DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Idm-E NO. 442

DMEA NO. 2257

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [x] Cost Audits
- [x] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] 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)
- [x] Work Comoleted analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [x] Field Team Semi-Annual Report for Certified Project F 2
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [x] Interim Field Team Reports F # 2
- [ ] 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
- [ ] 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
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No. 3 : Maps (Use pocket folder or envelope)

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

17963

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Contract Idm-E442, Docket DMEA-2257 (zinc-lead-copper), dated November 12, 1952, with

Walker Corporation
Box 163
East Ely, Nevada

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Ward Mine located in White Pine County, Nevada, during the period January 1, 1959, through August 3, 1961.

In accordance with Article 5 of the June 17, 1955, Termination Agreement and Annex II of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 10 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated November 18, 1954, indicated accepted costs under the exploration contract amounting to $62,004.05 with the Government's contribution on a 50 percent basis being $31,002.03.

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

This review established no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which also found no sales subject to the Government's royalty through December 31, 1958. The royalty account as of December 31, 1958, was:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

As of August 3, 1961, the royalty account of this project was found to be:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

March 27, 1962

E. D. Talbert, OME Auditor

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

The contract, as amended by the Termination Agreement and Annex II attached to Amendment No. 4, provides that the Operator, as principal if the producer or as surety if not the producer, shall pay to the Government a royalty on all mineral production from the land under the contract. The Termination Agreement also specifically deletes the so-called "abandonment" provision of the contract.

The land under contract consists of 25 patented lode mining claims in Sec. 9, 10, 15, and 16, T. 14 N., R. 63 E., M.D.M., excluding a block of ground encompassing the North Good Luck Orebody above the sill of the 230 level of the Goodluck Shaft. At the time the contract was executed the Operator was in possession by virtue of a November 10, 1951, assignment by Woodville J. Walker of an August 15, 1951, lease and option granted by the Walter W. Mining Company. An Owner's Consent to Lien signed by the latter on August 6, 1954, grants to the Government a lien on the property and any production therefrom.

Work under the contract was discontinued on August 20, 1954. No ores were produced during the exploration work. Furthermore, examination of the property and inquiries have disclosed no production subsequent thereto through the period covered by this review.

The files indicate that the Walter W. Mining Company, the landowner, was dissolved as a corporation on December 2, 1959. On May 11, 1961, the trustees for the creditors and stockholders quit-claimed 8 of the claims under the exploration contract to Woodville J. Walker, Box 857, Redding, California, who was the Operator's vice president at the time the exploration project contract was executed. In a July 28, 1961, letter Mr. Walker stated that "Shasta Minerals & Chemical Company intends to acquire a 90% interest" in the claims quit-claimed to him. With an August 3, 1961, letter Mr. Walker provided a copy of the May 11, 1961, indenture which includes a provision for acceptance by the grantee of the DMEA lien.

Mr. Walker's July 28, 1961, letter stated that the other 17 claims were included in a total of 30 claims acquired by Fred Farnsworth and associate of Ely, Nevada. That letter and the August 3, 1961, letter further state that exploration work was in progress on the Caroline claim, which is not subordinated under the contract. An inquiry addressed to Mr. Farnsworth on July 31, 1961, did not result in a reply.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(1) The files indicate that no minerals have been produced from the property under this contract during the period covered by this review; and

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

O.M.E.
JUN 1 1959

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files and records of the OME Field Team, Region II, pertaining to Contract No. Idm-E442, Docket No. DMEA-2257 (Zinc-Lead-Copper), dated November 12, 1952, including Amendment Nos. 1 to 4, inclusive, with

Walker Corporation
Box 163
East Ely, Nevada

for the purpose of determining the amount of royalties due the U. S. Government on sales of zinc, lead and copper ores from property known as the Ward Mine, located in White Pine County, Nevada, during the period November 12, 1952 to December 31, 1958.

A pseudo certification of discovery or development was incorporated under Item 5 of Termination Agreement dated June 17, 1955, and accordingly royalty is payable on all production from the land described in Article 2 and Appendix I of the contract, for a maximum period of 10 years as stipulated in Amendment No. 4 and Annex II of the contract. A Report of Review in lieu of final cost audit dated November 18, 1954, indicated acceptable costs under the exploration contract amounted to $62,004.05 with the Government's contribution on a 50 percent basis, being $31,002.03.

No royalties have been paid to date in connection with this contract.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(a) According to the Field Team's Semi-Annual Report of Certified Projects for the period July 1, 1958 to December 31, 1958, there was no production during the period covered by this review and all buildings, machinery and mine equipment removed from the site.

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

George Mavor
George Mavor, OME Auditor

May 27, 1959

Docket Copy

RECEIVED

JUL - 7 1955

TERMINATION AGREEMENT

It is agreed this 17th day of June, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Walker Corporation, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E442, Docket No. DMEA-2257, dated November 12, 1952, as amended, hereinafter called the "Contract," that:

1. Effective December 31, 1954, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute to allowable costs incurred prior to said effective date; and shall contribute to allowable costs incurred or to be incurred beginning with said effective date in performing winding-up and settlement actions provided for in the Contract, including (a) the preservation and disposal of property to the cost of which the Government has contributed, and (b) the making and rendering of reports and accounts.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including (a) the disposal of any facilities, buildings, fixtures, equipment, or other items to the cost of which the Government has contributed; and (b) the rendering of the final report and final account.

4. In Article 10 of the Contract form that part of the second sentence beginning with the word "Provided" is deleted.

5. The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government the royalty on production provided for in the Contract, in the same manner and amount as if certification of discovery or development had been made, such certification being hereby waived.

6. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract, except as otherwise provided in this termination agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson
ACTING Administrator, Defense Minerals
Exploration Administration

WALKER CORPORATION

By Woodville J. Walker
Vice President

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DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

Defense Minerals Administration
RECEIVED

I have reviewed the Monthly Reports of:

Walker Corporation,
a Nevada Corporation
Box 163
East Ely, Nevada

pertaining to Exploration Project Contract No. Idm-2442, Docket No. DMEA-2257, including Amendments No. 1, 2, 3 and 4, for the months of November 1952 to August, 1954, inclusive, covering a project for the exploration of zinc, lead and copper, on property known as the Ward Mine, located in White Pine County, Nevada.

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

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

(a) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible disallowances thereunder;

(b) the major portion ($60,704.05) of the costs incurred were under a contract provision for payment by the Government on the basis of agreed estimated costs of units of work actually performed, and the remaining costs ($1,300.00) were documented and did not exceed the amounts specified in the contract.

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

Total cost as billed by Contractor	$62,004.05
Exceptions	-0-
Total Accepted Cost	$62,004.05

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in amount of Thirty One Thousand Two and 3/100 Dollars:

** $31,002.03 **

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

George Mavor
George Mavor
Auditor

November 18, 1954

AMENDMENT NO. 4

Docket No. DMEA-2257 Mineral Zinc-Lead-Copper

Exploration Project Contract No. Kem-142

Date of Contract November 12, 1952

Date of Amendment July 19, 1954

Operator Walker Corporation

JUSTIFICATION

The results of exploration under the contract to some time in May 1954 were not encouraging. The Company therefore recessed the work to give it a chance to study the new evidence obtained and to complete additional mapping of the surface. Rather than continue to do underground exploration by drifts and crosscuts of the newly ascertained geological premises, the Company requested continuing the exploration by less expensive diamond drilling. The Field Team agreed that it was to the best interests of the Operator and the Government to change the work specified in the contract under Stage II to diamond drilling.

H. C. Miller, Executive Officer
DMEA Field Team, Region III

Docket copy

EXPLORATION PROJECT CONTRACT
WALKER CORPORATION
DOCKET NO. DMEA-2257

AMENDMENT NO. 4

It is agreed this 19th day of July, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Walker Corporation, hereinafter called the "Operator," that Exploration Project Contract Idm-E442 (Docket No. DMEA-2257), dated November 12, 1952, as amended, hereinafter called the "Contract," is further amended, effective November 12, 1952, as follows:

1. In Exhibit "A" under "Description of the Work," delete everything under "Part II" and substitute the following:

(a) Improve the access road to the Lower Defiance tunnel.

(b) Move the compressor from the Mountain Pride tunnel to the Lower Defiance tunnel.

(c) Clean up the Lower Defiance tunnel.

(d) Install air and water lines in Lower Defiance tunnel.

(e) Cut a drill station, and drill not in excess of 2,210 feet of diamond drill holes, as shown on the map entitled "Part II, Proposed Drilling Program," attached hereto and made a part hereof.

The diamond drill holes shall be reamed and cased, or cemented, as necessary. Cores shall be boxed and stored.

The number of holes, and the location, length, direction, size, and inclination of each diamond-drill hole, are subject to approval of the Government.

2. In Exhibit "A" under "Agreed Unit Costs," delete Stage I and Stage II under Part II and substitute the following: 1/

2,210 feet of diamond drilling @ $7.25/ft.	$16,022.50	
Casing lost @ $0.30/ft. 2/ Cementing @ $2.00/ft. 2/ Reaming and casing @ $1.50/ft. 2/ Standby time @ $2.00/hr. 2/ Assaying samples @ $3.00/ea. 2/	1,300.00	$17,322.50

3. In Exhibit "A" under "Scheduled Actual Costs," delete all costs under Part II and substitute the following: 3/

(* Indicates allowable maximum)

1.	Improve road to Lower Defiance tunnel.	$256.00	
2.	Move compressor from Mountain Pride tunnel to Lower Defiance tunnel.	160.00	
3.	Clean up Lower Defiance tunnel.	224.00	
4.	Install air and water lines in Lower Defiance tunnel.	921.50	
5.	Cut diamond drill station.	64.00	
6.	Supervision for items 1, 2, 3, 4 and 5.	550.00*	
7.	Transportation of personnel, supplies, and equipment for items 1, 2, 3, 4, 5 and 6.	120.00*	
8.	Core handling.	360.00*	2,655.50*
	Total Cost of Part II		$19,978.00*

1/ The Government will contribute to these agreed unit costs as they accrue for units of work actually performed in lieu of those actual costs set forth in Article 6 (a) of the Contract form. The agreed unit cost includes all costs of the work for which the unit is fixed.

2/ The Government will contribute to the unit costs of this element of work until the aggregate total cost of these five elements of work identified by "2/" reaches $1,300. Thereafter, the operator shall perform all units of these five elements of work required in connection with the 2,210 feet of drilling at its own cost without contribution by the Government.

3/ All schedules are waived, except as to items 6, 7 and 8 in this paragraph 3.

4. Delete the "Summary" at the end of Exhibit "A" and substitute the following:

SUMMARY

Estimated total cost, Part I	$68,410.00*	
Estimated total cost, Part II	19,978.00*	
Estimated total cost of Project		$88,388.00*
Government Participation @ 50%		44,194.00*

5. In Article 8 of the Contract form delete the sums "$132,310.00" and "$66,155.00" and substitute the sums "$88,388.00" and "$44,194.00," respectively

6. Annex I attached to Amendment No. 1 is cancelled and Annex II, attached hereto and made a part hereof, is substituted for Article 9 of the Contract form.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C. W. Theodore
Administrator, Defense Minerals
Exploration Administration

Butrip
Hoffhund
Talbut
Hedges
Gaild
Selfridge
Lingford
Ell
F. Johnson

WALKER CORPORATION

By Woodville J. Walker

EXPLORATION PROJECT CONTRACT
WALKER CORPORATION
DOCKET NO. DMEA-2257

ANNEX II

The following provisions are in lieu of Article 9 :

Repayment by Operator.--a. Certification.--If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Royalty on production.--The Operator, as principal, if the Operator is the producer, or as surety, if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

c. Basis for computation.--The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight paid by the buyer to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the

Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the raw ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

d. Unsold production.--If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

e. Percentages of royalty.--The percentages of the Government's royalty shall be as follows:

> One and one-half ($1\frac{1}{2}$) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half ($\frac{1}{2}$) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.
>
> (For instance: the royalty on an amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on an amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

f. Lien for payment.--To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

g. Notice to purchasers.--The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

h. No obligation to produce.--Nothing in this contract is 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.

i. Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

58694

MF-203
(Revised July 1, 1954)

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 Nevada, County of White Pine, described ~~as follows:~~ 1/ in an agreement of lease and option dated August 15, 1953, and recorded in Book 357, Page 91, Official Records of White Pine County, Nevada.

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

2/ Valor Corporation

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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 there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

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.

(OVER)

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.

4. Changes and added provisions _____

_____

_____

_____

Dated this 24th day of [illegible], 195[illegible].

_____ [Seal]

_____ [Seal]

_____ [Seal]

Docket Copy

EXPLORATION PROJECT CONTRACT
WALKER CORPORATION
DOCKET NO. DMEA-2257

AMENDMENT NO. 3

It is agreed this 14th day of April, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Walker Corporation, that Exploration Project Contract Idm-2442 (Docket No. DMEA-2257), dated November 12, 1952, as amended, is further amended, effective November 12, 1952, as follows:

In Exhibit "A":

1. Under "Description of the Work," "Part I," as amended by Amendments Nos. 1 and 2, delete all 7 items of work and substitute the following 2 items:

(1) Extend the Mountain Pride tunnel not in excess of 653 feet and crosscut not in excess of an aggregate of 350 feet. The location, direction, dimensions, and extent of the tunnel and crosscuts are subject to the prior approval of the Government.

(2) Cut 2 drill stations, and drill not in excess of 4,146 feet of diamond-drill holes. The holes shall be reamed and cased, or cemented, as necessary, but not to exceed 1,800 feet of reaming and casing, and 600 feet of cementing shall be allowed under this amendment. Not in excess of 3,700 feet of lost casing, nor 60 hours of stand-by time, nor 120 assays of core and sludge samples shall be allowed under this amendment. Cores shall be boxed and stored. The number of holes, and the location, length, direction, size, and inclination of the diamond-drill holes are subject to prior approval of the Government.

2. Under "Agreed Unit Costs," "Part I," as amended by Amendments Nos. 1 and 2, delete all 7 items of cost and the total following these costs ("$68,410.00") and substitute the following: 1/

1/ All costs set forth herein are agreed unit costs, in lieu of those actual costs set forth in Article 6 (a) of the contract form, and include all costs of the work except as otherwise scheduled in Exhibit "A".

Drifting 653 feet and crosscutting 350 feet @ $35.00/ft.	$35,105.00	
Cutting drill stations. 2/ 3/	585.00	
Diamond drilling 4,146 feet @ $6.35/ft. (rounded to)	$6,330.00	
Casing lost, 3,700 feet @ $0.30/ft. 2/	1,110.00	
Cementing, 600 feet @ $2.00/ft. 2/	1,200.00	
Reaming and casing, 1,800 feet @ $1.50/ft. 2/	2,700.00	
Standby time, 60 hours @ $6.00/hr. 2/	360.00	
Core handling. 2/ 4/	720.00	
Assaying samples, 120 samples @ $3.00/ea. 2/	360.00	$68,410.00*

2/ The number of units of each element of cost incident to the drilling is the allowable maximum for that element to which the Government will contribute; and if more units of any element of cost are required for the completion of the 4,146 feet of drilling, the Operator shall perform any such excess at its own cost without contribution by the Government. The elements of cost included in this provision are identified by the designation "2/."

3/ The unit is the completed job.

4/ The unit is the core-handling work for 4,146 feet of diamond drilling. In the event that less than said footage of diamond drilling is performed, the Operator shall be paid the same percentage of this element of cost as the percentage of the 4,146 feet of diamond drilling completed.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the amount of any item designated as "allowable maximum."

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C O Mitteuser
Administrator, Bureau
Mineral Exploration
Administration

Brutin
Hoffland
Chamber

WALKER CORPORATION

By Woodville S. Walker
vice-president & manager

Defense Minerals Administration
MAY 21 1954

AMENDMENT NO. 3

Docket No. [illegible]-2257 Mineral Lead-Zinc-Copper

Exploration Project Contract [illegible]-112

Date of Contract November 17, 1952

Date of Amendment April 14, 1953

Operator Walker Corporation

JUSTIFICATION

Diamond drill holes 1 and 2 completed under Amendment No. 2 encountered the contact as projected but at a much greater depth below the tunnel level than anticipated. The increased length of drill holes will use up the available footage without enough holes to give needed information on the size and grade of the anticipated extension of the Earth Coal Duck ore body below the main strand of the Ward fault.

This Amendment allows drilling deeper holes and the drilling of two holes in addition to those allowed under Amendment No. 2 and substitutes drilling for winzing, raising, and some drifting.

H. C. Miller, Executive Officer
DMEA Field Team, Region III

Docket Copy

WALKER CORPORATION
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-2257

AMENDMENT NO. 2

It is agreed this 2nd day of December, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Walker Corporation, each acting in consideration of the agreement of the other to the terms hereinafter set forth, that Exploration Project Contract Idm-E-442, Docket No. DMEA-2257, dated November 12, 1952, as amended, be further modified and amended as follows:

In Exhibit "A":

1. Under "Description of the Work, Part I, Item 1, as amended by Amendment No. 1, dated June 10, 1953, change the words "950 feet" to "not in excess of 656 feet," and at the end of the paragraph, add the following: "Two drill stations shall be cut, and there shall be drilled not in excess of 8 diamond drill holes having a total length not in excess of 1200 feet. Not more than 600 feet of reaming and casing, nor 200 feet of cementing may be done and cores shall be boxed and stored, and not more than 40 assays of the core and sludge may be made. No more than 1200 feet of lost casing will be allowed nor more than 20 hours of stand-by time. The location, length, direction, and inclination of the diamond drill holes shall be subject to the prior approval of the Government.

2. Under "Agreed Unit Costs, Part I, the first item thereof, as amended, is changed to read as follows:

Cutting drill stations 1/	$ 525.00
Diamond Drilling 1200 feet @ $6.35/ft. 2/	7,620.00

1/ The unit shall be the completed job.

2/ This includes the cost of a compressor man, compressed air, supervision, transportation, and all other costs of drilling not mentioned specifically.

Casing Lost, 1200 feet @ $0.30/ft.	$ 360.00
Cementing @ $2.00/ft.	400.00
Reaming and casing 600 feet @ $1.50/ft.	900.00
Stand-by time, 20 hours @ $6.00/hr.	120.00
Core handling 3/	240.00
Assaying samples 40 @ $3.00/ea.	120.00
656 feet of drift and 350 feet of crosscut @ $35.00/ft.	35,215.00
	$45,500.00

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the amount of any item designated as allowable maximum.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By [signature]
Administrator, Defense Minerals Exploration Administration

WALKER CORPORATION

By Woodville J. Walker
Vice-President & Manager

3/ The unit shall be the completed job.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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AMENDMENT NO. 2

Docket No. [illegible] Mineral [illegible]

Exploration Project Contract [illegible]

Date of Contract [illegible]

Date of Amendment [illegible]

Operator [illegible]

JUSTIFICATION

[illegible]

H. C. Miller, Executive Officer
DMEA Field Team, Region III

Docket Copy

WALKER CORPORATION
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-2257

AMENDMENT NO. 1

It is agreed this 10th day of June, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Walker Corporation, each acting in consideration of the agreement of the other to the terms hereinafter set forth, that Exploration Project Contract Idm-E-442, Docket No. DMEA-2257, dated November 12, 1952, be modified and amended as of November 12, 1952, as follows:

1. In Exhibit "A":

Under "Description of the Work," Part 1, Item 1, change the figure "1300" to "950", and add the following: and drive two crosscuts, both from this tunnel approximately at coordinate 3200 North, one 150 feet eastwardly, called the "hanging wall crosscut", and the other 200 feet westwardly, called the "footwall crosscut", the total drifting and crosscutting not to exceed 1300 feet.

Under "Agreed Unit Costs", Part 1, the first item thereof is changed to read as follows: "950 feet of drift and 350 feet of crosscut at $35.00* per foot - $45,500."

2. Annex I which modifies Article 9 of the contract form, is attached hereto and made a part hereof.

3. This Amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may be required to contribute, nor the amount of any item designated as allowable maximum.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. Mitteudorf
Administrator, Defense Minerals Exploration Administration

WALKER CORPORATION

By Woodville J. Walker
Vice-President & Manager

Attest: Ruth Chamberlin

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
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SAN FRANCISCO, CALIFORNIA

WALKER CORPORATION
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-2257

ANNEX 1

The following provisions are in lieu of all of paragraph (a) of Article 9 which precedes the colon:

If at any time the Government considers that a discovery or 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 final report and final account required by the exploration project contract, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development. The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land which is the subject of the exploration project contract, as follows: (1) Regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by the contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of 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, as follows:

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REGION III
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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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AMENDMENT NO. 1

Docket No. [redacted]

Mineral [redacted]

Exploration Project Contract [redacted]

Date of Contract [redacted]

Date of Amendment [redacted]

Operator [redacted]

JUSTIFICATION

[redacted]

H. C. Miller, Executive Officer
DMEA Field Team, Region III

MF-200
(June 1951)
(Revised Feb. 1952)

DOCKET NO. DMEA 2-57

COMMODITY Zinc, Lead, Copper

Docket Copy
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

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

EXPLORATION PROJECT CONTRACT [1]

IT IS AGREED this 12th day of November, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Walker Corporation, a Nevada Corporation
~~Box 317~~ Box 163
~~Leadville, Colorado~~ East Ely, Nev. Nevada

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 Nevada, County of White Pine, described as follows: [3] See Appendix 1, attached hereto and made a part hereof. See also, map entitled Mining Property of the Walter W. Mining Company (Ward Mine).

the Operator represents and undertakes: [4]

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

(*b*) That 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 thirty (30) days from the date of this contract shall commence work on a project of exploration for [5] Zinc, Lead, Copper

in or upon the described land; and shall bring the project to completion within a period of two (2) years 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.

ARTICLE 4. *Performance of the work.*—(*a*) *Operator's responsibility.* The work shall be performed efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmens' compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. To the extent specified in Exhibit "A," attached hereto, the work may be performed by independent contractor or contractors; and work not specified in Exhibit "A" for performance by independent contractor may nevertheless be so performed upon amendment of Exhibit "A," as agreed to by the parties, to state the work to be so performed and the estimated unit costs thereof, as provided hereafter.

