimum footage basis for which a contract can be negotiated.

B. Second Stage

If significant quantities of ore are found by drilling in the oxidized zone of the Mud vein, exploration below such ore should include drifting west on the 150-foot level. Necessary funds would require a supplemental application and loan or a contract amendment.

Examining Team's Project Proposal

The Defender Mining Company expects to operate two shifts daily, 6 days a week. Cost of drifting and raising are believed to be approximately the same and are so considered.

Items	Amount
Drifting	80 feet
Raising	50 feet
Diamond drilling	500 feet

Project Costs

Progress is estimated at 6 feet of drift or raise per day on a two shift, 6-day-week basis, 25 days per month.

	Cost per day (including overtime)	Cost per foot	Total cost of project
Labor:			
2 Drillers at $1.50 per hour	$ 26.00		
4 Trammers at $1.25 per hour	43.33		
2 Hoistmen at $1.50 per hour	26.00		
2 Topmen at $1.00 per hour	17.33		
Total	$112,66	$18.78	$2,441.40
Supervision:			
1 Foreman at $400.00 per month		$ 3.08	$ 400.00
Technical Services:			
Engineering		$ .30	$ 39.00
Operating Material and Supplies:			
Timber	$3.00		
Explosives	2.55		
Pipe	.85		
Track	.80		
8-inch, galvanized, ventilation pipe, 100 feet	.77		
Miscellaneous: coal, drill steel, carbide, lubricants, small tools	.45		
Electric power	.43	$ 8.85	$1,150.50
Operating Equipment:			
Depreciation for 1 month at $110.57 (see equipment list in section on Proposed Financing)		$ .85	$ 110.57
Miscellaneous:			
Repairs to equipment	$3.00		
Sampling and analysis (includes diamond drill core)	0.50		
Payroll taxes	1.61		
Accounting at $25.00 per month	0.20	$ 5.31	$ 690.30
Total costs, drifting and raising		$37.17	$4,831.77

* Total cost, diamond drilling 500 feet, including core boxes, sampling and handling--$7.00 per foot $3,500.00

*500 feet is believed a minimum footage for which a contract can be negotiated.

Recapitulation

Item	Location	Feet	Cost
Proposed drifting	225-foot level	40	$1,486.80
Proposed sublevel drift	above 225-foot level	40	1,486.80
Proposed raise	above 225-foot level	50	1,858.50
Total underground exploration		130	$4,832.10
Proposed core drilling	Surface, oxidized zone	500	$3,500.00
Total			$8,332.10
Total estimated cost of exploration program recommended by the examining team, rounded to			$8,300.00

New Equipment and Facilities

No new equipment or facilities are required to prosecute the exploration and mining program.

Transportation

The property is near both Silver Cliff and Westcliffe, Colo., and employees will furnish their own means of transportation. Ready access is had to industrial centers at Canon City, Salida, Leadville, et cetera, by truck and car. The nearest shipping point is Texas Creek on the Denver and Rio Grande Western Railroad, 24 miles north of Westcliffe.

Manpower

Sufficient labor can be employed locally. The crew employed, with anticipated wage scale, is shown in the labor schedule under project costs.

Power

The mine is completely electrified and power is supplied by the Southern Colorado Power Company at a base charge of $0.015 - $0.0023476 per kilowatt-hour. The property will use about 2,500 kilowatt-hours a month, with bills averaging $65.00.

Water

There is ample water for the project and contemplated mining operations from the mine and the Silver Cliff city water supply. No milling operations are contemplated.

Other

R. O. Pratt of Enid, Okla., partner in the Defender Mining Company, expects to carry out necessary accounting. In any event, $25.00 monthly is allowed for this item. Engineering is allowed at a total of $200.00. Twenty control assays for lead-zinc-silver are also included.

Royalties

Ten percent of the net smelter returns is stipulated, with royalty to be not less than $1.00 per dry ton of ore.

PRODUCTION PLAN

Time Schedule for Completion of Project

Progress is estimated at 6 feet of drift, crosscut, or raise per day, on a two-shift, 6-day-week basis, 25 days per month. The project should be completed in 1 month, with underground exploration and diamond drilling conducted simultaneously.

Rate of Production

This property will always be a small producer of hand-sorted, moderate grade ores. Ore from the shallow carbonate-oxide zone will necessarily have to be shipped directly to the smelter and sold, while ore from the sulfide zone must be sold directly to the Resurrection Mining Company custom mill at Leadville. Under present conditions, production of 1,000 tons of ore yearly is optimistic.

Mining and Milling Methods and Costs

Mining has been carried on in open stopes with occasional stull support. The vein material is closely sorted underground and on the surface. Carbonate ores were shipped directly to the American Smelting and Refinining Company smelter at Leadville. Sulfide ores, galena and sphalerite, were also closely sorted and shipped to the Resurrection Mining Company mill at Leadville. Ores will be trucked to Leadville, 140 miles distant, at $5.00 per ton and sold at prevailing schedules to both mill and smelter. Last milling charges were $3.50 per ton, and base smelter charges were $9.00 per ton.

PROPOSED FINANCING

The Defender Mining Company proposes to finance its share of the exploration costs with labor contributions from the partnership, a depreciation allowance on its equipment, and cash contribution.

Following is a list of equipment on the property for which a monthly depreciation allowance will be expected, and the amount, based on present value, depreciated in 60 months.

The Defender Mining Company Depreciation Allowance

Unit	Description	Condition	Present Value	Allowed depreciation monthly
1	Vulcan second motion, geared, electric hoist, 15-inch by 23-inch, complete with 15 hp, 819 r.p.m. Westinghouse motor, G.E. type K10A controller and accessories	used	$2,000.00	$ 33.33
1	Gardner-Denver, 8 by 8, single stage air compressor, 120 c.f.m. capacity, driven by a 20 hp. Fort Wayne electric motor. Includes a 1-inch centrifugal cooling water pump driven by a 1/4 hp. motor	used	1,335.00	22.25

Unit	Description	Condition	Present value	Allowed depreciation monthly
1	Boston ventilation blower, 35-inch, complete with 3 hp. Wagner electric motor	used	$ 300.00	$ 5.00
5	Mine cars, end-dump	used	500.00	8.33
1	Ingersoll-Rand electric sinker pump, model A, serial no. 0147502, 200-foot head, 40 g.p.m., 3,485 r.p.m., 10 hp. motor	new	400.00	6.66
1	Ingersoll-Rand jackhammer on a shell, 50-pound	used	850.00	14.17
1	Sullivan DP-33 jackhammer	used		
1	Atlas drill and jackleg, complete	used		
3	Ingersoll-Rand stopers	used	750.00	12.50
	Shop equipment, including smithing tools, pipe tools, woodworking and maintenance tools	used	500.00	8.33
	Total		$6,635.00	$110.57

CONCLUSIONS

The Defender mine workings are close to the northern boundary of the property, as shown on figures 2 and 4. Only a limited amount of exploration work westward is advisable.

The greater portion of production and best values were taken from the carbonate-oxide zone which bottoms approximately 80 feet below the surface.

Galena and sphalerite occur beneath the carbonate zone, with appreciable reduction in silver and lead values.

Ore occurs in small local bodies controlled by either changes in dip and strike or vein intersections.

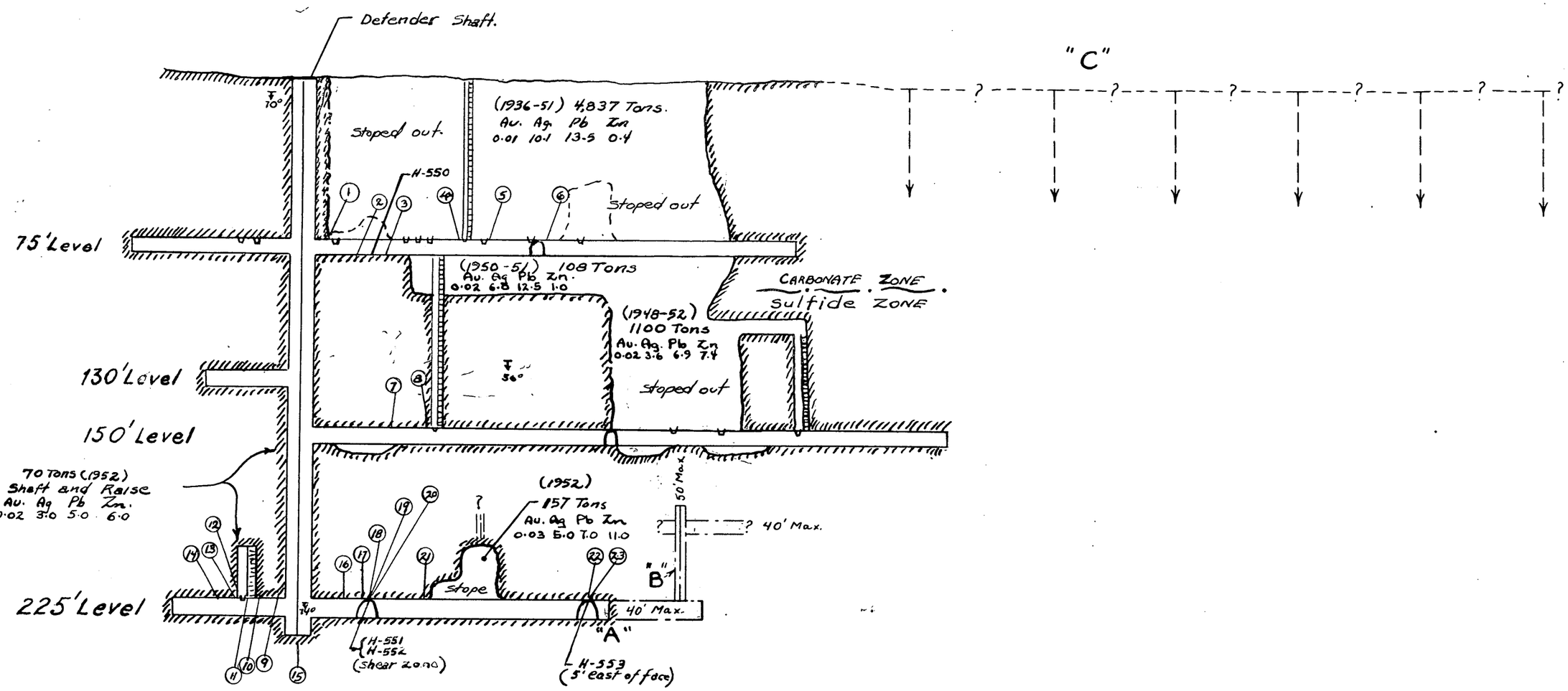
The most promising exposure of ore is in the floor of the 150-foot level under the stoped area near its end. Exploration under this zone on the 225-foot level is indicated.

The property will always be a very small producer of lead-zinc-silver ore which must be carefully sorted and sold directly to the nearest custom mill or smelter at Leadville. Production will probably never exceed 1,000 tons of ore per year.

The Defender mine will not contribute largely to the nation's ore reserves; however, the recommended exploration program appears justified by past production of ore from the carbonate-oxide and sulfide zones and the possibility of repetition and discovery of small ore bodies west of the present workings.

RECOMMENDATIONS

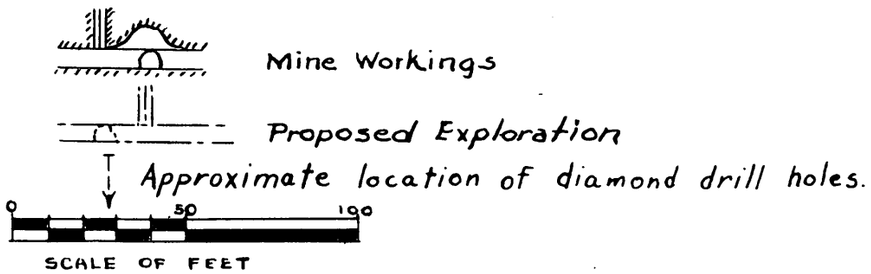
An exploration program consisting of 80 feet of drift, 50 feet of raise, and 500 feet of diamond drilling, is recommended for approval at a total cost of $8,300.00. U. S. Government participation will be 50 percent of this amount, or $4,150.00.