(*b*) *Independent contracts.*—Any independent contract for the performance of work shall be on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved), or on some basis that will indicate the amount due for work performed at any stage of the work to be performed under such independent contract. The Government shall not be nor be considered to be a party to any such independent contract, and the Government's right to terminate the exploration project contract under any of its provisions shall not in any manner be affected by reason of any such independent contract. If the reference in Exhibit "A" to any such independent contract states that the Government's approval thereof is required, the Government may refuse to participate in the cost thereof unless and until it has given its written approval of the independent contract.

(*c*) *Government may inspect.*—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 5. *Estimated costs of the project.*—A statement of the estimated cost of the project is set forth in Exhibit "A," attached hereto. Except insofar as any item of requirement or the estimated cost thereof set forth in Exhibit "A" is there or elsewhere designated as an "allowable maximum," such items of requirement and of related cost are estimates only, and may be exceeded to the extent that the Government may from time to time approve for the most economic and beneficial performance of the work within the limitation of the total aggregate estimate of costs. The Government's approval of any such excess over the estimate for an item of requirement or related cost will be signified by its approval and payment of any invoice or voucher for payment which expressly calls attention to such excess. Items expressly designated in Exhibit "A" or elsewhere as "allowable maximum," and the total aggregate estimated cost are limitations, and any excess therein will be for the sole account of the Operator in which the Government will not participate.

ARTICLE 6. *Allowable costs of the project.*—(*a*) The costs of the project in which the Government will participate are limited to the following:

(1) *Independent contracts.*—Payments to independent contractors under independent contracts listed in Exhibit "A." The estimated cost of any work to be performed under an independent contract is or shall be included in the estimate of costs in Exhibit "A" in terms of the estimated numbers of units of work to be performed, the estimated amount to be paid per unit, and the estimated total amount to be paid to the independent contractor, and such estimates shall be allowable maximums above which the Government will not contribute. Regardless of the provisions of any such independent contract, the Government will participate in the payments to the independent contractor only on account of work actually performed and that conforms with the provisions of the exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable and necessary. No such independent contract shall have the effect of increasing the estimated total cost of the exploration project contract nor the maximum amount which the Government will pay as provided in the exploration project contract.

(2) *Labor, supervision, consultants.*—Labor, supervision and technical services (including engineering and geological consultants), a schedule of which is included in the estimate of costs set forth in Exhibit "A." The requirements and related estimated costs for supervision and technical services are allowable maximums.

(3) *Operating materials and supplies.*—Necessary materials and supplies including items of equipment costing less than $50.00 each, and power, water, and fuel, a schedule of which is included in the estimate of costs in Exhibit "A."

(4) *Operating equipment.*—Any operating equipment to be rented or purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or the allowable depreciation, as the case may be, a schedule of which is included in Exhibit "A." Any items listed as owned and to be furnished by the Operator, and related ~~initial~~ allowable depreciation, are allowable maximums.

(5) *Rehabilitation and repairs.*—Any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and to be devoted to the purposes of the exploration contract, a schedule of which is included in the estimate of costs set forth in Exhibit "A." These items are allowable maximums.

(6) *New buildings, improvements, installations.*—Any necessary buildings, fixed improvements, or installations to be purchased, installed, or constructed for the purposes of the exploration work, with the estimated cost of each, a schedule of which is included in the estimate of costs in Exhibit "A." All of these items are allowable maximums.

(7) *Miscellaneous.*—Repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance and payroll taxes.

(8) *Contingencies.*—Such other necessary, reasonable direct costs of performing the exploration work, within the limit of the total aggregate estimate of costs, whether or not included in any schedule of costs in Exhibit "A," as may be approved by the Government in the course of the work, as indicated by its approval and payment of invoices and vouchers.

[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*) The Government's payments in all cases will be based on actual, necessary costs (including contract unit prices) incurred not in excess of any "allowable maximum," and not in excess of the fixed percentage of the total aggregate estimated cost. Costs will be considered to be incurred only as they are or become due and payable.

(*c*) No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes) or any other indirect costs, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

ARTICLE 7. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operators shall provide the Government with monthly reports of work performed and costs (including contract unit prices) incurred 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 costs incurred 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.

(*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 operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account as provided in Article 12.

ARTICLE 8. *Payments by the Government.*—(*a*) The Government will pay 50 percent of the allowable costs incurred, as they accrue, in an aggregate total amount not in excess of $66,155.00, which is 50 percent of $132,310.00, 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 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.

(*b*) The Government may make any payment or payments direct to independent contractors and to suppliers, for the account of the Operator, rather than to the Operator.

ARTICLE 9. *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 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 10. *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 11. *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.

ARTICLE 12. *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. Upon the completion of the project or any termination of the contract the Operator shall dispose of any remaining materials, supplies, facilities, buildings, fixtures, and equipment in which the Government has an interest, for the joint account of the Operator and the Government in the proportion of their respective interests; shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; and shall pay to the Government its pro rata share of any money remaining.

ARTICLE 13. *Changes and added provisions.* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. Meredith

Administrator, Defense Minerals Exploration Administration

Walker Corporation
(Operator)

By Woodville J. Walker

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—66328-1

EXPLORATION PROJECT CONTRACT
WALKER CORPORATION
DOCKET NO. DMEA-2257

EXHIBIT "A"

Description of the Work

The work consists of two parts. Part I shall be known as the Goodluck Orebody Project, and Part II as the Defiance Tunnel Exploration Project. The work on these two parts may be carried on simultaneously.

PART I

1. Extend the Mountain Pride tunnel 1300 feet to cut the projected position of the faulted continuation of the North Goodluck orebody below the Ward fault, shown on the attached map (Fig. 2) as Project 1a.

2. Drive the Mountain Pride tunnel along the Paymaster vein for about 100 feet to test the width and grade of ore at this level, shown on the attached map (Fig. 2) as Project 1b.

3. Crosscut northeast for 30 feet from 2790 north to the upper strand of the Ward fault, shown on the attached map (Fig. 2) as Project 1c.

4. Sink a 4' x 6' winze 100 feet just under the fault to cut the projected position of the South Goodluck mineralized shoot in the sulfide zone, shown on attached map (Fig. 2) as Project 1c.

5. Raise (4' x 6') 20 feet through the fault to cut the same shoot in the oxide zone, in the area on attached map (Fig. 2) shown as Project 1c.

6. Sink a 4' x 6' incline winze 200 feet from 3200 N. and 3470 W. just under the upper strand of the Ward fault to cut the projected position of the North Goodluck orebody in the sulfide zone, shown on the attached map (Fig. 2) as Project 1d.

7. Raise (4' x 6') 20 feet through the fault to cut the North Goodluck orebody in oxide zone above the fault, in the area on the attached map (Fig. 2) shown as Project 1d.

PART II

This part consists of Stages 1 and 2. Stage 2 will depend on the findings of Stage 1 and shall be performed only with the prior approval of the Government.

Stage 1

1. Construct one 20' x 20' frame and metal compressor house.

2. Rehabilitate approximately 1130 feet of the lower Defiance tunnel.

3. Extend by crosscutting the lower Defiance tunnel to the east side of the dike and drift in both directions along the dike, not exceeding a combined total of 1000 feet of crosscutting and drifting. The extent of the drifts shall be subject to the approval of the Government. The work is shown on the attached map (Fig. 2) as Project 2a and Project 2b.

Stage 2

1. Further extend the crosscut of the lower Defiance tunnel through the dike and drift in both directions along the west side of the dike, not exceeding a combined total of 600 feet of crosscutting and drifting. The extent of the drifts from the crosscut shall be subject to the approval of the Government. The work is shown on attached map (Fig. 2) as Project 2c.

Estimated Costs of the Project
(*Indicates allowable maximum)

AGREED UNIT COSTS

PART I

1300 feet of drift @ $35.00* per foot	$45,500.00
100 feet of drift @ $35.00* per foot	3,500.00
30 feet of crosscut @ $35.00* per foot	1,050.00

100 feet of winze @ $54.00* per foot	$ 5,400.00	
20 feet of raise @ $54.00* per foot	1,080.00	
200 feet of winze @ $54.00* per foot	10,800.00	
20 feet of raise @ $54.00*	1,080.00	
Total Agreed Unit Cost		$68,410.00*

PART II

Stage 1

Crosscut and drift 1000 feet* @ $35.00 per foot*	35,000.00*

Stage 2

Crosscut and drift 600 feet* @ $35.00 per foot*	21,000.00*

The Government will contribute to the costs of all drifting, crosscutting, raising and winzing, as they accrue for units of work actually performed, on the basis of the agreed estimated unit costs per foot in lieu of actual costs.

These unit costs include all costs of the work except those costs specified in Article 6(a) of the contract form which are scheduled below, to which the Government will contribute on the basis of actual costs.

Scheduled Actual Costs

(2) **Labor, Supervision, Consultants**

PART II

Stage 1

Rehabilitate the lower Defiance tunnel for about 1130 feet	$ 5,900.00

This estimated cost includes all labor, supervision, supplies, materials, and all other costs necessary to complete this work in preparation for extending this tunnel.

(6) New Buildings, Improvements, Installations

PART II

Stage 1

Construction of one 20' x 20' frame and metal compressor house	$2,000.00*

This estimated cost includes all labor, supervision, supplies, materials, and all other costs necessary to complete the construction of this compressor house.

S U M M A R Y

Total Estimated Cost Part I		$68,410.00*
Total Estimated Cost Stage 1, Part II	$42,900.00*	
Total Estimated Cost Stage 2, Part II	21,000.00*	
Total Estimated Cost Stages 1 and 2, Part II		$63,900.00*
TOTAL ESTIMATED COSTS OF THE PROJECT		$132,310.00*
GOVERNMENT PARTICIPATION @ 50%		$ 66,155.00*

EXPLORATION PROJECT CONTRACT
WALKER CORPORATION
DOCKET NO. DMEA-2257

APPENDIX I

Patented Lode Mining Claims in Sections 9, 10, 15 and 16, Township 14 North, Range 63 East, M.D.M.

U. S. Survey Number	Name of Claim
3709	Ruth
3709	Side Line
63	Juno
3709	Plieades Extension
52	Plieades*
37	Paymaster*
38	Young America
62	Ward & Henry
42	Mountain Pride
3709	Iowa
57	Governor
3709	Silver King
3709	Denver
3709	Smuggler
3709	May Day
59	Jew Peter
3709	Extension
3709	Ironclad
39	Defiance
3709	Pueblo
3709	Defiance No. 2
3709	Hill Top
3709	Lucky Guss
3709	Napoleon
3709	M.M. & S.

*Excluded from the Plieades and Paymaster claims is that block of ground lying above the sill of the 230 level of the Goodluck Shaft, as driven, being approximately (30) feet above the sill of the Mountain Pride Tunnel as it will be driven, and lying within the following tract, described by metes and bounds and shown with horizontal hatching on the attached map (Fig. 1).

Begin at a point on the northeasterly side line of Paymaster Lode, U. S. Sur. 37, from whence the northeast corner (Corner No. 6) of the said Paymaster Lode bears northwesterly along said side a distance of two hundred (200) feet.

Thence, the first course, due East two hundred (200) feet. Thence, the second course, South 50° East three hundred (300) feet. Thence, the third course, due South four hundred (400) feet. Thence, the fourth course, due West two hundred and fifty (250) feet. Thence, the fifth course, North 73° West six hundred and thirty (630) feet to the place of beginning.

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 Nevada, County of White Pine, described ~~as xxxxxxx~~ 1/ in an agreement of lease and option dated August 15th, 1951, ~~and recorded in Book 157, Page 91, official records of White Pine County,~~ Nevada

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/ Walker Corporation

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 production 3/ 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/$ 66,155.00, 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 28th day of November, 195 2.

Walter W. Mining Company [Seal]

By [signature] [Seal]
Vice President

[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.

Walker Corporation
Box 917
Leadville, Colorado
November 8, 1951

HARD MINE
WHITE PINE COUNTY
NEVADA

1. (a) See attached Summary for a complete list of the properties of the Walter W. Mining Company (Hard Mine).

(b) See attached photostatic copy of our lease and option on the Hard Mine, with typewritten assignement of this lease from Woodville J. Walker to Walker Corporation.

(c) Defiance Tunnel Project:

The Defiance Tunnel Exploration Project will be conducted primarily on the DEFIANCE CLAIM, U. S. SUR. 39. Therefore, as shown on the accompanying claim map, those claims cross-hatched in red lines are the claims where the Defiance Project will be conducted. These are:

DEFIANCE	U.S. SUR. 39
DEFIANCE NO 2	U. S. SUR. 3709
PUEBLO	U.S. SUR. 3709

Goodluck orebody Project (Mountain Pride Tunnel Project):

The Goodluck Orebody Project will be conducted through the Mountain Pride Tunnel. This project has as its' objective the discovery of the faulted continuations of the North & South Goodluck Orebodies. The known oxidized portions of these orebodies are excluded from the premises from which royalty will be repaid in the event of the discovery of the faulted extensions.

"That part of the following claims lying below a horizontal plane at elevation 8454 feet (fifty (50) feet above the sill of the Mountain Pride Tunnel Level at the portal of said tunnel);

[illegible]	U. S. SUR. 3709
[illegible]	U. S. SUR. 37
[illegible]	U. S. SUR. 38
[illegible]	U. S. SUR. 62

shown hatched in red on attached exhibit claim map."

Kaiser Corporation
Box 917
Leadville, Colorado
November 7, 1951

YARD MINE
WHITE PINE COUNTY
NEVADA

2. (a) Zinc, Lead, Copper, Silver

(b) See attached summary.

Walker Corporation
Box 217
Leadville, Colorado
November 7, 1951

WHITE PINE
WHITE PINE COUNTY
NEVADA

3. (a) Defiance Tunnel Project:

See exhibit "E" on the attached summary, where all proposed work is shown in heavy broken red lines. The Defiance Tunnel Project consists in extending the Defiance Tunnel to and through the Defiance Dike to explore the downward continuations of the Defiance Orebody (on the footwall or east side of the dike) and the Boy Tunnel Orebody on the hangingwall or west side. The project consists of an estimated 550 feet of cross-cutting, plus 1150 feet of drifting on the contacts, or a maximum of 1700 feet of work.

Goodluck Orebody Project:

See exhibit "D" on the attached summary, where all proposed work is shown in heavy red lines. The Mountain Pride Tunnel will be used to explore the Goodluck orebodies. The project consists of extending the Mountain Pride Tunnel to and through various segments of the South Goodluck Orebody to the projected position of the North Goodluck Orebody on the footwall side of the Hard Fault Zone. This project contains 1300 feet of proposed drifting.

(b) The Goodluck Orebody Project can be started within thirty days after the signing of the contract, after January 1, 1952. The Defiance Tunnel Project cannot be started until some road work has been done, and it is doubtful whether this work (road work) can be done until April. Probably the Defiance Project can be started definitely on June 1, 1952.

We expect to be able to average at least 30 feet per month, single shift, so that the Defiance Tunnel Project can be completed in twenty-one months and the Goodluck Orebody Project in seventeen months.

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

4. See attached summary.

5. There are no facilities, buildings, etc.

6. Two frame and sheet iron sheds for compressor house at $2500 each.

7. (a) It is planned to rent all equipment to be used on the two projects, unless the rental rates are excessive or suitable equipment can not be rented.

12 - 20 cu. ft. cars @ $40.00 per month
2 - 350 cfm portable compressors @ $550.00 per month
2 - 4" drifter leyners, etc., @ $75.00 per month
2 - small mucking machines @ $125.00 per month
2 - compressed air motors @ $75.00 per month
2 - compressed air piston pumps for water supply @ $15.00 per month
1 - pickup truck or substitute @ $50.00 per month
1 - compressed air grinder @ $20.00 per month
1 - acetyline outfit, complete @ $25.00 per month

Total, Est. $2,355.00 per month

(b) It is not planned to purchase any equipment unless rental prices are excessive.

(c) The pickup truck, above, will probably be furnished by Walker Corporation at $50.00 per month, substituting a 1949 Chevrolet Suburban Truck for this item.

[illegible] or [illegible]tion
Box 917
Leadville, Colorado
[illegible]ovember 7, 1951

[illegible]
[illegible] 72
[illegible]

6. Miner-boss - 2 15.00 per day each, plus time-and-one-half on Saturday.

Miner - 2 13.50 per day each, plus time-and-one-half on Saturday.

Mucker - 2 13.00 per day each, plus time-and-one-half on Saturday.

Compressor-man - 2 14.00 per day each, plus time-and-one-half on Saturday.

Subject to adjustment to conform with corresponding jobs in the Robinson (Ely) Mining District. Also subject to the modification that the headings can be driven on contract at the same rates as headings are driven on contract in the Robinson Mining District.

Supervision: The supervision will be done by one superintendent-foreman who will do all the purchasing, accounting, engineering and supervising. His salary will be 750.00 per month.

Timber - 400.00 per month.

Hand tools - 350.00 plus 20.00 per month.

Pneumatic tools - $300.00

Drill rods and bits - per foot - $3.50

lker Corporation
ox 917
Louisville, Colorado
November 7, 1951

10. (a) $52,500

(b) Yes

OFFICE OF THE ADMINISTRATOR

dmea-2257

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

Office of
Executive Officer
DMA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

November 19, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee,
Defense Minerals Administration, Interior Building,
Washington 25, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: Exploration Project Application
Walker Corporation, Leadville, Colo.--Ward Mine,
White Pine County, Nevada.

Enclosed herewith are four envelopes, each one of which contains a copy of MF-103, together with supporting data, submitted by Mr. Woodville J. Walker, Vice President & Treasurer, Walker Corporation, Box 917, Leadville, Colo., in connection with an exploration loan on the Ward Mine, White Pine County, Nevada.

Will you kindly have the necessary action taken on this application.

S. Ricker, Acting for
H. C. Miller, Executive Officer
DMA Field Team, Region III

Attachments

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.
NOV 26 10 35 AM '51

Refer to	Noted	Date
ROBERT T. WALKER		
WOODVILLE J. WALKER		
Answered		

WALKER AND WALKER
CONSULTING MINING GEOLOGISTS

BOX 917
LEADVILLE, COLORADO

November 10, 1951

Defense Minerals Administration
Field Executive Officer
1415 Appraisers Building
San Francisco, California

Walker Corporation
Box 917
Leadville, Colo.

Dear Sir:

WARD MINE, WHITE PINE COUNTY, NEVADA

Under separate cover I am sending you four copies of applications for a Defense Minerals Administration Loan.

The four copies are in separate envelopes in one bundle with a carbon of this letter attached to the outside of each envelope. Each envelope contains the following:

Form MF100

Form MF103

Summary of the Geology and Ore Resources of the Ward Mine, White Pine County, Nevada, by Walker & Walker, dated October 1, 1951

Photographic copy of the lease and option agreement between the Walter W. Mining Company (owner of the Ward Mine) and Woodville J. Walker, lessee and optionee of the Ward Mine

Copies of the Assignment of Lease from Woodville J. Walker to Walker Corporation.

Very truly yours,

Woodville J. Walker

Walker Corporation by
Woodville J. Walker, Vice-President
& Treasurer

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

1951 NOV 13 PM 1:56

SAN FRANCISCO, CALIFORNIA

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.
NOV 26 10 36 AM '51

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. A.M.E.A. 2257
Metal or Mineral
Date Received 11-26-51
Amount $
Participation (Government %)

Name and address of applicant

Walker Corporation
Box 917
Leadville, Colorado

Date November 7, 1951

WARD MINE
WHITE PINE COUNTY, NEVADA

If you have already filed MF-100, give date filed 11-6-51, type of assistance requested none,

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.

Walker Corporation
(Name of company)

By Woodville J. Walker
(Signature of authorized official)

November 7, 1951
(Date)

Vice-President & Treasurer
(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

Walker Corporation
Box 917
Leadville, Colorado
November 8, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

1. (a) See attached Summary for a complete list of the properties of the Walter W. Mining Company (Ward Mine).

(b) See attached photostatic copy of our lease and option on the Ward Mine, with typewritten assignement of this lease from Woodville J. Walker to Walker Corporation.

(c) Defiance Tunnel Project:

The Defiance Tunnel Exploration Project will be conducted primarily on the DEFIANCE CLAIM, U. S. SUR. 39. Therefore, as shown on the accompanying claim map, those claims cross-hatched in red lines are the claims where the Defiance Project will be conducted. These are:

DEFIANCE	U.S. SUR. 39
DEFIANCE NO 2	U. S. SUR. 3709
PUEBLO	U.S. SUR. 3709

Goodluck orebody Project (Mountain Pride Tunnel Project):

The Goodluck Orebody Project will be conducted through the Mountain Pride Tunnel. This project has as its' objective the discovery of the faulted continuations of the North & South Goodluck Orebodies. The known oxidized portions of these orebodies are excluded from the premises from which royalty will be repaid in the event of the discovery of the faulted extensions.

"That part of the following claims lying below a horizontal plane at elevation 8454 feet (fifty (50) feet above the sill of the Mountain Pride Tunnel Level at the portal of said tunnel);

EXTENSION	U. S. SUR. 3709
PAYMASTER	U .S. SUR. 37
YOUNG AMERICA	U. S. SUR. 38
WARD & HENRY	U. S. SUR. 62

shown hatched in red on attached exhibit Claim Map."

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

2. (a) Zinc, Lead, Copper, Silver

(b) See attached Summary.

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

3. (a) Defiance Tunnel Project:

See exhibit "E" on the attached Summary, where all proposed work is shown in heavy broken red lines. The Defiance Tunnel Project consists in extending the Defiance Tunnel to and through the Defiance Dike to explore the downward continuations of the Defiance Orebody (on the footwall or east side of the dike) and the Dog Tunnel Orebody on the hangingwall or west side. The project consists of an estimated 550 feet of cross-cutting, plus 1150 feet of drifting on the contacts, or a maximum of 1700 feet of work.

Goodluck Orebody Project:

See exhibit "E" on the attached Summary, where all proposed work is shown in heavy red lines. The Mountain Pride Tunnel will be used to explore the Goodluck orebodies. The project consists of extending the Mountain Pride Tunnel to and through various segments of the South Goodluck Orebody to the projected position of the North Goodluck Orebody on the footwall side of the Ward Fault Zone. This project contains 1300 feet of proposed drifting.

(b) The Goodluck Orebody Project can be started within thirty days after the signing of the contract, after January 1, 1952. The Defiance Tunnel Project cannot be started until some road work has been done, and it is doubtful whether this work (road work) can be done until April. Probably the Defiance Project can be started definitely on June 1, 1952.