SAMPLING DATA:-

No.	Width	OZ/TON Au	OZ/TON Ag	Percent Pb	Percent Zn	
1	1.5'	-	15.2	8.7	4.0	75' Level.
2	0.8'	-	0.6	4.4	-	
3	2.0'	-	4.8	4.4	-	
4	0.3'	-	3.2	4.6	-	
5	1.3'	-	0.9	4.6	-	
6	1.0'	-	9.1	20.9	-	
7	0.3'	-	1.6	2.2	5.2	150' Level
8	0.3'	-	1.4	3.4	4.6	
9	0.5'	-	1.9	4.7	9.2	
10	1.9'	-	2.8	7.1	6.4	
11	1.7'	-	2.6	10.3	16.6	
12	0.9'	-	1.4	1.6	4.8	
13	0.3'	-	5.9	6.6	6.7	225' Level
14	0.25	-	2.6	6.5	8.0	
15	2.0'	-	2.4	4.6	10.3	
16	1.5'	-	0.9	4.6	3.5	
17	1.5'	-	1.4	1.6	2.8	
18	0.6'	-	1.2	1.4	6.0	In X.C. North
19	0.7'	-	1.1	1.8	5.2	
20	0.6'	-	1.1	1.8	5.2	
21	4.0'	-	6.0	13.8	28.0	stope.
22	0.2'	-	4.6	12.0	27.4	stringers in X C N.
23	0.2'	-	14.4	51.2	11.9	
H-550	0.8'	-	3.1	1.55	6.6	Bureau of Mines samples
H-551	0.7'	-	0.8	0.6	1.8	
H-552	1.5'	-	0.8	0.6	1.7	
H-553	0.9'	-	0.5	2.65	3.2	

Sos. 1-23 incl. by Defender Mining Co.



COLORADO BRANCH - MINING DIVISION - REGION IV

BUREAU OF MINES

FIG.3-DIP SECTION LOOKING SOUTH, DEFENDER MINE, DEFENDER MINING CO., CUSTER COUNTY, COLORADO · DMEA-2517

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

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
OCT 6 1952

224 New Customhouse
Denver 2, Colorado

October 3, 1952

REGISTERED 87394

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E413, Docket DMEA 2517, Defender Mining Company

Enclosed are three copies of Contract Idm-E413 and three copies of the Power of Attorney requested in the letter from Mr. Ellis dated September 26, 1952. The contract number has been placed on all six copies of this contract.

Copies of the contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

RECEIVED
OCT 29 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Defense Minerals Exploration Administration
Robert E. Adams

14X3923.970 Working Fund, Interior, DMEA
October 2, 1952
4:05 p.m.

W. H. King, Executive Officer, Region IV, 224 New Customhouse Bldg., Denver 2, Colorado

Assignment of Contract Number

REFER DOCKET DMEA-2517X DEFENDER MINE, CONTRACT NO. ASSIGNED IS [illegible]13.

p.s. in R. & R.

C. O. Mittendorf

ADMINISTRATOR

READams/meb
10/2/52
cc to: Adm. Reading File
Mails & Files Br.
Audits Division

OCT 6
Central Service Br.

FILE COPY
SURNAME:

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

Memorandum

October 1, 1952

To: Mr. Robert E. Adams
Chief, Reports and Statistics Branch

From: C. O. Mittendorf
Administrator

10/3/52

Subject: Issuance of contract number on DMEA-2517X - Defender Mine (lead-zinc)

During a phone conversation with King, of Region IV, he stated that he had received all copies of the subject contract, which was executed under his delegated authority, which we had returned without assigning a number for the reason that one of several operators had signed the contract as "attorney in fact" without proof that he possessed power of attorney to act in that capacity. King informed me that he has on record a satisfactory power of attorney which has been executed by the several partners, but that he neglected to forward a copy to us. He agreed to have a photostat made and send it to Washington for our files.

He inquired if we could not assign a contract number by teletype, since he has been needled several times, this week, by the operators for early action on the case. I advised him that we would teletype the contract number, and outlined to him the new procedure that we have adopted in similar cases. The total of the project is $4,799.60, on a 50/50 basis.

C. O. Mittendorf (fw)

COMittendorf/fw

cc: Admr. Reading File
Mails & Files
Base Metals Div.
Mr. Mittendorf

FILE COPY
SURNAME:

140

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

Keating
AEKane
JLHofflund
HFKeller

SEP 2 6 1952

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

Re: Contract Docket DMEA-2517,
Defender Mining Company
(Lead-Zinc)

Dear Mr. King:

This contract is returned for signature of all the members of the Operator partnership if they can be obtained. If these signatures are unobtainable, Roy O. Pratt should sign as a partner. He has not done this but signed as "attorney-in-fact" for the other partners. If he insists on leaving the contract signed this way, he should produce a power of attorney showing his authority to sign for the other members as their attorney-in-fact, and this power or a copy thereof should be attached to the contract.

When the contract is returned to us, a contract number will be assigned as requested.

Sincerely yours,

Ernest Wm. Ems (B.H.)

ACTING Chairman, Operating Committee

AEKane/mef/ema
9/24/52

S.H.
9-29-52

Approved:

C. H. Johnson (B.H.)
Member, Bureau of Mines

A. R. Kinkel Jr. (B.H.)
Member, Geological Survey

cc: Mails & Files
Adm. R. File
Oper. Comm.
Hedges
Thayer
H. F. Keller
A. E. Kane
J. L. Hofflund
Chron.

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

SEP 15 1952

224 New Customhouse
Denver 2, Colorado

September 10, 1952

REGISTERED
#82989

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, Field Team, Region IV

Subject: Contract Docket DMEA 2517, Defender Mining Company (Lead-Zinc)

Enclosed are six copies of an Exploration Project Contract between the Government and the Defender Mining Company. All copies have been signed by the applicant and by the Executive Officer, DMEA Field Team, Region IV.

Please assign a contract number and return the required number of copies of the contract to this office.

W. H. King

W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

July 31, 1952

BL

Mr. Roy O. Pratt - Amea 2517
Box 669
Enid, Oklahoma

Dear Mr. Pratt:

This is in reply to your letter dated July 23, 1952, regarding leases on the property of the Defender Mining Company.

We have the following documents:

Title Bond and Lease on an undivided one-half interest in the Blue Eagle Lode Mining Claim from J.T. Stroehlke to Roy A. Pratt.

Title Bond and Lease on the Defender and an undivided one-half interest in the Blue Eagle Lode Mining Claim between W.J. Kettle, Willard A. Walker and J.T. Stroehlke. This was assigned to Roy A. Pratt.

Title Bond and Lease on an undivided one-half interest in the Major and Bismuth Lode Mining Claims between O.D. Campbell, Mary Campbell, and the Defender Mining Company.

The proposed exploration project will involve the Defender, Blue Eagle and Major claims. It will be necessary for you to show that the Defender Mining Company either owns these claims or holds them under lease before we can complete a contract.

Very truly yours,

W. H. King

W. H. King
Executive Officer
Field Team, Region IV

JFS:jp
cc Subj
Chron
Secty. to Oper. Committee (2)
WMTraver
AHKoschmann (2)

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

224 New Customhouse
Denver 2, Colorado

July 16, 1952

Memorandum

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

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2517, (Lead-Zinc) Defender Mining Co., Custer County, Colorado

The application for Government assistance in exploration work estimated to cost $8,300, has been approved by us and a contract is being prepared.

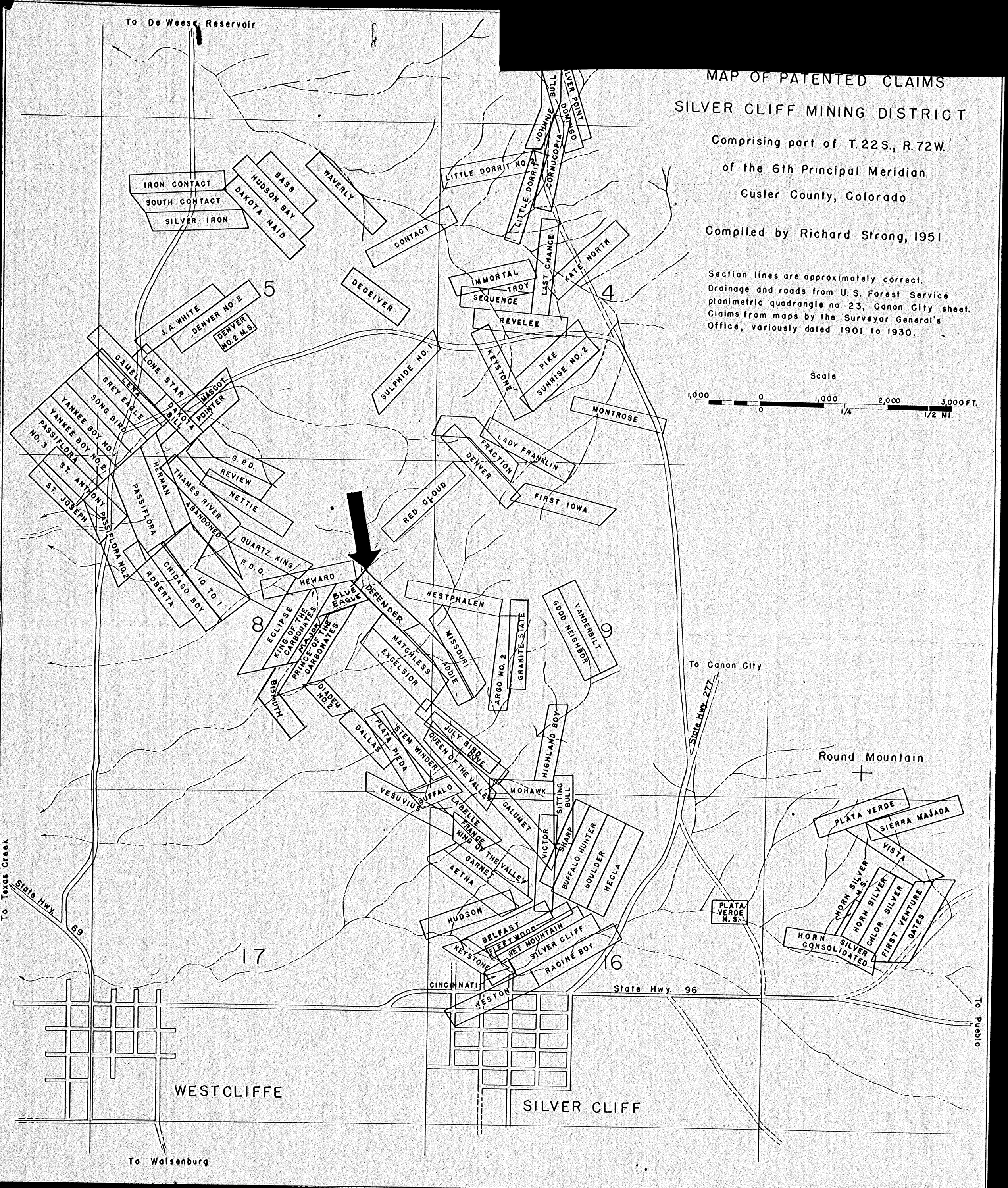
Government participation will be 50 percent, or $4,150.

Four copies of the Final Report will be forwarded when the contract is processed.

The original and one copy of Form 3b is attached.