We expect to be able to average at least 80 feet per month, single shift, so that the Defiance Tunnel Project can be completed in twenty-one months and the Goodluck Orebody Project in seventeen months.

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

4. See attached summary.

5. There are no facilities, buildings, etc.

6. Two frame and sheet iron sheds for compressor house at $2500 each.

7. (a) It is planned to rent all equipment to be used on the two projects, unless the rental rates are excessive or suitable equipment can not be rented.

12 - 20 cu. ft. cars @ $40.00 per month	$480
2 - 350 cfm portable compressors @ $550.00 per month	1100
2 - 4" drifter leyners, etc., @ $75.00 per month	150
2 - small mucking machines @$125.00 per month	250
2 - compressed air motors @ $75.00 per month	150
2 - compressed air piston pumps for water supply @ $15.00 per month	30
1 - pickup truck or substitute @ $50.00 per month	50
1 - compressed air grinder @ $20.00 per month	20
1 - acetyline outfit, complete @ $25.00 per month	25
Total, Est. $2,355.00 per month (?)	$2,255.00

(b) It is not planned to purchase any equipment unless rental prices are excessive.

(c) The pickup truck, above, will probably be furnished by Walker Corporation at $50.00 per month, substituting a 1949 Chevrolet Suburban Truck for this item.

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

8. Miner-Boss - 2 @ $15.00 per day each, plus time-and-one-half on Saturday*

Miner - 2 @ $13.50 per day each, plus time-and-one-half on Saturday*

Mucker - 2 @ $13.00 per day each, plus time-and-one-half on Saturday*

Compressor-man - 2 @ $14.00 per day each, plus time-and-one-half on Saturday*

*Subject to adjustment to conform with corresponding jobs in the Robinson (Ely) Mining District. Also subject to the modification that the headings can be driven on contract at the same rates as headings are driven on contract in the Robinson Mining District.

Supervision: The supervision will be done by one superintendent-foreman who will do all the purchasing, accounting, engineering and supervising. His salary will be $750.00 per month.

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

9. Materials:

Track - 5,850 feet of track (12# rail) or 23.4 tons @ $110.00 per ton

$2,574.00

Pipe (air & water) - 5,850 feet @ 40¢ per foot (3" air line, 1" water line)

284.00

fittings & valves 100.00

Powder - 3,000 feet @ $3.00 per foot $9,000.00

Fuel - (Diesel & gasoline) $275.00 per month

Engineering (see 8, above, superintendent will do all engineering).

Assaying - $25.00 per month (estimate only)

Accounting (see 8, above, superintendent will do all accounting work also)

Timber - $400.00 per month.

Hand tools - $350.00 plus $20.00 per month.

Carpenter tools - $300.00

Drill rods and bits - per foot - $3.50

Walker Corporation
Box 917
Leadville, Colorado
November 7, 1951

WARD MINE
WHITE PINE COUNTY
NEVADA

10. (a) $52,500

(b) Yes

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.

NOV 26 10 37 AM '51

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. D.M.E.A. 2257

Date received 11-26-51

Walker Corporation
Box 917
Leadville, Colorado

WARD MINE
WHITE PINE COUNTY
NEVADA

Name and address of applicant

Date Nov 6, 1951

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) ~~Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance~~, repair and operating supplies, and (6) 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.

X 5

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.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   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		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	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)	1948 Total (b)	1949 Total (c)	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)					

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.

12. Ore or Mineral Reserves:

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

(b) If deposit is other than placer:

(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.

Walker Corporation
(Name of company)

By Woodville J. Walker
(Signature of authorized official)

November 6, 1951
(Date)

Vice-President & Treasurer
(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

Walker Corporation
Box 917
Leadville, Colorado
November 6, 1951

1. MATERIALS PRODUCED:

(a) Zinc, lead, copper
(b) Pyrite, silver, gold

Walker Corporation
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Leadville, Colorado
November 6, 1951

2. NAME AND TYPE OF MINE:

The property is known as the "Ward Mine", and it comprises practically all of the Ward Mining District, situated about fifteen miles south of Ely, Nevada, on the eastern slopes of the Egan Range. (See attached "Summary of the Geology and Ore Deposits of the Ward Mine, White Pine County, Nevada").

The property was originally a silver mine and was worked as such 1866-1878. Subsequently it has been worked for the oxidized lead ores and for siliceous copper-silver ores remaining from the old operations.

INCLUDE OLD NAMES OF PROPERTY, IF ANY:

The property has always been known as the "Ward Mine" but was first operated by the "Martin White Company" until 1884. In 1906 the property was acquired by the "Nevada United Mines Company"who explored the property until 1912. In 1917, the property was leased by the Nevada United Mines Company to S. B. Elbert, and after his death, to Sid Barton in the name of "Ward Leasing Company". In 1927 the property was sold to the "Walter W. Mining Company", a subsidiary of the Colorado National Bank, Denver, Colorado.

SHOW EXTENT OF WORKINGS, INCLUDING THE FOLLOWING:

(a) Linear feet of shafts:

1. Goodluck shaft . . . . . 280 feet
2. North Plieades shaft . . 200 feet
3. South Plieades shaft . 1,200 feet

(b) Linear feet of drifts and cross-cuts:

1. Approximately 1,500 feet turned from the three shafts at various elevations.

(c) Linear feet of tunnels or adits:

1. Practically all of the workings

Walker Corporation
Box 917
Leadville, Colorado
November 6, 1951

are driven from adits at various elevations. These workings total approximately 13,000 feet.

(d) Linear feet of raising and other workings:

5 There is about one thousand feet of raising plus considerable stoping and intermediate workings not accessible.

INDICATE WHETHER THE MINE IS FLOODED OR NOT:

The mine is not flooded but makes sufficient water to serve for drilling and ordinary mine uses. The mine is entirely drained by the several tunnels.

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3. FOR EACH OPERATION LISTED ABOVE SUPPLY THE FOLLOWING:

(a) Distance and direction from nearest town and shipping point. (See Exhibit "A" in the attached "Summary").

The Ward Mine is situated on the eastern flank of the Egan Range, fifteen miles south of the city of Ely, Nevada, the shipping point.

(b) Mining District:

The Ward Mine is situated in the Ward Mining District.

(c) Township, Section, Range:

The Ward Mine is located in Sections 9, 10, 14, 15, 16, 22, and 23, Township 14 North, Range 63 East, M.D.M.

(d) County, State

The Ward Mine is located in White Pine County, Nevada.

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November 6, 1951

4. (a) STATE WHETHER OR NOT THE PROPERTY IS NOW IN OPERATION, AND IF IN OPERATION, BY WHOM OPERATED:

The property is being operated by an individual leaser by the Name of Christ Orphan, of Ely, Nevada. He has confined his activities to the oxidized outcrop of the largest orebody, the Goodluck, and has been mining about one hundred tons per year. Because of his lack of interest, the owners are not going to renew his lease on this or any part of the property.

(b) ARE YOU OPERATING THIS PROPERTY AS:

We will be operating the property as a lessee with an option to purchase.

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5. NUMBER OF YEARS IN PRODUCTION:

The Ward Mine has had several periods of production followed by periods of abandonment. At the present time, the Ward Mine is being operated on a very small scale and has been operated on this scale for the past eight years or so.

The ores on the outcrop of the Ward Mine are oxidized lead-silver ores and cannot be mined without a good price for lead. For this reason, the mine is entirely dependent on market conditions.

The present operation will be terminated on December 31, 1951. We expect to commence our operations in the spring of 1952. If we obtain a government loan, we will commence underground operations about April 1, 1952. If we do not obtain Governmental help, we will not undertake the underground program, but will commence mining in the open pit on the outcrop about May 1, 1952.

In any event, the mine will be in production on May 1, 1952, at an anticipated rate of fifty tons per day from the open pit.

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6. EXPERIENCE OF THE OPERATORS:

Walker Corporation is a new corporation organized for the purpose of conducting campaigns such as this one.

R. T. Walker, the President of Walker Corporation, 621 North Cascade, Colorado Springs, Colorado, is a man with fifty-one years experience in western mining. His activities have ranged from mine and smelter management and supervision to Chief Geologist for the U. S. Smelting Company. As a geologist, he has been largely responsible for the discovery and development of several mines, the latest being the property of the Resurrection Mining Company in Leadville, Colorado.

W. J. Walker, the son of R. T. Walker, Box 917, Leadville, Colorado, is a graduate Mining Engineer (class of 1936, University of Utah) with nineteen years in the mining industry, with his experience ranging from Ass't Mining Superintendent of the Mulberry, Florida, operations of the International Minerals & Chemicals Company (open pit) to miner, mucker, shift boss, engineer, and consulting geologist. W. J. Walker is Vice-president and Treasurer of Walker Corporation and will be in active charge of all work at the Ward Mine.

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Box 917
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November 6, 1951

7. HISTORY:

(a) Give a statement, as complete as possible, pf previous exploration, development, operation, and production of the property, with reasons for suspension of the operation:

The Ward Mining District was discovered in 1866. The various claims were consolidated at an early date under the ownership of the Martin White Mining Company. nThis company shipped gold and silver bullion worth $793,994.35 at the time of mining and smelting. Because of transportation difficulties, the company made no effort to make either lead or copper matte. This early production (to 1878) was entirely a smelter production.

The company subsequently produced in excess of $1,000,000 by milling the Ward silver ores.

Production from the mine and from dumps on the property have subsequently produced 67,674 tons of about $700,000 gross value (since 1908). Old mill tailings and smelter slag have also been shipped with a gross value of $100,000 so that the total production of the district has been about $2,500,000 at the time of mining.

The period of silver mining came to an end with the loss of the orebodies by post-mineral faulting. The extension of these orebodies below the fault is one of the objectives in the proposed exploration campaign.

The various periods of mining the oxidized lead ores have been terminated by falling market prices on lead, making it uneconomic to mine this material.

The Goodluck orebody had been discovered in 1877, and this large mass of irony lead ore inspired the Martin White Mining Company to drive a lower tunnel (The Paymaster) to explore it at depth. This tunnel was started in 1881 and stopped in 1884, but because the post-mineral fault had not been recognized, it was a failure and did not find the downward continuation of the orebody.

In 1906 the property was acquired by the Nevada United Mines Company who spent $300,000 between 1906 and 1912 vainly trying to find additional ore in and around the old high grade orebodies. The Goodluck orebody was developed and some ore shipped but was uneconomic at the metal prices prevailing. The post-mineral fault was recognized and a long westerly cross-cut driven to look for the faulted extensions of the orebodies. A short cross-cut from the 280 level of the Goodluck shaft encountered low grade sulphide ore in the footwall of the hangingwall strand of the Ward Fault, while a vertical winze from the 280 level found a substantial amount of sulphide ore fifty feet or so below the level. The complex nature of the ore, its high zinc and low lead ratio, coupled with the low precious metal content discouraged further exploration of the sulphide area.

In 1917, the property was leased to S. B. Elbert and later to Sid Barton as the Ward Leasing Company. This company operated until 1923 and shipped 38,000 tons of 12.3% lead ore to Salt Lake Smelters.

In 1927, the Colorado Nationak Bank, owners of the defaulted bonds of the Nevada United Mines Company, forclosed and took over the property, title to which was then transferred to the Walter W. Mining Company, a subsidiary organized for the purpose. With one notable exception, the property has been operated by small leasers until the present time.

The exception was an exploration campaign conducted on our recommendation by Newmont Mining Corporation for the Ethyl Lead Corporation. The campaign was stopped upon the exhaustion of the appropriation and was not completed. We did not direct the work for Newmont. We propose to complete this program as one part of our program.

Walker Corporation
Box 917
Leadville, Colorado
November 6, 1951

(b) STATE BRIEFLY THE KNOWN HISTORY AND PRODUCTION OF ADJOINING AND NEIGHBORING PROPERTIES:

There are no other mines in the Ward District.

(c) FURNISH ANY AVAILABLE (PRIVATE) REPORTS THAT MAY APPLY TO THIS APPLICATION, INCLUDING RESULTS OF MINE EXAMINATIONS, RECOMMENDED EXPLORATION AND DEVELOPMENT, AND METALLURGOCAL INVESTIGATIONS:

Walker & Walker, Consulting Mining Engineers and Geologists, have prepared an elaborate report on the Ward Mine. This report was prepared for exploration purposes and is available to the examining engineers. In addition, Walker Corporation has a single copy of many individual reports made by several engineers for the Nevada United Mines Company. These reports, bound into one cover, are also available to the examining engineers. Aside from these, we know of no other reports on this property.

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8. NAMES AND ADDRESSES OF OFFICERS, DIRECTORS, OR PARTNERS, AND IN ADDITION THERETO, THE FIVE LARGEST STOCKHOLDERS IF APPLICANT IS A CORPORATION:

(a)	(b)	(c)	(d)
Robert T. Walker 621 North Cascade Colorado Springs, Colorado	President "D"	none	$50,000

(e)	(f)	(g)	(h)
25,000	none	none	none

Woodville J. Walker Box 917 Leadville, Colo.	(b) Vice-President & Treasurer	(c) None	(d) $5,000 (

(e)	(f)	(g)	(h)
74,999	None	none	none

Belle M. Walker Box 917 Leadville, Colo	(b) Secretary	(c) none	(d) $5,000	(e) 1

(f)	(g)	(h)
none	none	none

Walker Corporation has been formed in November, 1951, for the purpose of consolidating the interests of the partnership firm of Walker & Walker, which is being disolved December 31, 1951. The corporation has been formed as a vehicle to perform exploration projects and does not contemplate, at the present time, paying any of its' officers any salary.

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November 6, 1951

9. CAPITOL STOCK ISSUES:

Item	(a)	(b)	(c)	(d)	(e)
Common Stock. .	100,000	100,000	10¢	100,000	none
Preferred Stock	none	none	none	none	none

Walker Corporation
Box 917
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November 6, 1951

10. PRODUCTION:

Does not apply.

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Box 917
Leadville, Colorado
November 6, 1951

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:

We plan to increase the scale of mining to about 1200 tons per month. The rate of mining will be directly dependent on the custom smelters in the Salt Lake Valley and the rate at which they will accept this ore.

The present lessee has been working the mine on Sundays and holidays and between trucking jobs. We intend to equip the open pit with a bulldozer and a compressor and drills and expect to be able to mine a minimum of fifty tons per day, if the smelters will accept this much.

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November 6, 1951

12. ORE OR MINERAL RESERVES:

(a) See attached Summary. The orebody that will be mined commencing in the spring of 1952 is the oxidized portion of the North Goodluck orebody. This orebody will be mined by open pit methods. According to old assay records and confirmed by prior mining operations, there is approximately 100,000 tons of oxidized irony lead ore available in this orebody by open pit mining. This 100,000 tons has an indicated grade of 8.4% lead. We propose to raise the grade to approximately 12% by selective mining and believe that we will have 50,000 tons of 12% lead ore available. Our calculations indicate that we will remove one ton of waste, one ton of low grade (4% lead) per ton of ore of 12% lead mined. Inasmuch as we have never been able to examine the workings and re-sample the workings that indicate this ore, we have not included such records as we have in this report. The old records are available for examination upon request.

(b) See attached summary.

Walker Corporation
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Leadville, Colorado
November 6, 1951

13. ACCESS ROADS:

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

The Ward Mine is situated southerly from Ely, Nevada, about fifteen miles. The first eight miles are paved highway (93 & 6). Following this, there is four miles of good graded gravelled county road (Cave Valley Road). From the county road to the mine is a one way dirt road, the first mile or so being of good grade and readily made into a good road, while the last two miles are steep and rough. However, mining operations have always been carried on over this road and considerable ore trucked out over it. We contemplate rebuilding the last mile or so of this road to give better grades and wider turns. This construction can be done at small cost by a bulldozer with only a small amount of blasting necessary.

Ely, Nevada, is the shipping point, as well as the residence and supply center.

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November 6, 1951

14. WATER SUPPLY:

There is a small constant flow of water in Ward Gulch, sufficient for mining purposes. In addition, the various tunnels make sufficient water to supply drilling and cooling water for mine operation.

Walker Corporation
Box 917
Leadville, Colorado
November 6, 1950

15. POWER:

All power for the initial operations will be diesel or gas engines at the mine. The nearest electric power is at Ely, fifteen miles away.

Walker Corporation
Box 917
Leadville, Colorado
November 6, 1951

16. LABOR:

The mine is not being operated at the present time. When operating, it is anticipated that there will be one miner and one cat skinner in the open pit, with three truck drivers there also. In the two exploration projects, there will be two miners, two muckers, and two compressor men.

Walker Corporation
Box 917
Leadville, Colorado
November 6, 1951

17. EQUIPMENT AND FACILITIES:

There is no equipment or facilities on the property.

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November 6, 1951

18. ARE THERE ANY PARTICULAR CONDITIONS OR CIRCUMSTANCES AFFECTING YOUR OPERATIONS THAT ARE NOT DESCRIBED ABOVE? IF SO, EXPLAIN:

This property contains one of the most accessible lead orebodies in the west. It is a marginal mine, the oxidized ore being only marketable under high metal prices, such as those now prevailing. This property offers one of the best opportunities to make a substantial contribution to lead production in a short time at relatively small cost that it has been our opportunity to observe.

Defiance Orebody Project

Erection of Compressor shed.....	$ 2,500	
1700' of X-cut and drifts at $23/ft.....	39,100	
Equipment and supplies.....	17,967	
Total costs.....		$59,567
Grand total, both projects		$105,705

On the list of rentals to be paid the following items are too high:

12 20 cu. ft. cars at $40/mo. each - should be purchased.
2 350 cfm. portable compressors at $550 - should be purchased.

A field team checkup would be advisable inasmuch as the grade of ore mined in the past has been marginal and it is not certain that an improved grade will be obtained by the proposed development work. Also, it may be advisable to allow only one of the proposed projects at the present time.

Lead-Zinc Branch
Bureau of Mines

ASSIGNMENT OF LEASE

TO WHOM IT MAY CONCERN:

For and in consideration of the sum of ten dollars ($10.00) and other due and valuable considerations, receipt of which is hereby acknowledged, the undersigned, WOODVILLE J. WALKER, of the County of Lake, State of Colorado, does on this 10th day of November, 1951, assign all of his lease and interest in that certain property known as the "Ward Mine, White Pine County, Nevada" to the WALKER CORPORATION, a Nevada Corporation.

IN WITNESS WHEREOF:

The parties hereto have set their hands and seals on this day first above written.

WALKER CORPORATION:

Woodville J. Walker
Woodville J. Walker

Woodville J. Walker
Woodville J. Walker,
Vice-President & Treasurer

State of Colorado)
County of Lake) ss

Before me this day appeared Woodville J. Walker, to me personally known, and acknowledge that he has executed the above instrument, and that said Woodville J. Walker, an individual, is that same Woodville J. Walker who appears as Vice-President and Treasurer of the corporation, "Walker Corporation".

My commission expires August 13, 1953

Witness my hand and notarial seal, this 10 day of November, 1951.

Charles L. Schlaepfer
Notary Public

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of White Pine, State of Nevada, described in a certain Exploration Project Contract dated _____, 195__, between the Walker Corporation, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated August 15, 1951, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and as per form MF 200, June 1951, Section 15.

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 2nd day of November, 195 1

Walter W. Mining Company.
by Geo. Klein
Vice President

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

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This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 2nd day of November, 1951

Walter W. Mining Company,

by Geo. Klein

Vice President

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

MF-202

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NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated August 15, 1951, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and as per form MF 200, June 1951, Section 15.

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 2nd day of November, 1951

Walter W. Mining Company

by G. Oakleen

Vice President

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
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SAN FRANCISCO, CALIFORNIA

SUMMARY

of the

GEOLOGY AND ORE RESOURCES

of the

WARD MINE

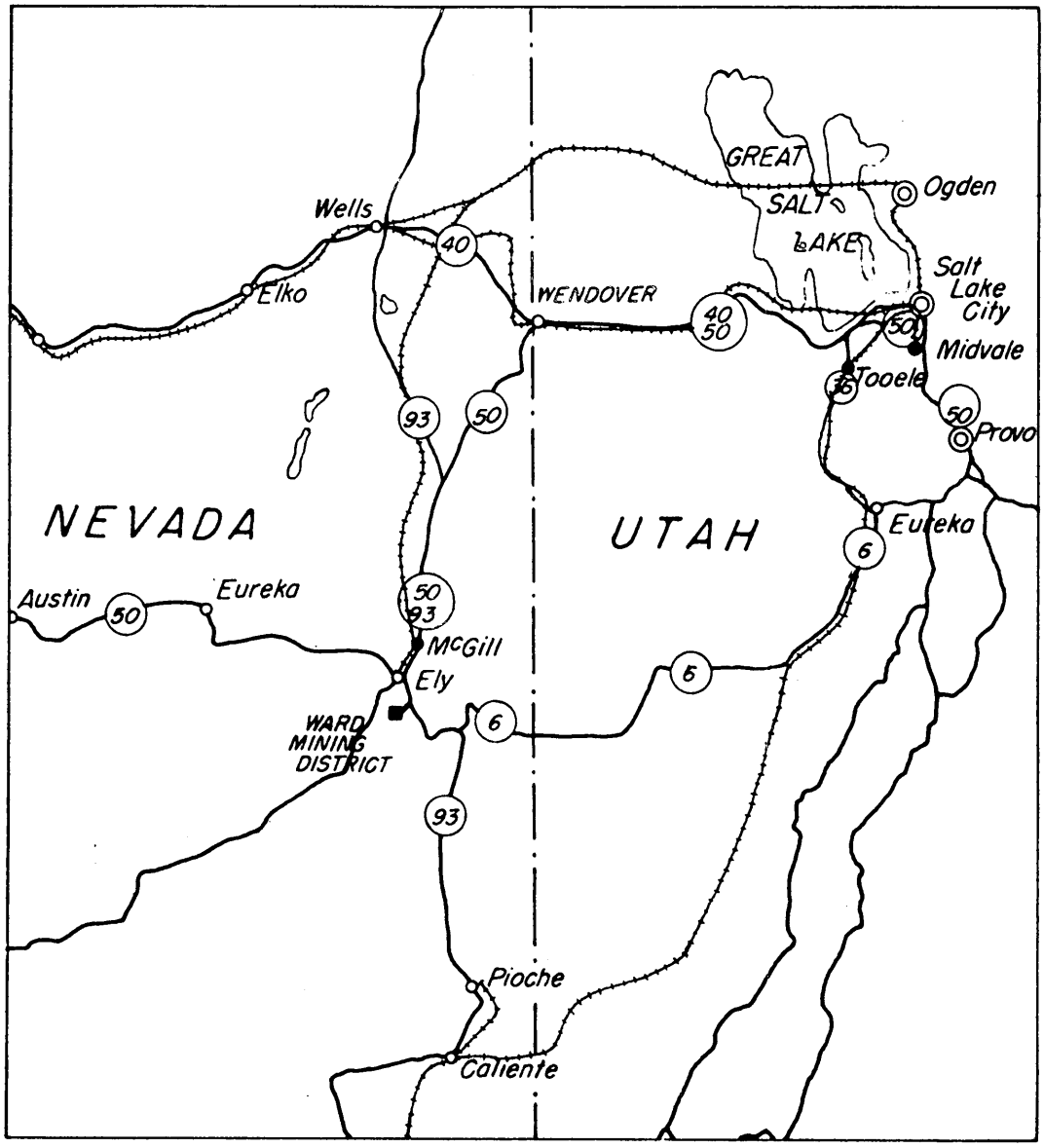
WHITE PINE COUNTY

NEVADA

by

WALKER & WALKER

OCTOBER 1, 1951.