W. H. King
W. H. King

Donald R. Macharen
for
A. H. Koschmann


MAP OF PATENTED CLAIMS
SILVER CLIFF MINING DISTRICT
Comprising part of T. 22 S., R. 72 W.
of the 6th Principal Meridian
Custer County, Colorado
Compiled by Richard Strong, 1951
Section lines are approximately correct.
Drainage and roads from U. S. Forest Service planimetric quadrangle no. 23, Canon City sheet.
Claims from maps by the Surveyor General's Office, variously dated 1901 to 1930.
Scale
1,000 0 1,000 2,000 3,000 FT.
0 1/4 1/2 MI.
To De Weese Reservoir
To Canon City
State Hwy. 277
Round Mountain
To Texas Creek
State Hwy. 69
State Hwy. 96
To Pueblo
To Walsenburg
WESTCLIFFE
SILVER CLIFF
5
4
8
9
17
16
IRON CONTACT
SOUTH CONTACT
SILVER IRON
BASS
HUDSON BAY
DAKOTA MAID
WAVERLY
CONTACT
LITTLE DORRIT NO. 2
LITTLE DORRIT
JOHNNIE BULL
CORNUCOPIA
SILVER POINT
DOMINGO
LAST CHANCE
KATE NORTH
IMMORTAL
TROY
SEQUENCE
REVELEE
DECEIVER
J. A. WHITE
DENVER NO. 2
DENVER NO. 2 M.S.
CAMEL
LENA
LONE STAR
GREY EAGLE
SONG BIRD
DAKOTA BILL
MASCOT
POINTER
YANKEE BOY NO.
YANKEE BOY NO. 2
PASSIFLORA NO. 3
ST. ANTHONY
ST. JOSEPH
PASSIFLORA
PASSIFLORA NO. 2
HERMAN
THAMES RIVER
ABANDONED
G. P. D.
REVIEW
NETTIE
QUARTZ KING
P. D. Q.
CHICAGO BOY
ROBERTA
10 TO 1
HEWARD
SULPHIDE NO. 1
KEYSTONE
PIKE
SUNRISE NO. 2
MONTROSE
LADY FRANKLIN
FRACTION
DENVER
FIRST IOWA
RED CLOUD
BLUE EAGLE
DEFENDER
WESTPHALEN
ECLIPSE
KING OF THE CARBONATES
MAJOR
PRINCE OF THE CARBONATES
MATCHLESS
EXCELSIOR
MISSOURI
ADDIE
ARGO NO. 2
GRANITE STATE
GOOD NEIGHBOR
VANDERBILT
BISMUTH
DIADEM NO. 2
DALLAS
PLATA PIEDA
STEM WINDER
JULY BIRD
QUEEN OF THE VALLEY
HIGHLAND BOY
VESUVIUS
BUFFALO
LABELLE
FRANCE
KING OF THE VALLEY
MOHAWK
CALUMET
SITTING BULL
VICTOR
SHARP
BUFFALO HUNTER
BOULDER
HECLA
GARNET
AETNA
HUDSON
BELFAST
FLEETWOOD
WET MOUNTAIN
SILVER CLIFF
RACINE BOY
KEYSTONE
CINCINNATI
WESTON
PLATA VERDE
SIERRA MAJADA
VISTA
HORN SILVER M.S.
HORN SILVER
CHLOR SILVER
FIRST VENTURE
GATES
HORN SILVER CONSOLIDATED
PLATA VERDE M.S.