INDEX MAP OF NORTHEASTERN NEVADA AND NORTHWESTERN UTAH, SHOWING THE LOCATION OF THE WARD MINING DISTRICT, IT'S PROXIMITY TO THE SHIPPING POINT AT ELY, AND IT'S RELATIVE POSITION TO CUSTOM MILLS AT PIOCHE, NEVADA, MIDVALE AND TOOELE, UTAH AND TO CUSTOM SMELTERS AT McGILL, NEVADA, AND MIDVALE AND TOOELE, UTAH.

EXHIBIT "A"

The Ward Mine is situated on the eastern slope of the Egan Range in White Pine County, Nevada, about fifteen miles south of the town of Ely, Nevada, which is its shipping point, and with which it is connected by road and highway. The property consists of a compact group of 35 patented lode mining claims and 6 patented mill-sites, together with 1280 acres of patented grazing land in the Steptoe Valley, which adjoins the Egan Range on the east; and it embraces the entire Ward Mining District, about a mile square, in which there are nine known ore-bodies, - only three of which, however, have been worked to any considerable extent.

The past production of the Ward Mine comprises about 100,000 tons of ore, averaging about 0.07 oz. gold, 15.0 oz. silver and 8½% lead per ton, with a gross metal value of about $2,500,000 at metal prices then prevailing, and nearly $4,500,000 at current metal prices. All of this ore was oxidized, and was mined within 250 ft. of the surface, so that the past production, at current metal prices, has been nearly $2,000,000 per 100 ft. of depth. This production has come almost wholly from three ore-bodies, known as the North Good Luck, Lyons and Clay Chamber ore-bodies, above points where, as shown on the accompanying diagrammatic cross-section (Exhibit "D"), they were cut off by a post-mineral fault of about 250 ft. displacement, known as the Ward fault.

The geological formations at the Ward Mine consist of a very thick series (over 8,000 ft. in total thickness) of easterly dipping Palaeozoic sedimentary beds, chiefly limestone, which have been cut by five porphyry dikes. All of the known ore-bodies occur in

or closely adjacent to these dikes. There have been two periods of mineralization.

First Period of Mineralization.

During the first period, a basic ore of mesothermal type was deposited, consisting, in the order of decreasing abundance, of pyrite, sphalerite (marmatite), galena and chalcopyrite, with low gold and silver values. The contacts between the dikes and the sedimentary beds have been the loci for the deposition of ore-bodies of this period, which replace the adjoining sedimentary beds. Three large ore-bodies, - the North Good Luck, South Good Luck and Defiance, - and two smaller ones, - the Mammoth and Welcome Stranger, - were formed during this period of mineralization, but only the first and third have previously been worked, and then exclusively in the oxidized zone.

The past production of the North Good Luck ore-body, its estimated possible ore reserves in the oxidized zone from the surface down to the Ward fault, and its estimated possible ore reserves in the sulphide zone from the Ward fault down to the level of the lowest or Paymaster Tunnel, are shown on the following page. The ore-bodies are expected to continue for substantial distances below the level of the Paymaster Tunnel, but the estimate of possible ore reserves has been confined to the ground above this level, because it is reasonably certain that they will extend at least to that depth, and because ore reserves above this level can be explored and mined readily and at relatively small cost.

(Above Paymaster Tunnel level)

	Previously Mined (oxidized)	Estimated Ore Reserves (oxidized)	Estimated Ore Reserves (sulphide)
	45,114 tons.	950,000 tons.	1,200,000 tons.
Gold:	0.007 oz.	-	0.004 oz.
Silver:	3.31 oz.	4.2 oz.	2.8 oz.
Lead:	12.6 %	8.4 %	5.6 %
Zinc:	1.2 %	-	11.2 %
Copper:	0.15 %	-	1.3 %
Iron:	37.4 %	38.8 %	29.6 %
Sulphur:	1.7 %	1.0 %	40.5 %
Insoluble:	12.5 %	13.2 %	8.8 %
Lime:	1.0 %	0.6 %	1.0 %

The past production of the Defiance ore-body, its estimated possible ore reserves in the oxidized zone from the surface down to the top of the sulphide zone, and its estimated possible ore reserves in the sulphide zone from the bottom of the oxidized zone down to the level of the lowest or Paymaster Tunnel, are as follows: (Above Paymaster Tunnel level)

	Previously Mined (oxidized)	Estimated Ore Reserves (oxidized)	Estimated. Ore Reserves (sulphide)
	(Small; no record)	437,500 tons.	1,725,000 tons.
Gold:	(no record)	(Uncertain; probably about half the grade of the North Good Luck ore-body.)	0.002 oz.
Silver:			1.4 oz.
Lead:			2.8 %
Zinc:			11.2 %
Copper:			1.3 %
Iron:			30.9 %
Sulphur:			42.0 %
Insoluble:			8.8 %
Lime:			1.0 %

The South Good Luck and Mammoth ore-bodies are uncommercial in the oxidized zone, and there are no available data whereby an estimate can be made of the probable grade of the ore in the sulphide zone of these ore-bodies.

(Second Period of Mineralization.

During the second period of mineralization, there was deposited, in much less volume than during the first period of mineralization, a silicious ore of epithermal type, consisting, in the order of decreasing abundance, of galena, freibergite (argentiferous tetrahedrite or "gray copper"), sphalerite and pyrite, in a quartz gangue. The freibergite contains high silver values, accompanied by gold. The ore-bodies occur along quartz veins, which traverse both the dikes and the sedimentary beds, but the commercial ore usually occurs where the veins are in the dikes. The principal ore-bodies of the second period of mineralization are the Lyons and Clay Chamber ore-bodies (both occurring along the Lyons vein), the Caroline ore-body and the Pleiades vein; but only the first two have had much production; the Caroline ore-body is low-grade; while the Pleiades vein is very scantily developed. The past production of the Lyons and Clay Chamber ore-bodies, which have been mined out down to the Ward fault, and their estimated ore reserves below the Ward fault down to the level of the Paymaster Tunnel, together with the estimated ore reserves of the Pleiades vein down to the Ward fault, are as follows:

(Above Paymaster Tunnel Level)

	Lyons and Clay Chamber Ore-bodies.		Pleiades Vein
	Previously Mined (oxidized)	Estimated Ore Reserves (sulphide)	Estimated Ore Reserves (oxidized)
	47,560 tons.	120,000 tons.	25,000 tons.
Gold:	0.14 oz.	0.10 oz.	0.01 oz.
Silver:	27.8 oz.	20.0 oz.	20.0 oz.
Lead:	4.8 %	4.0 %	4.0 %
Zinc:	2.1 %	2.0 %	3.0 %
Copper:	2.4 %	2.0 %	3.0 %

Value of Ore Reserves.

The sulphide ore reserves of the Ward Mine can most profitably be treated by differential flotation in a mill located on the property, producing a lead concentrate for shipment to the Salt Lake Valley smelters, and a zinc concentrate for shipment to the Anaconda electrolytic zinc refinery at Black Eagle, Montana.

North Good Luck Ore-body.

The following is an estimate of the percentages of recovery and assays of the mill products, following treatment of the sulphide ore reserves of the North Good Luck ore-body by this method:

Assays.

	Tons	Au. oz.	Ag. oz.	Pb. %	Cu. %	Zn. %	Fe. %	Insol. %	CaO. %	S. %
Mill Heads:	1.0	.004	2.8	5.6	1.3	11.2	29.6	8.8	1.0	40.5
Lead Concts.	0.11	.011	19.2	45.2	8.8	4.4	14.0	2.0	0.2	25.0
Zinc Concts.	0.19	.004	1.4	1.5	1.0	52.0	8.0	1.0	0.1	33.0
Tailings.	0.70	.003	0.6	0.5	0.2	1.2	37.8	12.0	0.8	45.0

Distribution.

	%	%	%	%	%	%	%
Lead concts.	11.0	30.2	75.4	88.7	74.5	4.3	5.4
Zinc concts.	19.0	9.5	9.5	5.1	14.6	88.2	5.1
Tailings.	70.0	60.3	15.1	6.2	10.9	7.5	89.3

On the basis of current Salt Lake Valley smelter schedules and current Anaconda zinc refinery schedule; of current hauling and freight rates; of current metal prices: Au. $35.00 per oz.; Ag. 90¢ per oz.; Pb. 17¢ per lb.; Cu. 24½¢ per lb.; and Zn. 17½¢ per lb.; and of an estimated mining cost of $8.00 per ton and milling cost of $3.00 per ton; lead and zinc concentrates of the composition indicated above would have the following net value:

Lead Concentrates (0.11 ton)

Gold:	0.011	oz.			
Silver:	19.2	oz.	@ 95% @ 90¢:		$ 16.42
Lead:	45.2	%	- 1.5% : 43.7% : 874# @ 90% : .786.6# @ (17¢ - 2¢ : 15¢):		117.99
Copper:	8.8	%	@ 90% : 7.92% : 158.4# @ (24½¢ - 6¢ : 18½¢):		29.30
Iron:	14.0	%	@ 6¢:		.84
					$164.55
Insoluble:	2.0	%	@ 10¢:	$ .20	
Zinc:	4.4	%			
Sulphur:	25.0	%		2.50	
Treatment:	$7.25 less lead credit: $1.37:			5.88	
					8.58
Net smelter payment per ton:					$155.97
Hauling: Ward mine to East Ely, Nevada: $2.25 per wet ton (5% H_2O):				$ 2.37	
Freight: East Ely to Salt Lake Valley smelters: $13.49 per wet ton (5% H_2O):				14.20	
					16.57
Gross Income Per Ton:					$139.40

Zinc Concentrates (0.19 ton)

Gold:	0.004	oz.			
Silver:	1.4	oz.	@ 80% @ 90¢:		$ 1.01
Lead:	1.5	%			
Copper:	1.0	%			
Zinc:	52.0	%	@ 80% : 41.6% : 832# @ 17½¢:		145.60
Iron:	5.0	%			
Insoluble:	2.0	%			
Lime:	0.1	%			
Sulphur:	34.0	%			
					$146.61
Treatment: $35.00 plus $5.00:					40.00
Net refinery payment per ton:					$106.61
Hauling: Ward mine to East Ely, Nevada: $2.25 per wet ton (8% H_2O):				$ 2.44	
Freight: East Ely to Black Eagle, Montana: $10.37 per wet ton (8% H_2O):				11.27	
					13.71
Gross Income Per Ton:					$ 92.90

Summary

Lead concentrates: 0.11 ton. @ $139.40:		$ 15.33
Zinc concentrates: 0.19 ton. @ 92.90:		17.65
		$ 32.98
Mining cost per ton of ore (estimated):	$ 8.00	
Milling cost per ton of ore (estimated):	3.00	
		11.00
Net income per ton of ore:		$ 21.98
Total net income: 1,200,000 tons of ore @ $21.98:		$26,376,000.00

Defiance Ore-body.

Assuming that the Defiance sulphide ore of the average assay shown on page 3 would produce concentrates of the same composition as those from the North Good Luck sulphide ore (page 6), with the same weight of zinc concentrates but only half the weight of lead concentrates, per ton of ore, the following would be the estimated value of the Defiance sulphide ore, under the same conditions as those applying to the North Good Luck ore-body (page 5), except that the mining cost is estimated at $9.00 per ton instead of $8.00:

Summary

Lead concentrates: 0.055 ton @ $139.40:		$ 7.66
Zinc concentrates: 0.19 ton @ $ 92.90:		17.65
		$25.31
Mining cost per ton of ore (estimated):	$ 9.00	
Milling cost per ton of ore (estimated):	3.00	
		12.00
Net income per ton of ore:		$13.31
Total net income: 1,725,000 tons of ore @ $13.31:		$22,959,750.00

Lyons and Clay Chamber Ore-bodies.

It is assumed that it will be best to produce only a lead concentrate from the sulphide ore of these ore-bodies by the flotation process, as there is not enough zinc in the ore to justify the separation of a zinc concentrate. The following is an estimate of percentages of recovery and assays of the mill products by this method:

Assays.

	Tons.	Au. oz.	Ag. oz.	Pb. %	Cu. %	Zn. %
Mill heads:	1.00	0.10	20.0	4.0	2.0	2.0
Lead concts:	0.12	0.625	150.00	30.0	13.3	10.0
Tailings:	0.88	0.028	2.3	0.45	0.45	0.9

Distribution.

	Tons.	Au. %	Ag. %	Pb. %	Cu. %	Zn. %
Lead concts.	12	75	90	90	80	60
Tailings.	88	25	10	10	20	40

Under the same conditions as those applying to the North Good Luck ore-body (page 5), except that the mining cost is estimated at $12.00 per ton, the following would be the estimated value of these ore-bodies:

Lead concentrates (0.12 ton).

Gold:	0.625 oz. @ $31.8183:				$ 19.89
Silver:	150.0 oz. @ 95% @ 90¢:				128.25
Lead:	30.0 % - 1.5% : 28.5% : 570# @ 90¢ : 513# @ (17¢ - 2.0¢ : 15¢):				76.95
Copper:	13.3 % @ 90% : 11.97% : 239.4# @ (24½¢ - 6¢ : 18½¢):				44.29
Iron:	5.0 % @ 6¢:				.30
					$269.68
Insoluble:	4.0 % @ 10¢:			$ .40	
Zinc:	10.0 % - 6.0% : 4.0% @ 30¢:			1.20	
Sulphur:				2.50	
Treatment:	$7.25 plus lead debit: $.15:			7.40	
					11.50
Net smelter payment per ton:					$258.18
Hauling: Ward mine to East Ely, Nevada: $2.25 per wet ton (5% H_2O):				$ 2.44	
Freight: East Ely to Salt Lake Valley smelters: $14.01 per wet ton (5% H_2O):				14.75	
					17.19
Gross income per ton:					$240.99

Summary.

Lead concentrates: 0.12 ton @ $240.99:		$ 28.92
Mining cost (estimated):	$12.00	
Milling cost (estimated):	3.00	
		15.00
Net income per ton:		$ 13.92
Total net income: 120,000 tons @ $13.92:		$1,670,400.00

Grand Total of Sulphide Ore Reserves.

North Good Luck ore-body:	1,200,000 tons	@$21.98:	$26,376,000.00
Defiance ore-body:	1,725,000 "	@$13.31:	22,959,750.00
Lyons-Clay Chamber ore-bodies:	120,000 "	@$13.92:	1,670,400.00
Total net value:	3,045,000 "		$51,006,150.00

Oxidized Ore Reserves.

The metallurgy of the oxidized ore not having yet been completely worked out, no attempt will be made to evaluate the oxidized ore reserves, but they may be considered latent assets of probable considerable future value.

Development.

Having shown, in the preceding pages, that, according to the most dependable information obtainable, the ore reserves of the Ward Mine are ample and valuable, it is next in order to consider the best means of developing these ore reserves, preparatory to exploiting them. This development work must be undertaken in steps, and the preliminary step, which is all that needs be considered at the present time, is to verify the estimates of the size and grade of the sulphide ore-bodies close beneath the bottoms of the oxidized zones thereof, so as to have the guidance, which these oxidized zones afford, in locating their downward continuations in the sulphide zone. The North Good Luck and the Defiance ore-bodies, being the largest and richest in the Ward Mine, deserve first attention in this manner.

The downward continuation of the North Good Luck ore-body beneath the Ward fault was not found by the insufficient and poorly planned work undertaken for this purpose by the previous operators of the property, but the direction of movement and extent of displacement along the Ward fault have now been determined, so that the position of the segment of the North Good Luck ore-body beneath it is now known, and development work can be planned with assurance for the recovery of this ore-body. Initial development work for this purpose can best be undertaken through the Mountain Pride Tunnel, beyond the face of which some 1,400 ft. of drifting will be required. On Exhibits "D" and "E" the existing section of the Mountain Pride Tunnel, which would be utilized for this purpose, is shown by a solid red line, while the new work, which would be driven, is marked by a broken red line.

The downward continuation of the Defiance ore-body has not been

displaced by faulting, so that the problem of exploring this ore-body in the sulphide zone is a simple one, requiring only the extension of the Lower Defiance Tunnel, now open and accessible, to the ore-body, followed by development of the ore-body, totalling about 1,600 ft. of drifting and crosscutting. On Exhibits "D" and "E", the Lower Defiance Tunnel is shown as a solid red line, while the new work to be performed is marked by a broken red line.

The cost of this program of preliminary development work is estimated at $100,000, of which $10,000 will be required for preparatory work, and $90,000 for 3,000 ft. of development work at an estimated cost of $30 per foot. It is worthy or remark in this connection that this development work, both in the Mountain Pride Tunnel and in the Lower Defiance Tunnel, will be favored by the fact that, all of it being tunnel work, no hoisting or pumping will be required, while the ground is firm, needing little timbering.

It is expected that this program of development work will develop 50 ft. of backs in sulphide ore in the North Good Luck ore-body, above the Mountain Pride Tunnel level, amounting to about 150,000 tons, and 200 ft. of backs in sulphide ore in the Defiance ore-body, above the Lower Defiance Tunnel level, amounting to about 300,000 tons.

If such proves to be the case, then the next step in the program, which would be the erection of a mill and the development of the Defiance ore-body on the Mountain Pride Tunnel level, can probably be financed by the shipment of some of this ore to custom mills in the Salt Lake Valley. The last step in the present contemplated program would be development of both the North Good Luck ore-body and the Defiance ore-body on the lowest or Paymaster Tunnel level.

SUMMARY

of the

GEOLOGY AND ORE DEPOSITS

of the

WARD MINE

WHITE PINE COUNTY

NEVADA

by

WALKER & WALKER

OCTOBER 1, 1951.

The Ward Mine is situated on the eastern slope of the Egan Range in White Pine County, Nevada, about fifteen miles south of the town of Ely, Nevada, which is its shipping point, and with which it is connected by road and highway. The property consists of a compact group of 35 patented lode mining claims and 6 patented mill-sites, together with 1280 acres of patented grazing land in the Steptoe Valley, which adjoins the Egan Range on the east; and it embraces the entire Ward Mining District, about a mile square, in which there are nine known ore-bodies, - only three of which, however, have been worked to any considerable extent.

The past production of the Ward Mine comprises about 100,000 tons of ore, averaging about 0.07 oz. gold, 15.0 oz. silver and 8½% lead per ton, with a gross metal value of about $2,500,000 at metal prices then prevailing, and nearly $4,500,000 at current metal prices. All of this ore was oxidized, and was mined within 250 ft. of the surface, so that the past production, at current metal prices, has been nearly $2,000,000 per 100 ft. of depth. This production has come almost wholly from three ore-bodies, known as the North Good Luck, Lyons and Clay Chamber ore-bodies, above points where, as shown on the accompanying diagrammatic cross-section (Exhibit "D"), they were cut off by a post-mineral fault of about 250 ft. displacement, known as the Ward fault.

The geological formations at the Ward Mine consist of a very thick series (over 8,000 ft. in total thickness) of easterly dipping Palaeozoic sedimentary beds, chiefly limestone, which have been cut by five porphyry dikes. All of the known ore-bodies occur in

or closely adjacent to these dikes. There have been two periods of mineralization.

First Period of Mineralization.

During the first period, a basic ore of mesothermal type was deposited, consisting, in the order of decreasing abundance, of pyrite, sphalerite (marmatite), galena and chalcopyrite, with low gold and silver values. The contacts between the dikes and the sedimentary beds have been the loci for the deposition of ore-bodies of this period, which replace the adjoining sedimentary beds. Three large ore-bodies, - the North Good Luck, South Good Luck and Defiance, - and two smaller ones, - the Mammoth and Welcome Stranger, - were formed during this period of mineralization, but only the first and third have previously been worked, and then exclusively in the oxidized zone.

The past production of the North Good Luck ore-body, its estimated possible ore reserves in the oxidized zone from the surface down to the Ward fault, and its estimated possible ore reserves in the sulphide zone from the Ward fault down to the level of the lowest or Paymaster Tunnel, are shown on the following page. The ore-bodies are expected to continue for substantial distances below the level of the Paymaster Tunnel, but the estimate of possible ore reserves has been confined to the ground above this level, because it is reasonably certain that they will extend at least to that depth, and because ore reserves above this level can be explored and mined readily and at relatively small cost.

(Above Paymaster Tunnel level)

	Previously Mined (oxidized)	Estimated Ore Reserves (oxidized)	Estimated Ore Reserves (sulphide)
	45,114 tons.	950,000 tons.	1,200,000 tons.
Gold:	0.007 oz.	-	0.004 oz.
Silver:	3.31 oz.	4.2 oz.	2.8 oz.
Lead:	12,6 %	8.4 %	5.6 %
Zinc:	1.2 %	-	11.2 %
Copper:	0.15 %	-	1.3 %
Iron:	37.4 %	38.8 %	29.6 %
Sulphur:	1.7 %	1.0 %	40.5 %
Insoluble:	12.5 %	13.2 %	8.8 %
Lime:	1.0 %	0.6 %	1.0 %

The past production of the Defiance ore-body, its estimated possible ore reserves in the oxidized zone from the surface down to the top of the sulphide zone, and its estimated possible ore reserves in the sulphide zone from the bottom of the oxidized zone down to the level of the lowest or Paymaster Tunnel, are as follows:

(Above Paymaster Tunnel level)

	Previously Mined (oxidized)	Estimated Ore Reserves (oxidized)	Estimated. Ore Reserves (sulphide)
	(Small; no record)	437,500 tons.	1,725,000 tons.
Gold:	(no record)	(Uncertain; probably about half the grade of the North Good Luck ore-body.)	0.002 oz.
Silver:			1.4 oz.
Lead:			2.8 %
Zinc:			11.2 %
Copper:			1.3 %
Iron:			30.9 %
Sulphur:			42.0 %
Insoluble:			8.8 %
Lime:			1.0 %

The South Good Luck and Mammoth ore-bodies are uncommercial in the oxidized zone, and there are no available data whereby an estimate can be made of the probable grade of the ore in the sulphide zone of these ore-bodies.