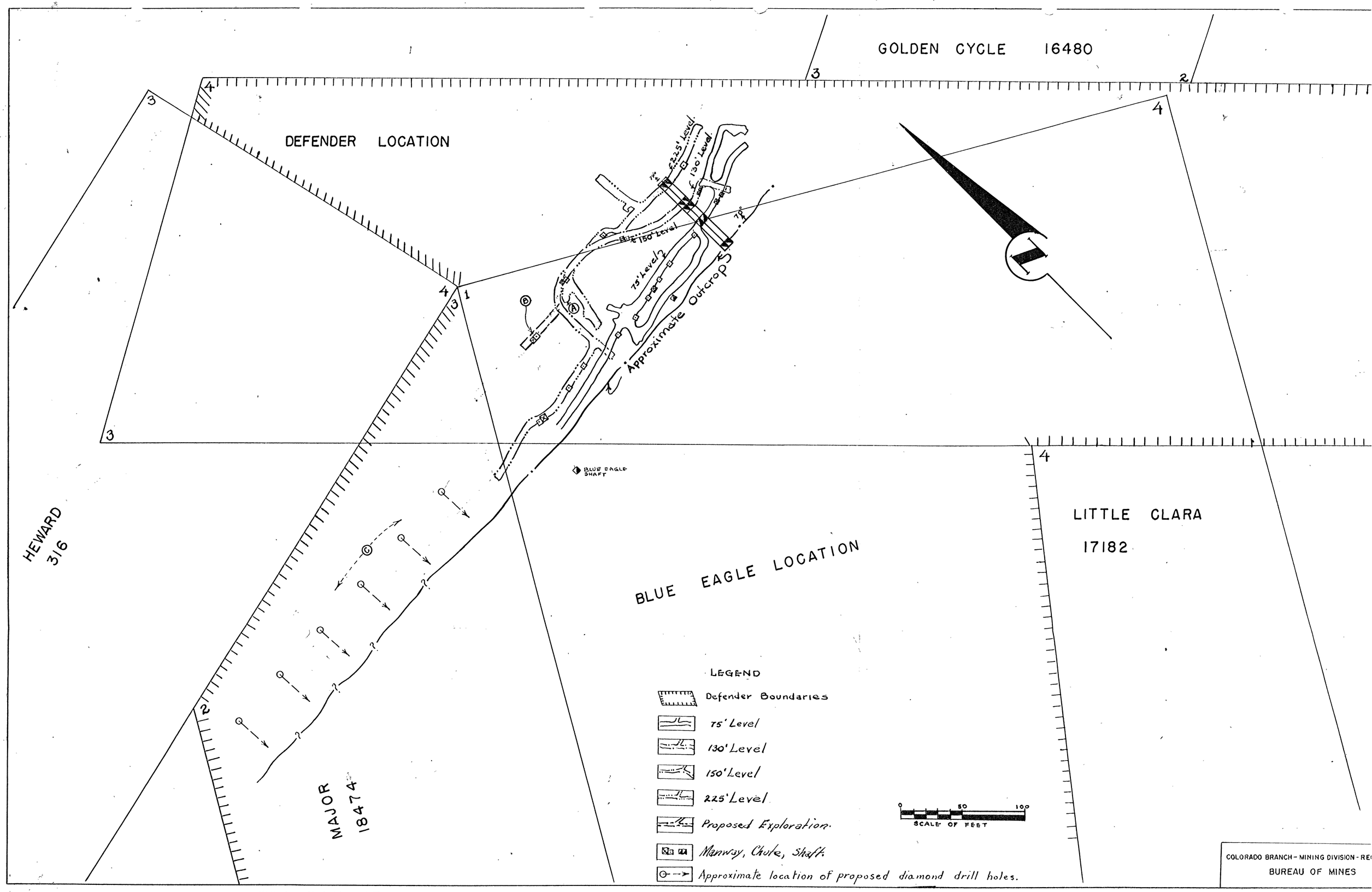
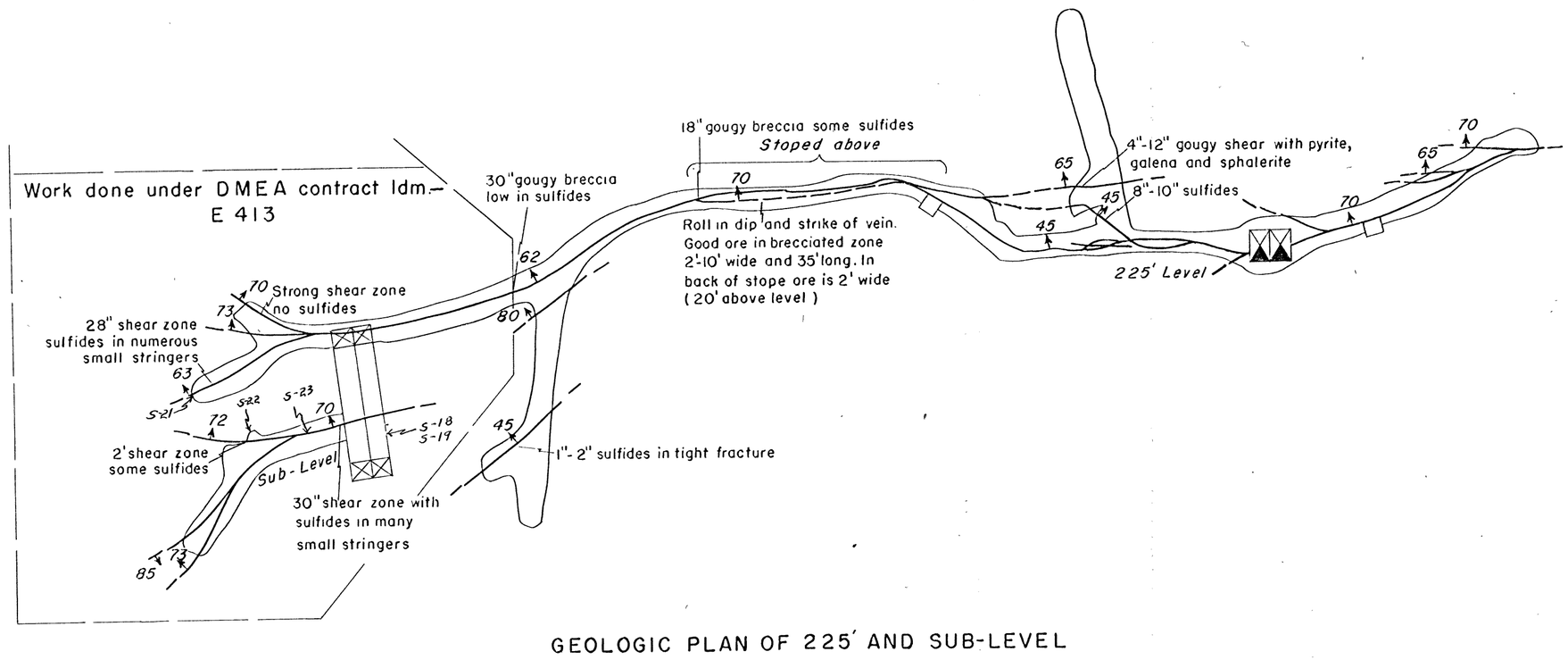
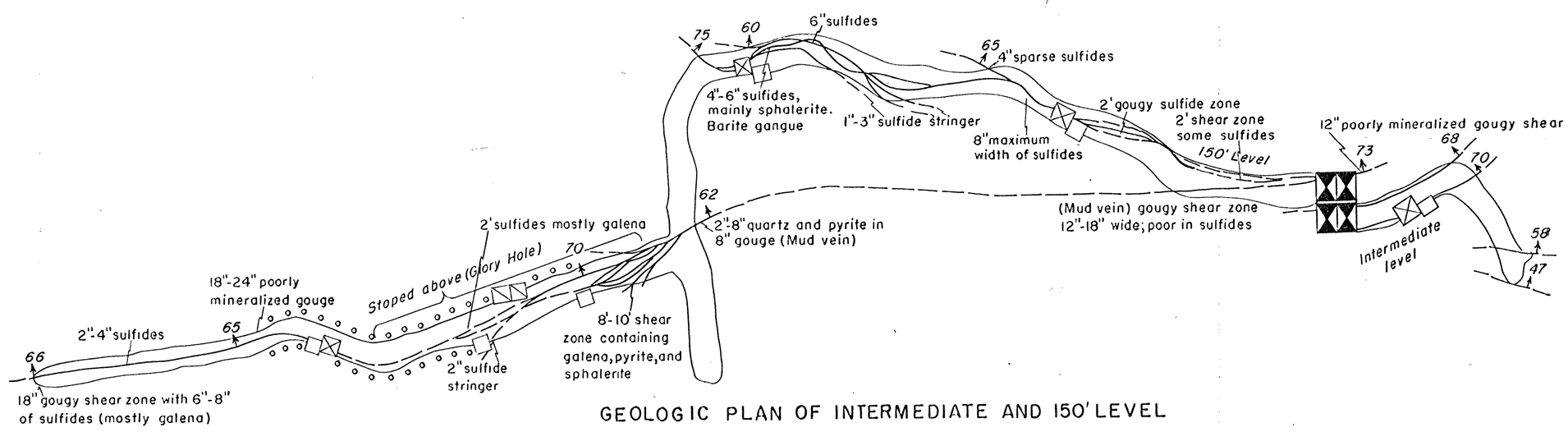


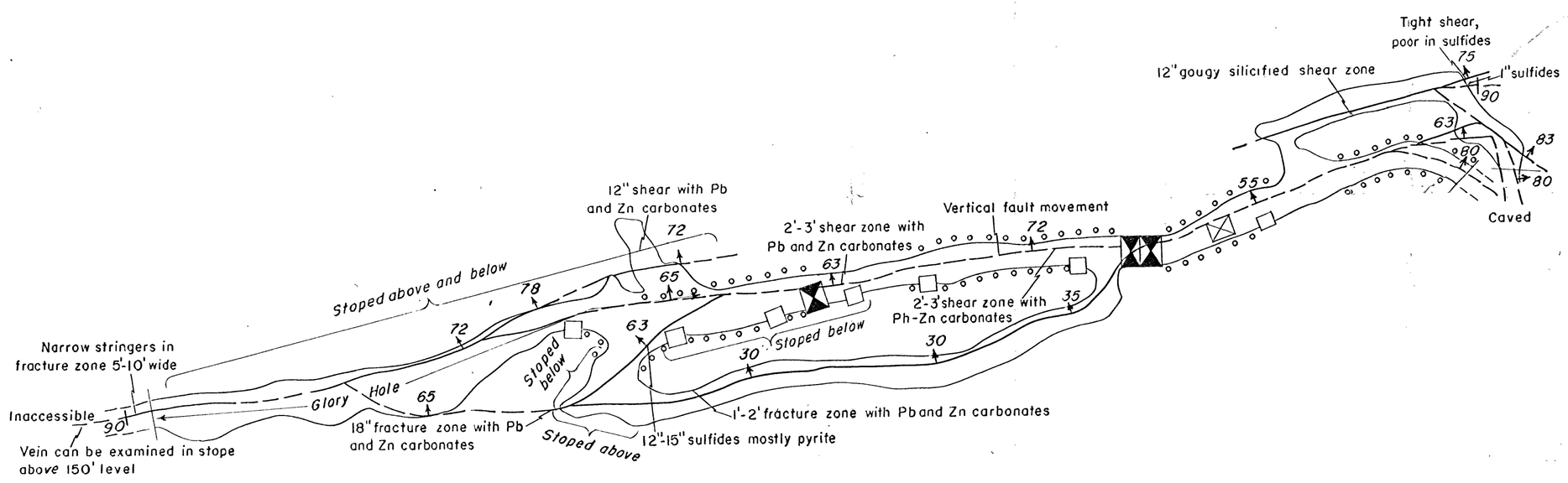
FIG. 4 – CLAIM LIMITS AND WORKINGS, DEFENDER MINE, DEFENDER MINING CO., CUSTER COUNTY, COLORADO, DMEA – 2517



GEOLOGIC PLAN OF 225' AND SUB-LEVEL

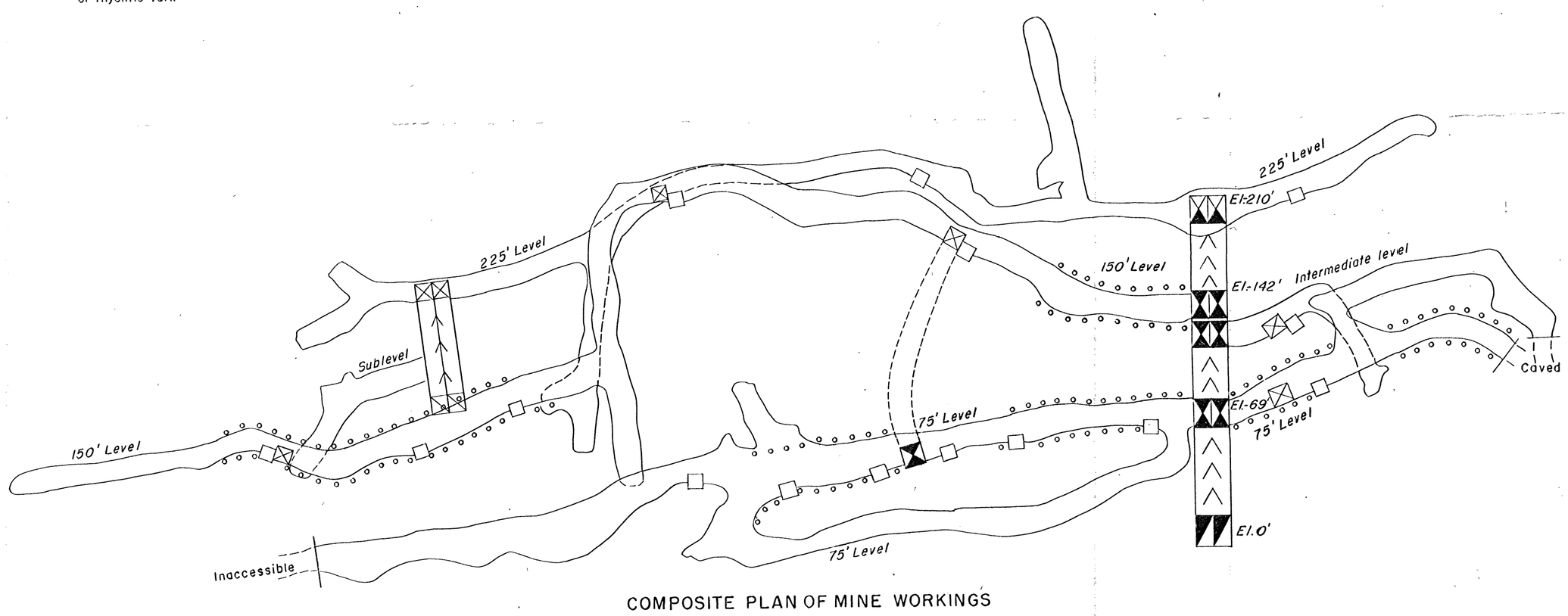


GEOLOGIC PLAN OF INTERMEDIATE AND 150' LEVEL



GEOLOGIC PLAN OF 75 LEVEL

Note: All mine workings in rhyolite
or rhyolitic tuff.