Second Period of Mineralization.

During the second period of mineralization, there was deposited, in much less volume than during the first period of mineralization, a silicious ore of epithermal type, consisting, in the order of decreasing abundance, of galena, freibergite (argentiferous tetrahedrite or "gray copper"), sphalerite and pyrite, in a quartz gangue. The freibergite contains high silver values, accompanied by gold. The ore-bodies occur along quartz veins, which traverse both the dikes and the sedimentary beds, but the commercial ore usually occurs where the veins are in the dikes. The principal ore-bodies of the second period of mineralization are the Lyons and Clay Chamber ore-bodies (both occurring along the Lyons vein), the Caroline ore-body and the Plieades vein; but only the first two have had much production; the Caroline ore-body is low-grade; while the Plieades vein is very scantily developed. The past production of the Lyons and Clay Chamber ore-bodies, which have been mined out down to the Ward fault, and their estimated ore reserves below the Ward fault down to the level of the Paymaster Tunnel, together with the estimated ore reserves of the Plieades vein down to the Ward fault, are as follows:

(Above Paymaster Tunnel Level)

	Lyons and Clay Chamber Ore-bodies.		Plieades Vein
	Previously Mined (oxidized)	Estimated Ore Reserves (sulphide)	Estimated Ore Reserves (oxidized)
	47,560 tons.	120,000 tons.	25,000 tons.
Gold:	0.14 oz.	0.10 oz.	0.01 oz.
Silver:	27.8 oz.	20.0 oz.	20.0 oz.
Lead:	4.8 %	4.0 %	4.0 %
Zinc:	2.1 %	2.0 %	3.0 %
Copper:	2.4 %	2.0 %	3.0 %

Value of Ore Reserves.

The sulphide ore reserves of the Ward Mine can most profitably be treated by differential flotation in a mill located on the property, producing a lead concentrate for shipment to the Salt Lake Valley smelters, and a zinc concentrate for shipment to the Anaconda electrolytic zinc refinery at Black Eagle, Montana.

North Good Luck Ore-body.

The following is an estimate of the percentages of recovery and assays of the mill products, following treatment of the sulphide ore reserves of the North Good Luck ore-body by this method:

Assays.

	Tons	Au. oz.	Ag. oz.	Pb. %	Cu. %	Zn. %	Fe. %	Insol. %	CaO. %	S. %
Mill Heads:	1.0	.004	2.8	5.6	1.3	11.2	29.6	8.8	1.0	40.5
Lead Concts.	0.11	.011	19.2	45.2	8.8	4.4	14.0	2.0	0.2	25.0
Zinc Concts.	0.19	.004	1.4	1.5	1.0	52.0	8.0	1.0	0.1	33.0
Tailings.	0.70	.003	0.6	0.5	0.2	1.2	37.8	12.0	0.8	45.0

Distribution.

	%	%	%	%	%	%	%
Lead concts.	11.0	30.2	75.4	88.7	74.5	4.3	5.4
Zinc concts.	19.0	9.5	9.5	5.1	14.6	88.2	5.1
Tailings.	70.0	60.3	15.1	6.2	10.9	7.5	89.3

On the basis of current Salt Lake Valley smelter schedules and current Anaconda zinc refinery schedule; of current hauling and freight rates; of current metal prices: Au. $35.00 per oz.; Ag. 90¢ per oz.; Pb. 17¢ per lb.; Cu. 24½¢ per lb.; and Zn. 17½¢ per lb.; and of an estimated mining cost of $8.00 per ton and milling cost of $3.00 per ton; lead and zinc concentrates of the composition indicated above would have the following net value:

Lead Concentrates (0.11 ton)

Gold:	0.011	oz.			
Silver:	19.2	oz.	@ 95% @ 90¢:		$ 16.42
Lead:	45.2	%	1.5% : 43.7% : 874# @ 90% : .786.6# @ (17¢ - 2¢ : 15¢):		117.99
Copper:	8.8	%	@ 90% : 7.92% : 158.4# @ (24½¢ - 6¢ : 18½¢):		29.30
Iron:	14.0	%	@ 6¢:		.84
					$164.55
Insoluble:	2.0	%	@ 10¢:	$ .20	
Zinc:	4.4	%			
Sulphur:	25.0	%		2.50	
Treatment: $7.25 less lead credit: $1.37:				5.88	
					8.58
Net smelter payment per ton:					$155.97
Hauling: Ward mine to East Ely, Nevada: $2.25 per wet ton (5% H_2O):				$ 2.37	
Freight: East Ely to Salt Lake Valley smelters: $13.49 per wet ton (5% H_2O):				14.20	
					16.57
Gross Income Per Ton:					$139.40

Zinc Concentrates (0.19 ton)

Gold:	0.004	oz.		
Silver:	1.4	oz.	@ 80% @ 90¢:	$ 1.01
Lead:	1.5	%		
Copper:	1.0	%		
Zinc:	52.0	%	@ 80% : 41.6% : 832# @ 17½¢:	145.60
Iron:	5.0	%		
Insoluble:	2.0	%		
Lime:	0.1	%		
Sulphur:	34.0	%		
				$146.61
Treatment: $35.00 plus $5.00:				40.00
Net refinery payment per ton:				$106.61
Hauling: Ward mine to East Ely, Nevada: $2.25 per wet ton (8% H_2O):				$ 2.44
Freight: East Ely to Black Eagle, Montana: $10.37 per wet ton (8% H_2O):				11.27
				13.71
Gross Income Per Ton:				$ 92.90

Summary

Lead concentrates: 0.11 ton. @ $139.40:		$ 15.33
Zinc concentrates: 0.19 ton. @ 92.90:		17.65
		$ 32.98
Mining cost per ton of ore (estimated):	$ 8.00	
Milling cost per ton of ore (estimated):	3.00	
		11.00
Net income per ton of ore:		$ 21.98
Total net income: 1,200,000 tons of ore @ $21.98:		$26,376,000.00

Defiance Ore-body.

Assuming that the Defiance sulphide ore of the average assay shown on page 3 would produce concentrates of the same composition as those from the North Good Luck sulphide ore (page 6), with the same weight of zinc concentrates but only half the weight of lead concentrates, per ton of ore, the following would be the estimated value of the Defiance sulphide ore, under the same conditions as those applying to the North Good Luck ore-body (page 5), except that the mining cost is estimated at $9.00 per ton instead of $8.00:

Summary

Lead concentrates: 0.055 ton @ $139.40:		$ 7.66
Zinc concentrates: 0.19 ton @ $ 92.90:		17.65
		$25.31
Mining cost per ton of ore (estimated):	$ 9.00	
Milling cost per ton of ore (estimated):	3.00	
		12.00
Net income per ton of ore:		$13.31
Total net income: 1,725,000 tons of ore @ $13.31:		$22,959,750.00

Lyons and Clay Chamber Ore-bodies.

It is assumed that it will be best to produce only a lead concentrate from the sulphide ore of these ore-bodies by the flotation process, as there is not enough zinc in the ore to justify the separation of a zinc concentrate. The following is an estimate of percentages of recovery and assays of the mill products by this method:

Assays.

	Tons.	Au. oz.	Ag. oz.	Pb. %	Cu. %	Zn. %
Mill heads:	1.00	0.10	20.0	4.0	2.0	2.0
Lead concts:	0.12	0.625	150.00	30.0	13.3	10.0
Tailings:	0.88	0.028	2.3	0.45	0.45	0.9

Distribution.

	Tons.	Au. %	Ag. %	Pb. %	Cu. %	Zn. %
Lead concts.	12	75	90	90	80	60
Tailings.	88	25	10	10	20	40

Under the same conditions as those applying to the North Good Luck ore-body (page 5), except that the mining cost is estimated at $12.00 per ton, the following would be the estimated value of these ore-bodies:

Lead concentrates (0.12 ton).

Gold:	0.625	oz.	@ $31.8183:		$ 19.89
Silver:	150.0	oz.	@ 95% @ 90¢:		128.25
Lead:	30.0	%	- 1.5% : 28.5% : 570# @ 90¢ : 513# @ (17¢ - 2.0¢ : 15¢):		76.95
Copper:	13.3	%	@ 90% : 11.97% : 239.4# @ (24½¢ - 6¢ : 18½¢):		44.29
Iron:	5.0	%	@ 6¢:		.30
					$269.68
Insoluble:	4.0	%	@ 10¢:	$ .40	
Zinc:	10.0	%	- 6.0% : 4.0% @ 30¢:	1.20	
Sulphur:				2.50	
Treatment:	$7.25 plus lead debit: $.15:			7.40	
					11.50
Net smelter payment per ton:					$258.18
Hauling: Ward mine to East Ely, Nevada: $2.25 per wet ton (5% H_2O):				$ 2.44	
Freight: East Ely to Salt Lake Valley smelters: $14.01 per wet ton (5% H_2O):				14.75	
					17.19
Gross income per ton:					$240.99

Summary.

Lead concentrates: 0.12 ton @ $240.99:		$ 28.92
Mining cost (estimated):	$12.00	
Milling cost (estimated):	3.00	
		15.00
Net income per ton:		$ 13.92

Total net income: 120,000 tons @ $13.92: $1,670,400.00

Grand Total of Sulphide Ore Reserves.

North Good Luck ore-body:	1,200,000 tons	@$21.98:	$26,376,000.00
Defiance ore-body:	1,725,000 "	@$13.31:	22,959,750.00
Lyons-Clay Chamber ore-bodies:	120,000 "	@$13.92:	1,670,400.00
Total net value:	3,045,000 "		$51,006,150.00

Oxidized Ore Reserves.

The metallurgy of the oxidized ore not having yet been completely worked out, no attempt will be made to evaluate the oxidized ore reserves, but they may be considered latent assets of probable considerable future value.

Development.

Having shown, in the preceding pages, that, according to the most dependable information obtainable, the ore reserves of the Ward Mine are ample and valuable, it is next in order to consider the best means of developing these ore reserves, preparatory to exploiting them. This development work must be undertaken in steps, and the preliminary step, which is all that needs be considered at the present time, is to verify the estimates of the size and grade of the sulphide ore-bodies close beneath the bottoms of the oxidized zones thereof, so as to have the guidance, which these oxidized zones afford, in locating their downward continuations in the sulphide zone. The North Good Luck and the Defiance ore-bodies, being the largest and richest in the Ward Mine, deserve first attention in this manner.

The downward continuation of the North Good Luck ore-body beneath the Ward fault was not found by the insufficient and poorly planned work undertaken for this purpose by the previous operators of the property, but the direction of movement and extent of displacement along the Ward fault have now been determined, so that the position of the segment of the North Good Luck ore-body beneath it is now known, and development work can be planned with assurance for the recovery of this ore-body. Initial development work for this purpose can best be undertaken through the Mountain Pride Tunnel, beyond the face of which some 1,400 ft. of drifting will be required. On Exhibits "D" and "E" the existing section of the Mountain Pride Tunnel, which would be utilized for this purpose, is shown by a solid red line, while the new work, which would be driven, is marked by a broken red line.

The downward continuation of the Defiance ore-body has not been

displaced by faulting, so that the problem of exploring this ore-body in the sulphide zone is a simple one, requiring only the extension of the Lower Defiance Tunnel, now open and accessible, to the ore-body, followed by development of the ore-body, totalling about 1,600 ft. of drifting and crosscutting. On Exhibits "D" and "E", the Lower Defiance Tunnel is shown as a solid red line, while the new work to be performed is marked by a broken red line.

The cost of this program of preliminary development work is estimated at $100,000, of which $10,000 will be required for preparatory work, and $90,000 for 3,000 ft. of development work at an estimated cost of $30 per foot. It is worthy or remark in this connection that this development work, both in the Mountain Pride Tunnel and in the Lower Defiance Tunnel, will be favored by the fact that, all of it being tunnel work, no hoisting or pumping will be required, while the ground is firm, needing little timbering.

It is expected that this program of development work will develop 50 ft. of backs in sulphide ore in the North Good Luck ore-body, above the Mountain Pride Tunnel level, amounting to about 150,000 tons, and 200 ft. of backs in sulphide ore in the Defiance ore-body, above the Lower Defiance Tunnel level, amounting to about 300,000 tons.

If such proves to be the case, then the next step in the program, which would be the erection of a mill and the development of the Defiance ore-body on the Mountain Pride Tunnel level, can probably be financed by the shipment of some of this ore to custom mills in the Salt Lake Valley. The last step in the present contemplated program would be development of both the North Good Luck ore-body and the Defiance ore-body on the lowest or Paymaster Tunnel level.

COOPER-TRENT DIVISION / KEUFFEL & ESSER CO.

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TO: Mr. E. M. Laubert
Phillips Petroleum Company
P. O. Box 239
Salt Lake City, Utah 84110

DATE 8/13/69

PLEASE REFER TO QUOTATION NO. IN ALL CORRESPONDENCE MG/8/13

GENTLEMEN: In response to your request, we are pleased to submit the following quotation.

Re: IMEA-2257 (Zinc-Lead-Copper) Walker Corporation Ward Mine White Pine County, Nevada Contract I&m-8442 Contract and amendment furnished by Department of the Interior. Reproduce by Xerox the above contract with amendments - Per Set	$7.25

DELIVERY	F.O.B.	TERMS	ACCEPTANCE
As required	Arlington, Va.	Net-30 days	30 days

Respectfully,
Cooper-Trent Division of Keuffel & Esser Co.

T. R. Meehan
Assistant Regional Manager

MAY WE ASK THAT YOU MENTION THE ABOVE QUOTATION NUMBER WHEN YOU FORWARD YOUR ORDER OR MAKE FURTHER INQUIRY.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
8/8/69	Emerick	120
		120
		220

AIRMAIL

AUG 11 1969

Mr. E. M. Lambert
Phillips Petroleum Company
P. O. Box 239
Salt Lake City, Utah 84110

Re: DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

Dear Mr. Lambert:

In regard to your request of July 30, 1969, for a copy of DMEA Contract Idm-E442 (Docket DMEA-2257), the following material is available:

1. Exploration Project Contract
   - 1 page - both sides - 8" x 16"
   - 1 page - both sides - 8" x 12"
   - 6 pages - one side - 8" x 10½"
   - 1 claim map - Scale 1" = 600' - 15-3/4" x 21"
   - 1 geology map - Scale 1" = 200' - 16" x 23"
   - 1 figure - Orebodies - Scale 1" = 300' - 8½" x 11"

2. Amendment No. 1 to Contract
   - 2 pages - one side - 8" x 10½"

3. Amendment No. 2 to Contract
   - 2 pages - one side - 8" x 10½"

4. Amendment No. 3 to Contract
   - 3 pages - one side - 8" x 10½"

5. Amendment No. 4 to Contract
   - 1 page - both sides - 8" x 10½"
   - 6 pages - one side - 8" x 10½"
   - 1 map of proposed drilling program
     Scale 1" = 200' - 8½" x 11"

6. Termination Agreement
   - 2 pages - one side - 8" x 10½"

Copies of this material may be obtained by contacting:

Cooper-Trent, Inc.
1521 North Danville Street
Arlington, Virginia 22201
Attention: Mr. Marvin Mundy

Please send the enclosed copy of this letter to Cooper-Trent, Inc., with your letter of instructions when ordering copies of the above material. Cooper-Trent, Inc., will contact you regarding cost of reproductions. All further correspondence relating to the procurement of copies of this material will be with the above company and not with this office.

In answer to your question, this contract is no longer in effect.

Sincerely yours,

Harold Kirkemo (gla)

Harold Kirkemo
Chief, Office of
Minerals Exploration

For the attention of Mr. Mundy:

Please return the enclosed material to:

Mr. Harold Kirkemo
Office of Minerals Exploration
U. S. Geological Survey
Room 4460, Interior Department
Washington, D. C. 20242

cc: Director's Reading File
Economic Geology File
OME file
OME Reading File
OME Region II
Mr. Emerick
130

WLEmerick/gla 8-11-69

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

PROJECT SUMMARY REPORT

By: W. P. Klugescheid August 2, 1955

1. Docket No. DMEA-2257 (Lead-Zinc-Copper)
Contract No. Idm-E442
Property: Ward Mine
White Pine County, Nevada

Operator: Walker Corporation
Box 163
East Ely, Nevada

Operator's Property Rights: Lessee
Agreement of Lease and Option - dated August 15, 1951.
Owner's Consent to Lien - dated November 28, 1952
Owner's Consent to Lien in consideration of Amendment No. 4, dated August 6, 1954.

2. Contract dated November 12, 1952. To complete - 24 months.

Work Authorized

The work consists of two parts. Part I shall be known as the Goodluck Orebody Project, and Part II as the Defiance Tunnel Exploration Project. The work on these two Projects may be carried on simultaneously.

PART I

1. Extend the Mountain Pride tunnel 1,300 feet.

2. Drive to the Mountain Pride tunnel along the Paymaster vein for about 100 feet.

3. Crosscut northeast for 30 feet from 2790 north to the upper strand of the Ward fault.

4. Sink a 4' x 6' winze for 100 feet.

5. Raise (4' x 6') 20 feet through the fault.

6. Sink a 4' x 6' inclined winze 200 feet from 3200 North and 3470 West.

7. Raise (4' x 6') 20 feet through the fault to cut the North Goodluck ore body.

PART II

This part consists of Stage 1 and Stage 2. Stage 2 is contingent on the results of Stage 1.

STAGE I

1. Construct one 20' x 20' compressor house.

2. Rehabilitate approximately 1, 130 feet of the Lower Defiance tunnel.

3. Extend the Lower Defiance tunnel by crosscutting to the east side of the dike and drift in both directions along the dike. Drifting and crosscutting is not to exceed 1,000 feet.

STAGE II

1. Further extend the crosscut of the Lower Defiance tunnel through the dike and drift in both directions along the west side of the dike. Drifting and crosscutting is not to exceed 600 feet.

Agreed Unit Costs

Part I

1,300 feet of drift @ $35.00/ft.	$ 45,500.00
100 feet of drift @ $35.00/ft.	3,500.00
30 feet of crosscut @ $35.00/ft.	1,050.00
100 feet of winze @ $54.00/ft.	5,400.00
20 feet of raise @ $54.00/ft.	1,080.00
200 feet of winze @ $54.00/ft.	10,800.00
20 feet of raise @ $54.00/ft.	1,080.00
Total Agreed Unit Costs	$ 68,410.00

Part II

Stage I

1,000 feet of crosscut and drift @ $35.00/ft.	$ 35,000.00

Stage II

600 feet of crosscut and drift @ $35.00/ft.	$ 21,000.00

Scheduled Actual Costs

Part II

* Indicates maximum allowable cost.

Stage I

Rehabilitate the Lower Defiance tunnel for about 1,130 feet	$ 5,900.00
Construct one 20' x 20' compressor house.	2,000.00*

SUMMARY

Total estimated cost of Part I		$ 68,410.00
Total estimated cost of Stage I, Part II	$42,900.00	
Total estimated cost of Stage II, Part II	21,000.00	
Total estimated costs of Stages I & II, Part II		63,900.00
Total estimated cost of the project		$132,310.00
Government's participation @ 50%		$ 66,155.00

Amendments

No. 1 Dated June 10, 1953

In Exhibit "A", under Part I, change the figure "1,300" to "950", and add; drive two crosscuts, one 150 feet easterly and the other "200" feet westerly. Total drifting and crosscutting not to exceed 1,300 feet.

No increase in the total cost of the project.

No. 2 Dated December 2, 1953.

1. Change the work, Part I, Item 1, as amended by Amendment No. 1.

2. Under "Agreed Unit Costs, Part I, Item 1 is changed to read as follows:

Cutting 2 drill stations	$ 525.00
1,200 feet of diamond drilling @ $6.35/ft.	7,620.00
1,200 feet of lost casing @ $0.30/ft.	360.00
Cementing, 200 ft. @ $2.00/ft.	400.00
600 feet of reaming and casing @ $1.50/ft.	900.00
Standby time, 20 hours @ $6.00/hr	120.00
Core handling	240.00
Assaying, 40 samples @ $3.00 each	120.00
656 feet of drifting and 350 feet of crosscutting @ $35.00/ft.	35,215.00
Total	$45,500.00

No increase in the total cost of the project.

Amendments (continued)

No. 3 Dated April 14, 1953.

1. Under "Description of the Work", "Part I", as amended by Amendments Nos. 1 and 2, delete all 7 items and substitute the following 2 items.

   (1) Extend the Mountain Pride tunnel not in excess of 653 feet and crosscut not in excess of 350 feet.

   (2) Cut 2 drill stations, and drill not in excess of 4,146 feet of diamond drill holes.

2. Delete all 7 items of the costs and substitute the following:

653 feet of drifting and 350 feet of cross-cutting @ $25.00/ft.	$ 35,105.00
Cutting 2 diamond drill stations	525.00
4,146 feet of diamond drilling @ $6.35/ft. (rounded to)	26,330.00
3,700 feet of casing @ $0.30/ft.	1,110.00
600 feet of cementing @ $2.00/ft.	1,200.00
1,800 feet of reaming and casing @ $1.50/ft.	2,700.00
Standby time, 60 hours @ $6.00/hr	360.00
Core handling	720.00
Assaying, 120 samples @ $3.00 each	360.00
Total	$ 68,410.00

No increase in the total cost of the project.

No. 4 Dated July 19, 1954.

1. In Exhibit "A" under "Description of the Work", delete everything under "Part II" and substitute the following:

   (a) Improve the access road to the Lower Defiance tunnel.
   (b) Move the compressor from the Mountain Pride tunnel to the Lower Defiance tunnel.
   (c) Clean up the Lower Defiance tunnel.
   (d) Install air and water lines in Lower Defiance tunnel.
   (e) Cut a drill station and drill not in excess of 2,210 feet of Diamond drill holes.