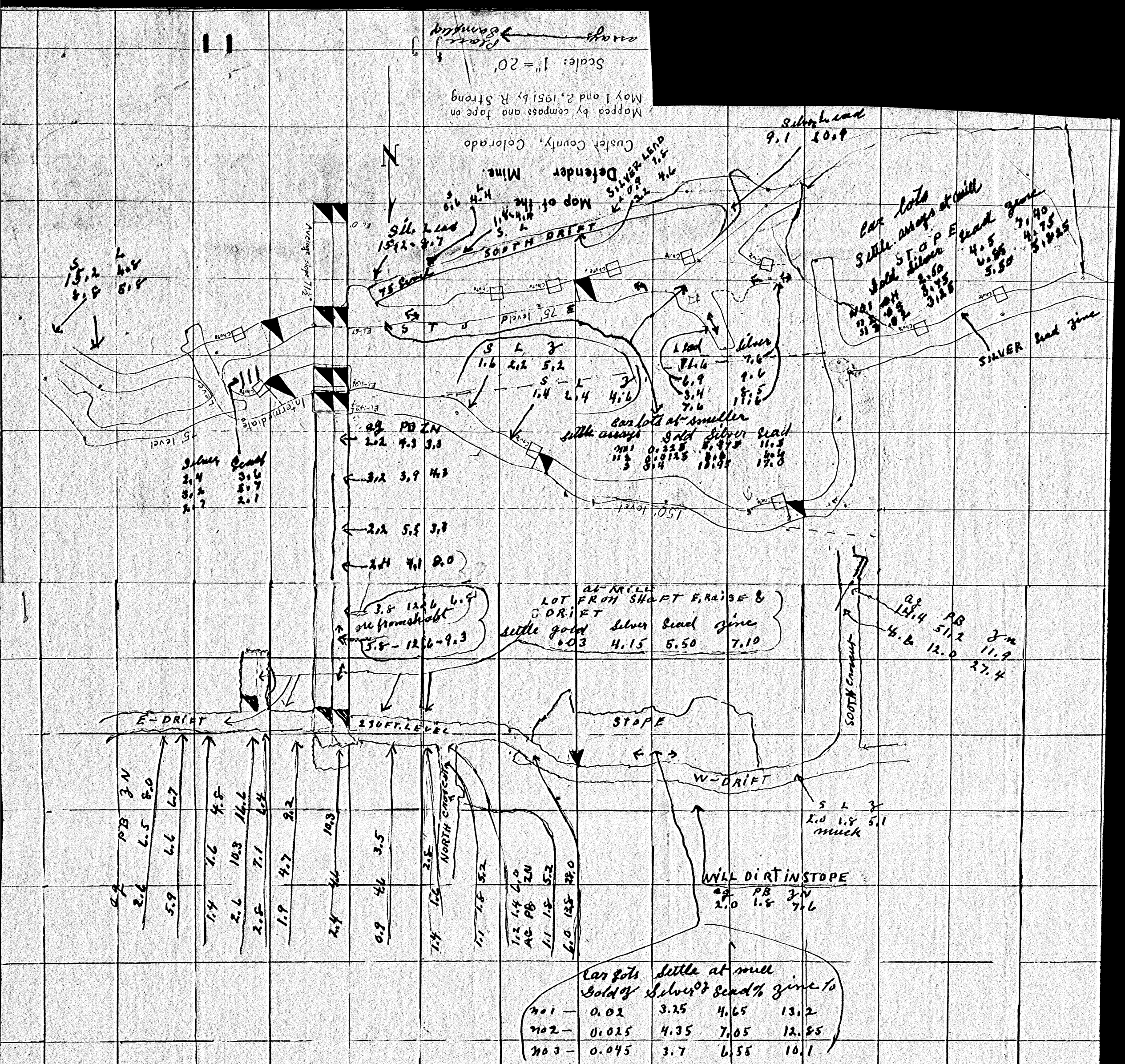


COMPOSITE PLAN OF MINE WORKINGS

E.N. Harshman Feb. 1953

FIGURE 4.-GEOLOGIC PLAN, DEFENDER MINE WORKINGS

20 10 0 60 Feet



NOTE: Data shown is from operation of Defender Mining Company Since December 1950. Shipping records and data of previous operators not available.

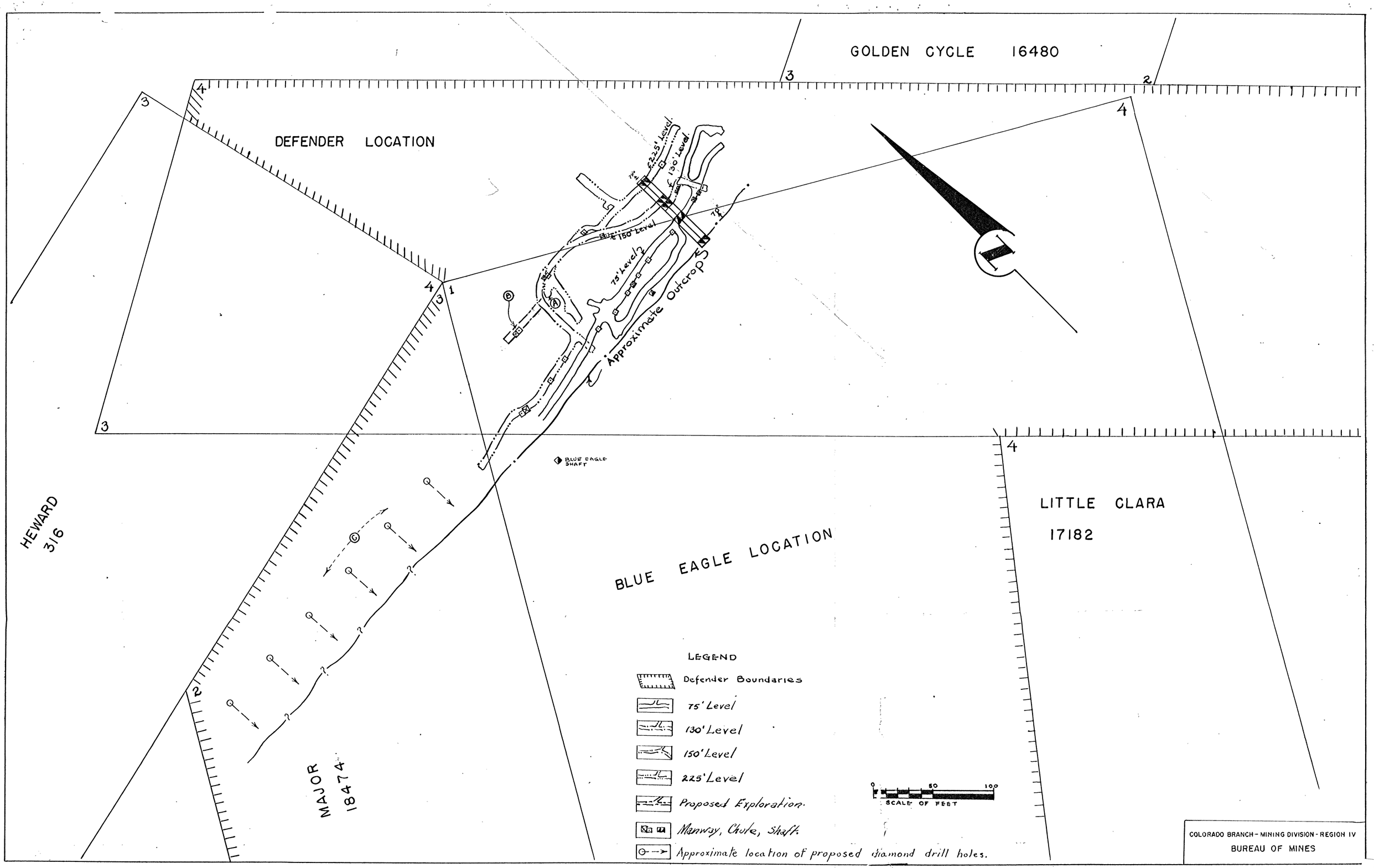


FIG. 4 – CLAIM LIMITS AND WORKINGS, DEFENDER MINE, DEFENDER MINING CO., CUSTER COUNTY, COLORADO, DMEA – 2517