2. In Exhibit "A" under "Agreed Unit Costs", delete Stage I and Stage II under Part II and substitute the following:

2,210 feet of diamond drilling @ $7.25/ft.	$ 16,022.50
Casing, standby time and assaying samples	1,300.00
	$ 17,322.50

3. In Exhibit "A" under "Schedule Actual Costs" delete all costs under Part II and substitute the following:

1.	Improve road to Lower Defiance Tunnel	$ 256.00
2.	Move compressor from Mountain Pride tunnel to Lower Defiance tunnel	160.00
3.	Clean up Lower Defiance tunnel	224.00
4.	Install air and water lines in Lower Defiance tunnel	921.50
5.	Cut diamond drill station	64.00
6.	Supervision for items 1, 2, 3, 4 and 5.	550.00*
7.	Transportation of personnel, supplies and equipment for items 1, 2, 3, 4, 5 and 6.	120.00*
8.	Core handling	360.00*
		$ 2,655.50*
	Total cost of Part II	$ 19,978.00

SUMMARY

Estimated total cost of Part I	$68,410.00
Estimated total cost of Part II	19,978.00
Total estimated cost of the project	$88,388.00
Government participation @ 50%	$44,194.00

Work Completed

Drifting - 653 ft. @ $35.00/ft.	$ 22,855.00
Crosscutting - 350 ft. @ $35.00/ft.	12,250.00
Diamond drilling - 2,128 ft. @ $6.35/ft.	13,512.80
Diamond drilling - 1,465 ft. @ $7.25/ft.	10,621.25
Miscellaneous drill costs etc.	2,765.00
Total	$ 62,004.05
Government's participation @ 50%	$ 31,002.03

3. Audit - Report of Review issued November 18, 1954.

Total cost as billed by Contractor	$ 62,004.05
Exceptions - None	
Total accepted cost	$ 62,004.05
Government's participation @ 50%	$ 31,002.03

4. Certification of Discovery - Psuedo certification embodied in the Termination Agreement dated June 17, 1955.

5. Comments

Work was begun November 12, 1952 and terminated August 20, 1954.

The purpose of the project was (1) to explore for the possible faulted continuation of the North Good Luck ore body below the Ward fault, and (2) to explore for the possible downward continuation of the Defiance ore body. The faulted continuation of the North Good Luck ore body was explored by 653 feet of drifting, 350 feet of crosscutting and 2,278 feet of diamond drilling. A thin zone of low grade lead-zinc sulphide ore was cored by the drill but the ore body was too small and too discontinuous to warrant development. The main faulted continuation was not found. The Defiance ore body was tested by four drill holes having an aggregate length of 1,465 feet which were drilled to cut the ore body in the sulphide zone 400 feet below the lowest stopes. The result of the drilling was disappointing; two of the holes were barren and the remaining two showed thin zones of lead-zinc-copper minerals of less than commercial grade. This stage of the work was completed in August 1954 and no further work on the Defiance project is contemplated by the Operator.

The work adequately tested the areas in which reserves were inferred. Additional exploration in other areas for the North Good Luck sulphide ore body below the Ward fault is warranted by the Operator providing additional geologic evidence can be obtained from surface geologic mapping. Government participation in further exploration in this area would be dependent upon the amount and kind of geologic evidence found. In the Defiance project no further exploration appears to be warranted. The Mountain Pride tunnel was extended under the North Good Luck oxide orebody incidental to Part I, and it is probable that production from this ore body will be made through DMEA workings within the next ten years, depending upon the price of lead, but the oxide ore is excluded in the contract from DMEA royalties.

The Field Team did not recommend certification of discovery.

The most abundant rock in the mine area is limestone, which has been intruded by quartz monzonite porphyry dikes and is overlain by quartz latite lavas and tuffs. A few quartz veins cut the limestone and all of the rocks are cut by normal faults. Ore bodies are of two types, replacement bodies in limestone and veins along faults.

Two replacement ore bodies have been mined, the North Good Luck and the Defiance. The North Good Luck was mined to a depth of 280 feet and yielded 45,000 tons of oxidized ore that average 12.6 percent lead, 1.2 percent zinc, 3.31 ounces of silver and 0.007 ounces of gold per ton.

There may be a third replacement ore body beneath the barren gossan labelled the South Good Luck ore body. The outcrop area of the gossan is about 150 by 300 feet. Not enough exposures can now be seen to evaluate the possibility of the zone of copper enrichment below it, or a primary sulphide zone of commercial grade.

Two vein-type ore bodies have been mined and they have yielded a combined total of 47,560 tons of a partially oxidized ore averaging 4.8 percent lead, 2.1 percent zinc, 2.4 percent copper, 0.14 ounces of gold, and 27.8 ounces of silver, per ton.

W. P. Klugescheid

W. P. Klugescheid

WPK/er

Copy to: Docket
Base Metals
Chron.

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

PROJECT SUMMARY REPORT (Incomplete)
(No Final Field Team Report)

By: J. W. Alt June 13, 1955

1. Docket No. DMEA-2257 (Lead-Zinc-Copper)
Contract No. Idm-E442
Property: Ward Mine
White Pine County, Nevada

Operator: Walker Corporation
Box 163
East Ely, Nevada

Operator's Property Rights: Lessee
Agreement of Lease and Option - Dated August 15, 1951.
Owner's Consent to Lien - dated November 28, 1952
Owner's Consent to Lien in consideration of Amendment No. 4, dated August 6, 1954.

2. Contract dated November 12, 1952. To complete - 2 years.

Work Authorized

The work consists of two parts. Part I shall be known as the Goodluck Orebody Project, and Part II as the Defiance Tunnel Exploration Project. The work on these two parts may be carried on simultaneously.

PART I

1. Extend the Mountain Pride tunnel 1300.
2. Drive to Mountain Pride tunnel along the Paymaster vein for about 100 feet.
3. Crosscut northeast for 30 feet from 2790 north to the upper strand of the Ward fault.
4. Sink a 4' x 6' winze 100 feet.
5. Raise (4' x 6') 20 feet through the fault.
6. Sink a 4' x 6' incline winze 200 feet from 3200 North and 3470 West.
7. Raise (4' x6') 20 feet through the fault to cut the North Goodluck orebody.

PART II

This part consists of Stage 1 and 2. Stage 2 will depend on the findings of Stage 1.

STAGE I

1. Construct one 20' x 20' compressor house.
2. Rehabilitate approximately 1130 feet of the lower defiance tunnel.
3. Extend by crosscutting the lower defiance tunnel to the east side of the dike and drift in both directions along the dike. Drifting and crosscutting not to exceed 1,000 feet.

STAGE II

1. Further extend the crosscut of the lower Defiance tunnel through the dike and drift in both directions along the west side of the dike. Drifting and crosscutting not to exceed 600 feet.

Agreed Unit Costs

PART I

1,300 feet of drift @ $35.00 per foot	$45,500.00
100 feet of drift @ $35.00 per foot	3,500.00
30 feet of crosscut @ $35.00 per foot	1,050.00
100 feet of winze @ $54.00 per foot	5,400.00
20 feet of raise @ $54.00 per foot	1,080.00
200 feet of winze @ $54.00 per foot	10,800.00
20 feet of raise @ $54.00 per foot	1,080.00
Total Agreed Unit Cost	$68,410.00

PART II

Stage I

Crosscut and drift 1,000 feet @ $35.00 per foot	$35,000.00

Stage II

Crosscut and drift 600 feet @ $35.00 per foot	21,000.00

Scheduled Actual Costs

PART II

Scheduled Actual Costs (Con.)

Stage I

Rehabilitate the lower Defiance tunnel for about 1,130 feet.	$ 5,900.00
Construction of one 20' x 20' compressor house.	2,000.00*

SUMMARY

Total Estimated Cost Part I		$68,410.00
Total Estimated Cost Stage I, Part II	$42,900.00	
Total Estimated Cost Stage II, Part II	21,000.00	
Total Estimated Cost Stages I & II, Part II		$63,900.00
Total Estimated Costs of the Project		$132,310.00
Government's Participation @ 50%		66,155.00

Amendments:

No. 1 Dated June 10, 1953, effective November 12, 1952.

1. In Exhibit "A" , under Part I, Item 1, change the figure "1300" to "950", and add: drive two crosscuts, one 150 feet easterly and the other 200 feet westerly. The total drifting and crosscutting not to exceed 1300 feet.

No. 2 Dated December 2, 1953.

1. Change the work, Part I, Item 1, as amended by Amendment No. 1.

2. Under "Agreed Unit Costs, Part I, Item 1 is changed to read as follows:

Cutting drill station	$ 525.00
Diamond drilling 1200 feet @ $6.35/ft.	7,620.00
Casing Host, 1200 feet @ $0.30/ft.	360.00
Cementing @ $2.00/ft.	400.00
Reaming and casing 600 feet @ $1.50/ft.	900.00
Stand-by time, 20 hrs @ $6.00/hr.	120.00
Core handling	240.00
Assaying samples 40 @ $3.00/each	120.00
656 feet of drift and 350 feet of crosscut @ $35.00/ft.	35,215.00
Total	$45,500.00

Amendments (Cont.)

No. 3. Dated April 14, 1953, effective November 12, 1952.

1. Under "Description of the Work", "Part I", as amended by Amendment Nos. 1 and 2, delete all 7 items of work and substitute the following 2 items.

   (1) Extend the Mountain Pride tunnel not in excess of 653 feet and crosscut not in excess of an aggregate of 350 feet.

   (2) Cut 2 drill stations, and drill not in excess of 4,146 feet of diamond - drill holes.

2. Delete all 7 items of cost and substitute the following:

Drifting 653 feet and crosscutting 350 feet @ $35.00/ft.	$35,105.00
Cutting drill stations	525.00
Diamond drilling 4,146 feet @ $6.35/ft (rounded to)	26,330.00
Casing cost, 3,700 feet @ $0.30/ft.	1,110.00
Cementing, 600 feet @ $2.00/ft.	1,200.00
Reaming and casing, 1,800 ft. @ $1.50/ft	2,700.00
Standby time, 60 hrs @ $6.00/hr.	360.00
Core handling	720.00
Assaying samples, 120 samples @ $3.00/ea.	360.00
	$68,410.00

No. 4 Dated July 19, 1954, effective November 12, 1952.

1. In Exhibit "A" under "Description of the Work," delete everything under "Part II and substitute the following:

   (a) Improve the access road to the Lower Defiance tunnel.
   (b) Move the compressor from the Mountain Pride tunnel to the Lower Defiance tunnel.
   (c) Clean up the Lower Defiance tunnel.
   (d) Install air and water lines in Lower Defiance tunnel
   (e) Cut a drill station, and drill not in excess of 2,210 feet of diamond drill holes.

2. In Exhibit "A" under "Agreed Unit Costs", delete Stage I and Stage II under Part II and substitute the following:

2,210 feet of diamond drilling @ $7.25/ft.	$16,022.50
Casing, standby time, assaying samples	1,300.00
	$17,322.50

Amendments (Continued)

No. 4 Continued

3. In Exhibit "A" under "Schedule Actual Costs" delete all costs under Part II and substitute the following:

1.	Improve road to Lower Defiance tunnel.	$ 256.00
2.	Move compressor from Mountain Pride tunnel to Lower Defiance tunnel	160.00
3.	Clean up Lower Defiance tunnle	224.00
4.	Install air and water lines in Lower Defiance tunnel	921.50
5.	Cut diamond drill station	64.00
6.	Supervision for items 1, 2, 3, 4 and 5	550.00*
7.	Transportation o personnel, supplies and equipment for items 1, 2, 3, 4, 5 and 6	120.00*
8.	Core handling	360.00*
		$ 2,655.50*
	Total Cost of Part II	$19,978.00

SUMMARY

Estimated total cost, Part I	$68,410.00
Estimated total cost, Part II	19,978.00
Estimated Total Cost of Project	$88,388.00
Government Participation @ 50%	$44,194.00

Work on Part I of the Contract was stopped in April 1954 and work on Part II was stopped in August 1954.

Total Amount of Work Completed

PART I

Drifting 653 feet	
Crosscutting 350 feet	
Diamond drilling 2128 feet	
Total Cost	$50,082.80

PART II

Diamond drilling 2126 feet	
Total Cost	$11,921.25
Total Cost of the Project	$62,004.05

3. Audit Certificate - Report of Review - Dated November 18, 1954 $62,004.05

Total cost as billed by Contractor	$62,004.05
Exceptions - None	
Total Accepted Cost	$62.004.05
Government Participation @ 50%	$31,002.03

Operator's Final Report - Date received by Field Team on February 7, 1955.

Final Field Team Report not received as yet.

4. Mutual Termination Agreement with Pseudo-Certification dated

5. Comments:

All work was conducted in an efficient manner.

Under the work of Part I, Mountain Pride Tunnel some lead-zinc-silver ore was discovered in crosscutting, drifting, raising and diamond drilling but the results as a whole were discourazing and did not warrant further exploration.

Under the work of Part II, Defiance tunnel, as amended which consisted of diamond drilling, no discovery was made and the work was stopped in August 1954.

We recommend that the project be mutually terminated with a pseudo-certification.

Total Estimated Amount of Contract	$132,310.00
Total Estimated Amount as Amended Contract	$ 88,388.00
Total Amount Expended	$ 62,004.05

JWAlt/er

Copy to: Docket
Base Metals
Chron.

J. W. Alt

J. W. Alt

-6-

☒ Audited

☒ Certified (Pendo)

Name WALKER CORPORATION.

State NEVADA

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of 4/4/55.
Incl. Voucher for August 1954.

Commodity LEAD-ZINC-COPPER

☐ Actual Cost

*☒ Agreed Unit Costs

Docket No. 2,257

Idm-E No. 442

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting *	1,003' @ 35.00	$35,105.00	1,003'	$35,105.00	$35,105.00
Raising					
Shafts					
Winzes					
Drilling (Specify) Diamond *	6,356' @ 6.35 + 2.25	42,352.50	2,128 @ 6.35 1,465 @ 7.25	13,512.80 10,621.25	26,899.05
~~Surface Excavation~~ Mapping Adits (A) *		8,699.00		2,765.00	2,765.00
Underground Excavation					
Roads and Trails *		256.00			
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) See Below. (B)		1,775.50			
Totals		$88,388.00		$62,004.05	$62,004.05

Other (Estimated)
Rehabilitation, Defense $224.00
Transportation 120.00
Services 550.00
Misc. Contractors 160.00
Misc. Pipe Lines 921.50
*(B) $1,975.50

Misc. Drill Costs (Estimated)
Drill Stations $589.00
Misc. Drilling 360.00
Assays @ 3.00
*(A) $8,699.00

* Agreed Unit Costs or Allowable Maximum

Terminated 2/8/55 by Field Team.
Received Field Team Report 6/29/55.

Prepared by O.R. Muenscheid.

Termination Agreement dated 6/17/55.

71626

E-442.

Walker Corporation – Nevada – 2257

Agreed Unit Costs.

Part I

~~1136'~~ 1003' ~~Drifts + Crosscuts @ 35.00~~ — ~~$50,050.00~~ — X 35,105.00 — ~~Away 39,465.00~~

(A-2) ~~DD. non detail 1200' + extras~~ — ~~10,285.00~~

Odds + Ends D.D. see below — 6,615.00

~~300 Hinge @ 54.00 (4'x6')~~ — ~~16,200.00~~

4,146' DD @ 6.35 — X 26,330.00

40' 120 casing @ 3.00 — 360.00

40' Raise @ 54.00 (4'x6') — 2,160.00

68,410.00

~~Part II~~

~~Stage I~~

~~1000' Drifts + Crosscuts @ 35.00~~ — ~~35,000.00~~

2210' D.D. @ 7.25 — X16,022.50

~~Stage II~~ Casing, Reaming etc. — 1300.00

~~600' Drifts + Crosscuts @ 35.00~~ — ~~21,000.00~~

~~Contract~~ Part II – Stage I.

~~Rehab Lower Engines Cut and 1130'~~ — ~~5,100.00~~

~~20'x20' Compressor House~~ — ~~2,000.00~~

~~20'x20'~~ — ~~132,518.00~~

D.D. stop 525.00 + 64 = 589.00 X — Improve Road X 256.00

Lost Drag 1,110.00 — ~~$88,388.00~~

Cementing 1,200.00

Reaming 2,700.00

Casing 360.00

Contract 720.00 + 360.00

Odds + Ends 1300.00

United States Department of the Interior

GEOLOGICAL SURVEY
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

August 1, 1969

OFFICIAL
COPY
O. M. E.
RECEIVED
AUG 5 1969
INITIALS | CODE
130
HK 120

Memorandum

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

Enclosed is a request from the Minerals Division of Phillips Petroleum Company, P. O. Box 239, Salt Lake City, Utah 84110, for a copy of the subject contract.

Inasmuch as Phillips is now the owner and operator of the property, I know of no reason why the request should not be granted. A copy of the Operator's Final Report was furnished to them on December 30, 1968. The certification period expired on November 12, 1962.

H. K. Stager

Enclosure

PHILLIPS PETROLEUM COMPANY
P. O. Box 239
Salt Lake City, Utah 84110

July 30, 1969

Re: Our File MD-10036
Ward District
White Pine County, Nevada

File: La-13-69-MD

U. S. Geological Survey
Office of Minerals Exploration
Bldg. 2
345 Middlefield Road
Menlo Park, California 94025

Dear Sir:

It would be appreciated if you could furnish us with a copy of DMEA Contract Idm-E442 (Docket No. dmea 2257). Would you also advise if this contract is still in effect?

Yours truly,

Ernest M. Lambert

E. M. Lambert

EML:gb

RECEIVED
AUG 1 1969
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
12/30/68		110
		220

Mr. S. R. Havenstrite
Minerals Division
Phillips Petroleum Company
P. O. Box 615
East Ely, Nevada 89315

DEC 30 1968

Re: DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

Dear Mr. Havenstrite:

Your letter of December 16, 1968, to Mr. Harold Stager, Field Officer, OME Region II, Menlo Park, California, requesting information on the subject contract, has been referred to this office.

In response to your request we are enclosing a copy of the Operator's Final Report on the work performed under the contract and accompanying maps and cross sections. There is no charge for this material as we had duplicate copies available.

Sincerely yours,

FRANK E. JOHNSON (gla)

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's Reading File
Economic Geology File
OME docket
OME Reading File
OME Region II

FEJohnson/gla 12-30-68

PHILLIPS PETROLEUM COMPANY
Minerals Division
P. O. Box 615

East Ely, Nevada 89315
December 16, 1968

2257
1217

Subject: DMEA Report Of Walker
And Walker

File: Hav-109-68MD

OFFICIAL COPY
O. M. E.
RECEIVED
DEC 23 1968

INITIALS	CODE
	110
	220

Mr Johnson file is attached
A. Curtis

Mr. Harold Stager
USGS, Office of Minerals
Exploration
Building 2
345 Middlefield Road
Menlo Park, California 94025

Dear Mr. Stager:

As requested in our telephone conversation of December 16 we are submitting this request for a copy of the final DMEA report of Walker and Walker on their Ward Mountain Property near Ely, Nevada.

The Ward Mountain property was acquired from Walker and Walker by Silver King Mines, Inc., and has since become the joint property of both Silver King and Phillips Petroleum Co.

If you could expedite this matter it would be greatly appreciated.

Very truly yours,

PHILLIPS PETROLEUM CO.

CH11

S. R. Havenstrite

S. R. Havenstrite

RECEIVED
DEC 20 1968
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

Mr. H. stated on the phone he would be glad to pay any costs involved in copying the report.
R.M.S.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Arnold	500
12/17	Talbot	800
	Selfridge	120
		110
	Can leave	100
		220

Mr. Woodville J. Walker
Box 857
Redding, California

DEC 1 8 1962
NOV 1 8 1962

Re: DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

Dear Mr. Walker:

The enclosed copy of a letter to the Shasta Minerals & Chemical Company is self-explanatory.

Your attention is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.

Sincerely yours,

(signed) FRANK E. JOHNSON

ACTING Director

Enclosure

WRGriswold/mm
12-13-62
cc: Director's Reading File
Region II (2)
Docket
Code 500

43683

OFFICIAL FILE COPY

Date	Surname	Code
	Durand	500
11/13	Talbot	800
	Selfridge	120
		110
	On leave	100
		220

Shasta Minerals & Chemical Company
826 South Main Street
Salt Lake City, Utah

DEC 1 9 1962
NOV 1 3 1962

Re: BMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-2442

Gentlemen:

By the terms of the subject Exploration Project Contract, as amended, and the Termination Agreement dated June 17, 1955, all minerals mined or produced from November 12, 1952, to November 12, 1962, were subject to the Government's percentage royalty as set forth in said contract.

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 (gla)

ACTING Director

WRGriswold/mm
12-13-62
cc: Director's Reading File
Region II w/Copy of Form 63 11/21 to Woodville J. Walker
CMA Division
Docket
Code 500

43683

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

November 21, 1962

Re: DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

Mr. Woodville J. Walker
Box 857
Redding, California

Dear Mr. Walker:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

It would definitely be to the advantage of your company if you can bring us up to date, since we would then be able to release the present Government lien against production from the property in question.

Sincerely yours,

W. R. Griswold, Chief
Division of Minerals

OFFICIAL FILE COPY
O M E
RECEIVED 1962

DATE		
11/30		800
		120
11/30		100
		100
	Griswold	500

MME Form 63
Revised 3-62

DMEA-2256
Idm-E442

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since July 1, 1958, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes [x] No [ ]

   Filed in the San Francisco office on August 3, 1961
   Subsequently, on August 8, 196, the property was deeded by W. J. Walker et al to Shasta Minerals & Chemical Company, 826 South Main Street, Salt Lake City, Utah, ~~kk~~

2. Since July 1, 1958, has there been any production from the land subject to the contract? Yes [ ] No [x]

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

3. Since , has any production been transported through workings (see - of contract)? Yes [ ] No [x]

   A. If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name W. J. Walker Title Former owner, sold to Shasta Minerals and Chemical Company

Address Box 857 Date Nov. 26, 1962

Further inquiry should be addressed to Shasta Minerals & Chemical Company at 826 South Main Street. It is my understanding that this company [illegible]d the property to Silver King Mining Company, also 4511 of 826 South Main Street, Salt Lake City, [illegible]ah.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Griswold	500
12/10	Talbert	800
		120
		110
		100
		220

Shasta Minerals & Chemical Company
826 South Main Street
Salt Lake City, Utah

Re: DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

Gentlemen:

By the terms of the subject Exploration Project Contract, as amended, and the Termination Agreement dated June 17, 1955, all minerals mined or produced from November 12, 1952, to November 12, 1962, were subject to the Government's percentage royalty as set forth in said contract.

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. ~~Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.~~

Sincerely yours,

Director

WRGriswold/mm
12-10-62
cc: Director's Reading File
Region II w/Copy of Form 63 11/21 to Woodville J. Walker
CA&A Division
Docket
Code 500

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

APR 23 1962

Memorandum

To: Acting Field Officer, Region II

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

Subject: DMRA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-8442

The original and one copy of a Report of Royalty Review covering the subject contract are enclosed. If you concur in the facts stated therein, please make the following distribution:

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.; and

(b) One copy for your files.

This Report of Royalty Review is made for record purposes only; therefore, no copy for the Operator is provided.

As evidence of your concurrence, a copy of your memorandum transmitting the original report to the Fiscal Section should be furnished this Division. If for any reason you do not concur, both copies of the report should be returned to this Division with your comments.

Enclosures

EDTalbert/ama 4-20-62

cc:
Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
555 Battery Street
San Francisco 11, California

OFFICIAL FILE COPY
O. M. E
RECEIVED MAR 27 1962

DATE
3/7 March 23, 1962
3/28 Received
800
500
220

Memorandum

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

From: Acting Field Officer, OME, Region II

Subject: DMEA-2257 (Zinc, Lead, Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E 442

With reference to your memorandum of March 13, 1962, regarding ownership status of the mining claims pertinent to the subject contract, our files show no reply from Fred Farnsworth in answer to Mr. Gentry's letter of July 31, 1961.

The present operating status of the seventeen claims is not known. Mr. Walker's letter of July 28, 1961, states that Shasta Minerals & Chemical Co. intends to acquire 90 percent interest in the ten claims Walker owns.

Paul V. Fillo

Paul V. Fillo

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
3/13	[illegible]	120

MAR 13 1962

Memorandum

To: Acting Field Officer, Region II

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

Subject: DMFA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract Idm-E442

A review of the files of the Washington office pertaining to the subject contract indicates that the last inspection of the property was made on December 31, 1957. Advice will be appreciated as to whether the regional files disclose later examinations and, if so, the dates thereof and the findings.

The files also disclose that eight of the twenty-five claims under the contract were quit-claimed on May 11, 1961, to Woodville J. Walker, who was the operator's vice president at the time the subject contract was executed. The other seventeen claims apparently were acquired by Fred Farnsworth, to whom Mr. Gentry addressed a letter of inquiry on July 31, 1961. The files, however, contain no copy of a reply.

Your advice as to any confirmation of the ownership or information as to operations on the seventeen claims is solicited. Also, do your files contain any indication other than Mr. Walker's July 28, 1961, letter of the acquisition of a 90% interest in the eight claims by Shasta Minerals & Chemical Company?

EDTalbert/cac
March 13, 1962

cc: Director's reading file
Contract Admin. & Audit Div.

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
555 Battery Street
San Francisco 11, California

OFFICIAL FILE COPY
O. M. E
RECEIVED AUG 8 1961

DATE	INITIALS	CC
		140
8/10		800
		500
"	Brownell	100
		220

August 4, 1961

Memorandum

To: Chief, Division of Field Operations, OME
Region II

From: Acting Field Officer, OME, Region II

Subject: Docket No. DMEA-2257 (Lead-Zinc-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E 442

Reference is made to our letter of August 1, 1961 regarding ownership status of the mining claims pertinent to the subject certified contract.

Enclosed herewith are copies of a letter on this subject from Mr. W. J. Walker dated August 3, 1961 together with two copies of the Quit Claim Deed dated May 11, 1961 transferring the property from the Walter W. Mining Company to W. J. Walker.

You will note in the first paragraph of Mr. W. J. Walker's letter that he states: "Grantee herein by accepting this deed accepts the lien on ore shipments from the property determined by the Defense Minerals Exploration Administration Contract Idm-E442, also known as Docket No. DMEA 2257.

Glenn G. Gentry

Glenn G. Gentry

Enclosures
OME File

Quit Claim involves 8 of contract claims
Who has other 25 contract claims?

ORIGINAL 0-0070

REC. ORIGINAL 0-4000

WOODVILLE J. WALKER
CONSULTING MINING ENGINEER AND GEOLOGIST
BOX 007
REDDING, CALIFORNIA

OFFICIAL FILE COPY
O. M. E
RECEIVED AUG 8 1961

DATE	INITIALS	CODE

MINE EXPLORATION PROGRAMS

MINE EXAMINATIONS AND EVALUATIONS

August 3, 1961

Mr. Glenn Gentry
Acting Field Officer
OME Region II
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA 2257 (Zinc-lead-copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Ida-I 442

Dear Mr. Gentry:

Enclosed is a copy of the instrument conveying part of the mining claims in the Ward Mining District to W. J. Walker. On the second page you will note the sentence that says: "Grantee herein by accepting this deed accepts the lien on ore shipments from the property determined by Defense Minerals Exploration Administration Contract Ida-I 442, also known as Docket No. DMEA 2257."

All ten of the acquired claims are included in the list of claims subordinated under the contract. They are the Defiance, Mountain Pride, Paymaster, Ruth, Ruth No. 2, Silver King, Ward & Henry, Welcome Stranger, Young America, and Pleiades. These ten claims cover all of the ground in which work was done under terms of the contract.

The portal of the Welcome Stranger adit is located in the bottom of Ward gulch at the south end of the claim. It is driven northerly along the west side of the Welcome Stranger dike. A replacement ore body is exposed in a limey bed about 200 feet from the portal. The ore minerals includes pyrite, sphalerite, galena and chalcopyrite in order of decreasing abundance. This limey bed is presently being explored by driving a drift along the strike in a westerly direction. The work is being done on the adjacent Carolina claim which is not owned by us.

This work is being done under the direction of Einar Erickson a geologist of East Ely, Nevada. I trust this information will be useful.

Very truly yours,

W. J. Walker

W. J. Walker

WJW/rg

cc: K. L. Stoker
Dan Bushnell

BOOK 217
OFFICIAL FILE COPY
O. M. B.
RECEIVED AUG 9 1961
DATE | INITIALS | CHECK

QUIT CLAIM DEED

THIS INDENTURE, Made this 11th day of May, 1961,

WITNESSETH THAT:

WHEREAS, prior to the 16th day of December, 1959, the Walter W. Mining Company was a corporation duly incorporated under and by virtue of the laws of the State of Nevada, and

WHEREAS, on the said 16th day of December, 1959, said corporation was duly dissolved in accordance with the laws of the State of Nevada, and

WHEREAS, at the time of the dissolution of said corporation H. Kountze was the President thereof and together with Willard F. Bozett and Conrad H. Klein constituted the Board of Directors of said corporation, and upon the dissolution thereof became Trustees of the creditors and stockholders of said corporation under the statutes of the State of Nevada, and

WHEREAS, at the time of the dissolution of said corporation the said H. Kountze, Willard F. Bozett and Conrad H. Klein were also the sole stockholders of said corporation, owning all of its shares of stock;

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That we the said H. Kountze, Willard F. Bozett and Conrad H. Klein of the City and County of Denver and State of Colorado, as such Trustees aforesaid and individually, for and in consideration of One Dollar ($1.00) cash to us in hand paid by W. J. Walker of the County of Shasta and the State of California and of other valuable consideration, the receipt of which is hereby acknowledged, do hereby remise, release and forever quit claim unto the said W. J. Walker, his heirs and assigns forever, all those certain lots, pieces or parcels of land situate, lying and being in the County of White Pine, State of Nevada, and more particularly described as follows, to-wit:

The Lode Mining Claims described as follows:

3941	39	Defiance
1776	42	Mountain Pride
3940	37	Paymaster
399507	3709	Ruth
399507	3709	Ruth #2
399507	3709	Silver King
17375	62	Ward & Henry
399507	3709	Welcome Stranger
3703	38	Young America
2464	52	Pleides

Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof. To have and to hold, all and singular, the said premises together with the appurtenances unto said W. J. Walker, and to his heirs and assigns forever. Grantee herein by accepting this deed accepts the lien on ore shipments from the property determined by Defense Minerals Exploration Administration Contract Idn-E 442, also known as Docket No. DMEA-2257.

IN WITNESS WHEREOF, H. Kountze, Willard F. Bozett and Conrad H. Klein, all individually and as Trustees for the creditors and stockholders of Walter W. Mining Company, a dissolved corporation, have hereunto set their hands and seals the day and year first above written.

H. Kountze

Willard F. Bozett

Conrad H. Klein

All individually and as Trustees for the creditors and stockholders of Walter W. Mining Company, a dissolved corporation.

STATE OF COLORADO)
CITY AND COUNTY OF DENVER) ss

The foregoing instrument was acknowledged before me this 11th day of May, 1961, by H. KOUNTZE, WILLARD F. BOZETT and CONRAD H. KLEIN, individually and as Trustees for the creditors and stockholders of Walter W. Mining Company, a dissolved corporation.

Witness my hand and official seal.

Notary Public

My Commission expire. July 24, 1962

FILED July 24, 1961 AT 9:40 O'CLOCK A.M.
IN BOOK 212 PAGE 487-488 Mining Records
RECORDER OF WHITE PINE COUNTY, NEVADA
Fee Pd $2.60

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
555 Battery Street
San Francisco 11, California

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 7 1961

DATE	INITIALS	CODE
		120
8/8		800
		~~500~~
	Brinover	~~500~~
		220

August ~~1~~, ~~1961~~

Memorandum

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

From: Acting Field Officer, OME, Region II

Subject: Docket No. DMEA-2257 (Lead-Zinc-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E 442

Beginning on September 19, 1960 we requested status of this project from the operator on MME Form 63-8-60 to which we received a reply on the reverse side of the returned form:

"On December 2, 1959 a resolution was passed by the Board of Directors to dissolve the company and a Certificate of Dissolution was issued by the Secretary of State of Nevada on December 16, 1959. There has been no activity in this company for several years.

Signed: Walter W. Mining Company
By: Willard F. Bozett
c/O The Colorado National Bank of Denver
17th & Champa Streets
Denver 2, Colorado."

Upon receipt of this information our letter of November 3, 1960 (copy enclosed) requested ownership information from Mr. W. J. Walker of Redding, California.

Mr. Walker replied on November 7, 1960 and again with a letter on November 21, 1960. (copies enclosed).

We now have received a letter dated July 28, 1961 from Mr. Walker (copy enclosed) explaining the new ownership of 40 patented mining claims formerly consolidated as the Ward Mine.

MME FORM 8 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. ~~600~~		
2. 220		
3.		
4.		
5.		
FROM: 800		

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS: Entry should be requested to call Operator's attention to article 5 of Termination Agreement. Operator is surety for payment of royalty regardless of who is producer of minerals or owner of land.

Falbert 8/8/61

INT.-DUP. SEC. ~~WASH.~~ D.C. (220)

M56300-59

However, we do not as yet have the names of the claims and therefore do not know the distribution of ownership between Mr. Walker and Mr. Farnsworth.

Requests for this information are being forwarded to both parties today, with copies to your office.

We will continue to follow this matter and advise your office. Your instructions will be appreciated.

Glenn G. Gentry

Glenn G. Gentry

Enclosures

cc: OME file

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 7 1961

DATE	INITIALS	CODE
		120
8/8		SCC
		~~FCC~~
	Original	FCC
		220

555 Battery Street
San Francisco 11, California

July 31, 1961

Mr. W. J. Walker
Consulting Mining Engineer & Geologist
P. O. Box 857
Redding, California

Re: Docket No. DMEA 2257 (zinc-lead-copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E 442

Dear Mr. Walker:

Thanks for your letter of July 28, 1961 regarding the ownership status of the Ward Mine.

In checking the records in this office I have been unable to find any mention of the Welcome Stranger Adit. Can you advise me the name or names of claims upon which this adit is located?

Appendix No. 1 attached to the referenced contract, lists the following patented lode mining claims pertinent to the contract in section 9, 10, 15 and 16, Township 14 north, Range 16 east, M.D.M.:

"Ruth - Side Line - Juno - Plieades Extension -
Plieades* - Paymaster* - Young America -
Ward & Henry - Mountain Pride - Iowa - Governor -
Silver King - Denver - Smuggler - May Day -
Jew Peter - Extension - Ironclad - Defiance -
Pueblo - Defiance No. 2 - Hilltop -
Lucky Guss - Napoleon - M.M.ES.

*Some parts of these claim areas were excluded from the contract.

If any of the ten claims which you have purchased are pertinent to the DMEA contract will you please advise the names of the claims and if possible can you provide a copy of the document of property conveyance.

We will appreciate your kind assistance in this matter.

Very truly yours,

Glenn G. Gentry
Acting Field Officer
OME Region II

cc: Chief
Division of Field
Operations
OME File

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 7 1961

DATE	INITIALS	CODE
		1V0
8/8		800
		~~500~~
" Returned		500
		220

555 Battery Street
San Francisco 11, California

July ~~31, 1961~~

Mr. Fred Farnsworth
1452 Murry
Ely, Nevada

Re: Docket No. DMEA-2257 (lead -zinc-copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E 442

Dear Mr. Farnsworth:

On November 12, 1952 an exploration contract for certain exploration work at the Ward Mine was executed between the Government and the Walker Corporation whose address was P. O. Box 917, Leadville, Colorado.

Patented Mining claims pertinent to this contract were:

U. S. Survey Number	Name of Claim
3709	Ruth
3709	Side Line
63	Juno
3709	Phieades Extension
52	Plieades*
37	Paymaster*
38	Young America
62	Ward & Henry
42	Mountain Pride
3709	Iowa
57	Governor
3709	Silver King
3709	Denver
3709	Smiggler
59	Jew Peter
3709	Extention
3709	Ironclad
39	Defiance No. 2
3709	Hill Top
3709	Lucky Guss
3709	Napoleon
3709	M.M. & S.

All located in Sec. 9-23, T14N, R63E, White Pine County, Nevada.

*Some parts of these claim areas were excluded from the contract.

The Government holds a lien on production from the above claims expiring on December 12, 1962.

Of the 40 patented claims formerly consolidated as the Ward Mine we understand that thirty have been acquired by yourself and associates.

Will you please advise this office if any of the claims correspond to those listed as pertinent to the Government contract.

Any information you may be able to give us in this matter will be appreciated.

Very truly yours,

Glenn G. Gentry
Acting Field Officer, OME
Region II

cc: Chief, Division of Field Operations
OME file

CRESTWOOD 5-3070

RES. CRESTNUT 5-4000

WOODVILLE J. WALKER

CONSULTING MINING ENGINEER AND GEOLOGIST

BOX 807

REDDING, CALIFORNIA

MINE EXPLORATION PROGRAMS

MINE EXAMINATIONS AND EVALUATIONS

July 28, 1961

OFFICIAL FILE COPY
O. M. E
RECEIVED AUG 7 1961

DATE	INITIALS	CODE

Mr. Glenn G. Gentry
Acting Field Officer
Office of Minerals Exploration
555 Battery Street
San Francisco 11, California

Re: Hard Mine
White Pine County, Nevada

Dear Mr. Gentry:

In your letter of November 30, 1960, you asked for certain information concerning the ownership of the Hard mine. Since that time, I have purchased 10 of the 40 patented claims formerly consolidated as the Hard mine. The other 30 claims have been acquired by Fred Farnsworth and associate of Ely, Nevada. An exploration program is currently in progress at the Welcome Stranger adit under the direction of Einar Erickson, geologist, Box 312, East Ely, Nevada.

In acquiring the ten claims, I also accepted any continuing obligations existing under terms of DMA-2237.

Shasta Minerals & Chemical Company intends to acquire a 90% interest in the 10 claims I now own. I will retain 10%. I believe that there are several very good exploration objectives in this district. We were financially limited in our prior effort and were in no position to re-evaluate the program.

I trust this letter will bring your Hard mine file to date.

Very truly yours,

W. J. Walker

W. J. Walker

WJW/rg

OFFICIAL FILE COPY
O. M. E
RECEIVED AUG 7 1961

DATE	INITIALS	CODE

CROWWOOD 0-2070
W. J. WALKER, MGR.

WALKER ENGINEERING CORPORATION
MINE EXPLORATION PROGRAMS
BOX 007
REDDING, CALIFORNIA

Nov. 21, 1960

Mr. Glenn G. Gentry
U. S. Department of the Interior
Office of Minerals Exploration
555 Battery Street
San Francisco 11, California

Re: Ward Mine
White Pine County, Nevada
Docket DMEA-2257
Contract Idm-E 442

Dear Glenn:

I have inquired from both the Colorado National Bank and the White Pine County assessor of the status of the Ward Mine. Mr. Bozett, vice-president of the bank, informs me that the Walter W. Mining Company owner of the property, has been dissolved and that no taxes have been made for the past two years. The White Pine County assessor shows the property as delinquent for the 1959-60 taxes. I do not know if these are all of the delinquent taxes or not.

I am writing Mr. Bozett to ask him whether it was the intention to abandon the mining claims upon dissolution of the company or whether the assets were deeded either to the bank or to some individual. My father recommended that the bank hold the mining claims and dispose of the rest of the Ward mine property. I believe that Walker Engineering Corporation might be interested in acquiring the claims, if this could be done at a very low cost, and if we obtained a deed from the bank we would, of course, honor the DMEA royalty.

Offer is worthy, very worthless! Talk it

Although our exploration program failed to find the hypothecated objectives, yet there are still several unexplored objectives in the property worthy of investigation someday in the future. I will continue to pursue this inquiry.

Very truly yours,

W. J. Walker

OFFICIAL FILE COPY
O. M. E
RECEIVED AUG 7 1961

DATE	INITIALS	

CRCOTWOOD 5-2575
W. J. WALKER, MGR.

RES. CHESTNUT 3-4806

WALKER ENGINEERING CORPORATION

MINE EXPLORATION PROGRAMS
BOX 057
REDDING, CALIFORNIA

Nov 7, 1960

Mr. Glenn G. Gentry
Acting Field Officer
OME, Region II
555 Battery Street
San Francisco, California

Re: Ward Mine
White Pine County, Nevada

Dear Glenn:

I have your letter of November 31 1960, concerning the ownership of the Ward Mine, White Pine County, Nevada. I also have a letter from Willard F. Bozett, Vice-President of the Colorado National Bank, Denver 17, Colorado. In this letter, Mr. Bozett informs me that the Walter W. Mining Company was dissolved as of December 2, 1959, and a Certificate of Dissolution was issued by the Secretary of State of Nevada on December 16, 1959.

In your letter of November 3, 1960, you ask if ownership of the property has reverted to Walker Corporation and if Walker Corppration will be responsible for the property and its production in the future. We never owned the property and do not own it, consequently cannot assume responsibility for the future production. However, I am writing to Mr. Bozett today and am asking him what disposition was made of the property and who the present owners are. I will not know until I hear from him whether they (the Walter W. Mining Company) sold the properties to someone prior to dissolution of the company or whether they permitted the properties to become tax delinquent and thus sold for taxes.

I will follow up on this matter and inform you fully on the present status of the properties.

Very truly yours,

W. J. Walker

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 7 1961

DATE	INITIALS	CODE

555 Battery Street
San Francisco 11, California

November 3, 1960

Mr. W. J. Walker
Box 857
Redding, California

Dear Bud:

Subject: Docket DMA-2257
Walker Corporation
Hard Mine
White Pine County, Nevada
Contract IAm-E 442

With reference to the subject certified contract, I would appreciate it if you could tell me if the ownership of this mine has reverted to the Walker Corporation. Also, can you tell me if the Walker Corporation will be responsible for this property and its production in the future.

It is a surety failure

A statement from you, giving me the present status of this mine, will be most helpful.

With best regards,

Glenn G. Gentry
Acting Field Officer
OME, Region II

REDWOOD 5-2575
. J. WALKER, MGR.

REG. CHESTNUT 2-4006

WALKER ENGINEERING CORPORATION
MINE EXPLORATION PROGRAMS
BOX 857
REDDING, CALIFORNIA

Sept. 23, 1960

Walter W. Mining Company
c/o Colorado National Bank
Denver, Colorado

DMEA-2257, Idm-E 442
Walker Corporation
Ward Mine
White Pine County
Nevada

Gentlemen:

Enclosed is a request for information sent to this office by the field officer of the Office of Minerals Exploration, the successor to the DMEA.

I have talked with the officer, Mr. Gentry, by telephone, and he informs me that they have heard, in a round about way, that someone is doing some drilling or mining on the property. He has asked me to forward this form to you and request that you complete it for him.

You are probably aware of the fact that we still have the old reports on the Ward Mine in our files, as well as our own maps and records, which are available to you upon request. If you have no objection, we will keep the old records until you need them, as I still hope to have time to prepare a report suitable for use by the State of Nevada on this area, time permitting.

I would appreciate your informing me of your compliance with this request.

Very truly yours,

W. J. Walker

cc Olem O. Gentry
555 Battery Street
San Francisco 11, California

FEB 17 1961
O.M.E.

COPY

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6/2	Alley	800
		220

JUN 2 1959

Memorandum

To: Mr. George Mavor, OME Auditor

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

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Contract No. Idm-E442

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

AMAlley/ama
June 2, 1959

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

43683

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
500 2/27/57	att	500
3/1	Selfridge	130
"	Johnson	110
"	Ohrstenday	100
3/4	C	225

MAR - 1 1957

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-2257 (Lead-Zinc-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Dear Mr. Ricker:

A review of our docket for the cited terminated contract indicates that we have never received the "Semi-Annual Reports of Certified Projects" for this property. The termination agreement, dated June 17, 1955, contains a royalty payment provision and, therefore, we should receive these reports.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

APPROVED:

Frank D. Lamb (HB)
Member, Bureau of Mines

N. E. Nelson (HB)
Member, Geological Survey

JWAlt/er 2/27/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Hillsgaard, USGS
Chron.

8623

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
OCT 6 - 1955

October 5, 1955

Re: DMEA 2257, Idm-E442
Walker Corporation
Ward Mine
White Pine Co., Nevada
$88,388 - Lead, Zinc, Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Final report.

Unexpended funds under this contract amount to $26,384.95. The $62,004.05 expended was used for drilling and underground work in a search for the possible faulted section of the North Good Luck ore body and the possible downward continuation of the Defiance ore body. Neither project was successful due in the first case to unsolved complex structural conditions arising from faulting and dikes; in the second case the vein was probably found but was not of commercial grade. Work was stopped August 20, 1954.

The Field Team recommends that the contract be terminated by mutual agreement and that no certification of discovery be made because no commercial discovery was made in either project and no production is expected from the explored area.

I concur with the recommendations of the Field Team.

N. E. Nelson

N. E. Nelson

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

RECEIVED
JUL - 7 1955

1605 Evans Avenue
Reno, Nevada

July 5, 1955

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D.C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2257 (Lead-zinc-copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Reference is made to your letter of June 20, 1955 in which you enclosed the original and five copies of Termination Agreement to the above subject contract.

The Termination Agreement has been approved and signed by the Operator and the original and two copies are being returned to you herewith. The other copies have been distributed to Field Team and Finance Office.

S. Ricker

DmEa

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

RECEIVED
JUN 24 1955

1605 Evans Avenue
Reno, Nevada

June 22, 1955

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Attached are four copies of final report on above subject by Roscoe M. Smith, U. S. Geological Survey and Henry W. Jones, U. S. Bureau of Mines dated June 20, 1955.

Neither Roscoe Smith nor I believe that the property should be certified as to a discovery by the DMEA exploration.

S. Ricker

Attach.

F. Tam
7 Rpt

Reviewed by
DMEA OPERATING COMMITTEE
6-27-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
JUN 24 1955

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

FINAL REPORT

DMEA-2257, Idm-E442 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada

by

Henry W. Jones
Mining Engineer
U. S. Bureau of Mines

Roscoe M. Smith
Geologist
U. S. Geological Survey

June 20, 1955

Reviewed by
DMEA OPERATING COMMITTEE
6-27-55
(date)

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ILLUSTRATIONS

Figure 1. Location map

2. Geologic map of the Mountain Pride tunnel level, Ward Mine, White Pine County, Nevada

INTRODUCTION

The Ward mine, White Pine County, Nevada, was explored by the Walker Corporation, Box 163, Ely, Nevada and Box 917, Leadville, Colorado, in cooperation with the Defense Minerals Exploration Administration, docket DMEA-2257, under contract Idm-E442 dated November 12, 1952. Work was begun November 12, 1952 and terminated August 20, 1954, and an examination to evaluate the completed program was made April 13, 1954.

SUMMARY AND CONCLUSIONS

The purpose of the project was to (1) explore for the possible faulted continuation of the North Good Luck orebody below the Ward fault, and (2) to explore for the possible downward continuation of the Defiance orebody. The faulted continuation of the North Good Luck orebody was explored by 653 feet of drifting, 350 feet of cross-cutting and 2,278 feet of diamond drilling. A thin zone of low grade lead-zinc sulfide ore was cored by the drill but the orebody was too small and too discontinuous to warrant development. The main faulted continuation was not found. The Defiance orebody was tested by four drill holes having an aggregate length of 1,465 feet which were drilled to cut the orebody in the sulfide zone 400 feet below the lowest stopes. The results of the drilling were disappointing; two of the holes were barren and the remaining two showed thin zones of zinc-lead-copper minerals of less than commercial grade. This stage of the work was completed in August 1954 and no further work on the Defiance project is contemplated by the operator.

The work adequately tested the areas in which reserves were inferred. Additional exploration in other areas for the North Good Luck sulfide orebody below the Ward fault is warranted by the operator providing additional geologic evidence can be obtained from surface geologic mapping. Government participation in further exploration in this area would be dependent upon the amount and kind of geologic evidence found. In the Defiance project no further exploration appears to be warranted. The Mountain Pride tunnel was extended under the North Good Luck oxide orebody incidental to Part I, and it is probable that production from this orebody will be made through DMEA workings within the next ten years depending on the price of lead, but the oxide ore is excluded in the contract from DMEA royalties.

RECOMMENDATIONS

Because no commercial discovery was made in either project and as production from the explored area is unlikely, a certification of discovery should not be made. It is recommended that the contract be terminated by mutual consent.

LOCATION AND ACCESSIBILITY

The property is located 16 miles south of Ely, Nevada in section 15, T. 14 N., R. 63 E., MDB&M, on the east slope of the Egan Range at an altitude of 8,000-9,000 feet. The topography of the area is shown on the USGS Ely quadrangle map.

THE PROJECT

The program was divided into two parts, the North Good Luck orebody project and the Defiance tunnel project. The North Good Luck project was justified by inferred reserves of 1,000,000 tons of sulfide ore that might contain as much as 5 percent lead, 11 percent zinc, 1 percent copper, and 3 ounces of silver per ton. The target was the faulted continuation of the North Good Luck orebody below the Ward fault along which a displacement of 500 feet of dip-slip was measured about 2 miles north of the mine area. The Defiance project was justified by the occurrence of small lead orebodies of commercial grade in the oxidized zone which could be traced on the surface for 600 feet along the strike. It was inferred that the combined lead, zinc, and copper in the sulfide zone would also be of commercial grade.

The work outlined in the contract was as follows:

Part I

Item 1. Extend Mountain Pride tunnel 1,300 feet to cut projected position of faulted continuation of North Good Luck orebody below Ward fault (fig. 2, project 1a).

2. Drive Mountain Pride tunnel along Paymaster vein for about 100 feet to test its width and grade at this level (project 1b).

3. Crosscut northeast 30 feet from 2790 N to upper strand of Ward fault (project 1c).

4. Sink 4' x 6' winze 100 feet just under fault to projected position of south Good Luck mineralized shoot in sulfide zone (project 1c).

5. Raise (4' x 6') 20 feet through fault to cut same shoot in oxide zone (project 1c).

Part I - cont'd.

Item 6. Sink 4' x 6' inclined winze 200 feet from 3200 N and 3470 W just under upper strand of Ward fault to cut projected position of North Good Luck orebody in sulfide zone (project 1d).

7. Raise (4' x 6') 20 feet through fault to cut North Good Luck orebody in oxide zone above fault (project 1d).

Part II

Stage 1

Item 1. Construct 20' x 20' compressor house.

2. Rehabilitate approximately 1,130 feet of lower Defiance tunnel.

3. Extend lower Defiance tunnel to east side of Defiance dike not to exceed a total of 1,000 feet of crosscut and drift (project 2a and 2b).

Stage 2

Item 1. Further extend the lower Defiance tunnel through the Defiance dike and drift both ways along west side of dike not exceeding 600 feet of crosscut and drift (project 2c).

Work was started in the Mountain Pride tunnel in July 1952 and 400 feet was completed before the contract was signed on November 12, 1952. Where the Paymaster vein was inferred, old workings containing a small amount of replacement ore, but no vein, were found. Exploration for the South Good Luck orebody was done at company expense by diamond drilling because the ground was too heavy to raise or winze. No ore was found by this work.

As the work progressed the Ward fault was found to lie 100 feet east of the projected position, which indicated that the target (project 1a) might be south of its projected position. Amendment No. 1

to the contract was made June 10, 1953 to drive two crosscuts at approximately 3200 N, one eastward into the hanging wall and the other westward into the footwall to test the location of the Ward fault and permit exploration for the exact position of the Good Luck orebody at the Mountain Pride level in the light of new geologic evidence. Under project 1c a crosscut was driven 52 feet northeast, 30 feet of which was allowable under the contract. The upper strand of the Ward fault was cut at 46-50 feet and slightly mineralized gouge along the fault assayed 3 percent lead, .6 percent zinc, and .9 ounce of silver per ton. The crosscut was later extended to 74 feet. The crosscuts revealed that the dike pattern was considerably at variance with the projected positions and that the inferred ore bodies might lie at a considerably lower altitude than originally inferred. Amendment No. 2 was approved to substitute diamond drilling for crosscutting and drifting to establish the dike pattern in the footwall side of the Ward fault and to prospect the contacts of the dike for ore bodies. The first two drill holes cut a mineralized contact at a greater depth below the Mountain Pride tunnel than was anticipated and extra drilling was needed to explore below the Mountain Pride level for the North Good Luck orebody. Amendment No. 3 was therefore granted to substitute additional diamond drilling for winzing, raising, and drifting. The drilling was completed April 28, 1954. It revealed that the porphyry dikes are highly irregular and cannot be satisfactorily projected, that the Ward fault problem was not satisfactorily solved, and that dike contacts in the explored area have not been significantly mineralized.

During the course of the work the company explored at its own expense for the bottom oxidized part of the North Good Luck orebody on the Mountain Pride level. A few mineralized areas but no significant ore bodies were discovered by this work.

Part II of the program was then started in July 1954, but owing to the information obtained in Part I that the dikes are highly irregular, the operator wished to substitute less expensive diamond drilling for crosscutting and drifting. Amendment No. 4 was granted accordingly to convert Part II to a drilling program. Four holes were drilled, the dike pattern was found to be irregular here also, and no commercial ore bodies were cut in the holes.

Work was finished in August 1954, the contract was audited in August 1954, and all obligations incurred both by the operator and by the Government have been paid. The work was done efficiently and competently.

Summary of Expenditures

Total amended approved cost of project	$88,388.00
Units completed:	
Drifting - 653 ft. at $35.00/ft.	$22,855.00
Crosscutting - 350 ft. at $35.00/ft.	12,250.00
Diamond drilling - 2,128 ft. at $6.35/ft.	13,512.80
Diamond drilling - 1,465 ft. at $7.25/ft.	10,621.25
Incidental road repair, equipment moving, cutting drill stations, reaming, casing core handling, assaying, etc.	2,765.00
Total	$62,004.05
Government's share of the cost	$31,002.03
Government's share unexpended	$13,191.98

There was no equipment purchased under the DMEA contract and there was no production from the mine that was not excluded from DMEA royalty payments.

Summary of Drilling, Part I - Mt. Pride tunnel

Hole	Bearing	Inclination	Depth	Ore intercept	% Pb
DD 1	S 61 E	-52°	290	263-267	9.0
DD 2	S 43 E	-41°	376	182-184	little
DD 3	N63E	Horiz.	554	255-257 261-267	0.4 1.8
DD 4	East	-58°	318	43-44	4.5
DD 5	N 78 E	-57½°	453	None	--
DD 6	N 20 E	-57°	137(abandoned, bad ground)	11-12	1.2
		Sub-total . . .	2128		
DD 7*	N 31 E		150	85-116	V.little
		Total	2278		

*Company account - Govt. participated in 2126 feet.

Summary of Drilling, Part II - Defiance lower tunnel

DD 8	N 73 W	Horiz.	404	None	--
DD 9	S 60 W	"	296	None	--
DD 10	N 25 W	"	405	88-96 398-403	pyrite 1.5
DD 11	N 25 W	"	360	26-29 45-55	0.0 (2.3 Zn) pyrite
		Total	1465		

GEOLOGY

The most abundant rock in the mine area is limestone, which has been intruded by quartz monzonite porphyry dikes and is overlain by quartz latite lavas and tuffs. A few quartz veins cut the limestone and all of the rocks are cut by normal faults. Ore bodies are of two types, replacement bodies in limestone and veins along faults.

The Ely limestone of Pennsylvanian age forms the entire east slope of the Egan Range. The beds strike north and dip 20°-30° eastward. The formation is 2,500 feet thick in this area and composed of interbedded limestone, cherty limestone and shale. A thin black shale unit is present at the base of the section.

Quartz monzonite porphyry dikes of Tertiary age cut the sedimentary rocks and are closely associated with the ore bodies in the Ward mine. The dikes range in width from a few inches to about 200 feet and in general they trend northwest and dip steeply, but are commonly interconnected by gently dipping sills.

Two sets of faults cut the sedimentary rocks and the dikes. One set strikes northwest and dips northeast, the other strikes northeast and dips southeast. The Ward fault is the principal fault in the district, belongs to the northwest set, and has a measured displacement of 500 feet dipslip about 2 miles north of the mine. In the mine area the fault is composed of three strands. The upper strand has displaced the Lyons and Clay Chamber ore shoots 20 feet in the dipslip direction. These ore bodies have not been found below the central strand, which has the greatest displacement. The Ward fault is inferred to be post-mineral, as no ore minerals have been found along it.

ORE DEPOSITS

The ore bodies that have been mined in the Ward mine contained oxidized lead-silver ores in the hanging wall of the Ward fault. Two kinds have been productive: (1) replacement ore bodies in limestone adjacent to quartz monzonite porphyry dikes, and (2) quartz veins that cut the dikes and the limestone.

The ore minerals in the replacement bodies are cerusite, anglesite, and cerargerite in a gangue of iron oxide and leached wall rock. Below the Ward fault primary ore minerals have been found replacing limestone. These are pyrite, sphalerite, galena, and chalcopyrite, sometimes in quartz gangue. A sulfide-bearing sample of split core from diamond drill hole 1 assayed 9 percent lead, 8 percent zinc, and 9.7 ounces silver per ton. The vein deposits contain in addition to these sulfides small amounts of freibergite.

Two replacement bodies were mined, the North Good Luck and the Defiance. The North Good Luck orebody was mined to a depth of 280 feet and yielded 45,000 tons of oxidized ore that averaged 12.6 percent lead, 1.2 percent zinc, 3.31 ounces silver, and 0.007 ounce of gold per ton. The area of the mineralized zone is about 200 by 300 feet, but the average area mined is about 20 by 100 feet. The Defiance orebody is said to have yielded a few tons of oxidized ore of lower grade than that of the Good Luck orebody.

There may be a third replacement orebody beneath the barren gossan labelled South Good Luck orebody. The outcrop area of the gossan is about 150 by 300 feet. Not enough exposures can now be seen to evaluate the possibility of the zone of copper enrichment below it, or of a primary sulfide zone of commercial grade.

Two vein-type ore bodies, the Lyons and Clay Chamber ore shoots in the Paymaster vein, have been mined and they have yielded a combined total of 47,560 tons of partly oxidized ore averaging 4.8 percent lead, 2.1 percent zinc, 2.4 percent copper, 0.14 ounce of gold, and 27.8 ounces of silver per ton. The shoots were mined down to a depth of about 250 feet where they were cut off and displaced about 20 feet by the upper strand of the Ward fault. Both ore shoots were mined a few feet below this strand. Although the veins cut the dikes and the limestone they are productive only in the dikes.

ORE RESERVES

There are no measured reserves in the Ward mine and only a few hundred tons near the surface in the North Good Luck orebody are indicated. Reserves of 160,000 tons of oxidized ore averaging 12 percent lead, 1.0 percent zinc, and 3.0 ounces of silver per ton are inferred in the North Good Luck orebody from the surface down 300 feet to the Ward fault, averaging 6,400 square feet in area.

Additional reserves of sulfide ore are inferred between the Ward fault and the Paymaster tunnel. As the exploratory work did not solve the displacement along the Ward fault, the location of the downward continuation of the North Good Luck orebody is not known, but assuming that it exists, not more than 1,000,000 tons of sulfide ore could be inferred in a block 100 by 250 feet in area extending from the Ward fault 400 feet down to the Paymaster level. The grade of this ore is not known as it is nowhere exposed, but sulfide ore cut in diamond drill hole No. 1 assayed 9.0 percent lead, 8.0 percent zinc, and 9.7 ounces silver.

In the Defiance mine no reserves are estimated as no ore of commercial grade is revealed in the workings. A few tons of sulfide-bearing material may be inferred between the Defiance lower tunnel and the bottom of the oxidized zone, but the DMEA diamond drilling precluded the possibility of significant ore bodies in this area.

File Copy
Surname
J. Alt.

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

June 2, 1955

Memorandum

To: Acting Assistant Solicitor, Defense Minerals

From: Chief, Base Metals Division

Subject: Preparation of Termination Agreement for the Walker Corporation, Contract No. Idm-E442, Docket No. DMEA-2257 (Zinc-Lead-Copper), White Pine County, Nevada

Will you please prepare a mutual termination agreement for the cited contract. Operations on this project were stopped by the Operator in August 1954. This agreement should contain a pseudo-certification, and the "Provided" clause in Article 10 of the contract should be deleted.

W. R. Griswold

W. R. Griswold

WWAlt/er

Copy to: Docket
Base Metals
Chron.

SEND HE
ON
NEW
SCENTED TELEG
A MESSAGE...
THAT CARRIES ITS
ASS OF SERVICE
a full-rate
r Cable-
its de-
r is in-
ble
e

WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

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

The date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

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O.REA415 NL PD=RENO NEV 19=

:GEORGE C SELFRIDGE=

:CHAIRMAN OPERATING COMMITTEE DMEA INTERIOR BLDG

:RE DOCKET NO. DMEA-2257, CONTRACT NO. IDM-E442 MY MEMORANDUM APRIL 13 HAVE JUST LEARNED THAT NORTH GOOD LUCK ORE BODY WAS EXCLUDED IN CONTRACT FROM DMEA ROYALTIES WE THEREFORE DOUBT IF CERTIFICATE OF DISCOVERY CAN BE REISSUED ON BASIS OF EFTRACTING THIS ORE THROUGH DMEA WORKING=

:R RICKER=..

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

File Copy
Surname

Talbut
Selfridge
Johnson

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

JUN 20 1955

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-2257 (Lead-Zinc-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Dear Mr. Ricker:

We are enclosing the original and five copies of a Termination Agreement to the cited contract, signed by the Administrator. A pseudo-certification is contained in this agreement.

If the termination agreement meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute the copies in the usual manner.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

Enclosures

JW lt/er 6/10/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

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

Thor H. Kiilsgaard (JHB)
Member, Geological Survey

R.C.S.

RmEa

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

AIR MAIL

1605 Evans Avenue
Reno, Nevada

April 13, 1955

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2257 (Zinc-lead-copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Reference is made to your letter of March 21, 1955 regarding the final Field Team report on above subject.

Our final report has been held in abeyance until the geologist was able to examine drill cores, as stated in our letter of March 11, 1955, two copies of which for your convenience are attached.

In addition to the information set forth in the letter of March 11, I am quoting from a memorandum of April 4, 1955 from Roscoe Smith:

"The Mountain Pride tunnel was extended under the North Good Luck orebody as a part of the DMEA project. Although no discovery was made by the work, it is probable that production from this orebody will be made through DMEA workings within the next 10 years, depending on the price of lead. There are no measured reserves in this orebody and only a few hundred tons near the surface are indicated. Reserves of 160,000 tons averaging 12 percent lead, 1.0 percent zinc and 3.0 oz. of silver per ton are inferred in the block from the surface down 300 feet to the Ward fault and averaging 6,400 square feet in area.

"The work adequately explored the objective area, and Government assistance in additional exploratory work is not warranted unless new evidence is found to materially add to existing information.

"I have not examined the drill core from the Defiance project but Walker's final report and maps are well prepared and indicate the area has been adequately tested and that no orebodies are indicated. These cores are stored at the mine, which is snowbound. They will be examined as soon as weather permits."

Thought that perhaps with this additional information you could terminate and certify the project. In the meantime we will endeavor to expedite the preparation of our final report.

S. Ricker

Encls.

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

Department of the Interior
Defense Minerals Administration
RECEIVED
APR 15 1955

1620 Evans Avenue
Reno, Nevada

March 11, 1955

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E642

Reference is made to your letter of March 7, 1955 relative to certification of discovery on the above cited contract.

The Operator's final report was received in my office on February 7, 1955. The final report has not been completed as the geologist wishes to examine some of the core from the last drill holes as soon as the property is accessible. The project was divided into two parts.

PART I

Good Luck Orebody

The Mountain Pride tunnel was extended under the North Good Luck orebody (fig. 2, application report 7/10/52) as a part of the exploration project. Although, no discovery was made by the work, it is probable that production from this orebody will be made through DMEA workings during the next 10 years depending on the price of lead. We recommend, therefore, that the Government certify a development from which future production may be made from the work executed under the contract.

PART II

Defense Funed

No discovery was made, and no certificate of discovery or development should be issued.

Glenn G. Gentryfos
G. Ziegler
Executive Officer
DMEA Field Team, Region II

GZiegler:gh
cc: R. M. Smith
H. C. Miller (2)
File

File Copy
Surname
J. W. Alt.
Selfridge.
Jefferson
Hedges

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

MAR 21 1955

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
U. S. Bureau of Mines
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-2257 (Lead-Zinc-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Dear Mr. Ricker:

With reference to the cited contract before we can determine the type of termination agreement to prepare, we will need a tonnage and grade estimate of ore that was indicated by the DMEA work.

If the final Field Team report on this project has not been completed, we would appreciate receiving at your earliest convenience, a preliminary report which will give us the necessary information to terminate and to certify this project.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JWB)

APPROVED:

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

Thor H. Kiilsgaard (JWB)
Member, Geological Survey

JWAlt/er 3/17/55

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.C.S.

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

Defense Minerals Administration
RECEIVED
MAR 15 1955

1620 Evans Avenue
Reno, Nevada

March 11, 1955

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D.C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Reference is made to your letter of March 7, 1955 relative to certification of discovery on the above cited contract.

The Operator's final report was received in my office on February 7, 1955. The final report has not been completed as the geologist wishes to examine some of the core from the last drill holes as soon as the property is accessible. The project was divided into two parts.

PART-I

Good Luck Orebody

The Mountain Pride tunnel was extended under the North Good Luck orebody (fig. 2, application report 7/10/52) as a part of the exploration project. Although, no discovery was made by the work, it is probable that production from this orebody will be made through DMEA workings during the next 10 years depending on the price of lead. We recommend, therefore, that the Government certify a development from which future production may be made from the work executed under the contract.

PART II

Defiance Tunnel

No discovery was made, and no certificate of discovery or development should be issued.

for

S. Ricker
Executive Officer
DMEA Field Team, Region II

File Copy
Surname

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

MAR 7 - 1955

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region II
U. S. Bureau of Mines
Rare and Precious Metals Experiment Sta.
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-2257 (Lead-Zinc-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-1442

Dear Mr. Ricker:

With reference to the cited contract, before we prepare a termination agreement we would appreciate receiving your recommendation regarding a certification of the project. In your memorandum, dated December 10, 1954, you state that your recommendation as to whether a certificate of discovery should be issued will be determined from data in final report.

The work under the terms of the contract and amendments was suspended by the Operator in August 1954. The Operator's final report was forwarded by you on February 8, 1955. As there is no date on the final report, when was it accepted by your office?

Please advise us at your earliest convenience as to your recommendation regarding a certification of discovery of this contract.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

J. H. Hodges

Member, Bureau of Mines

E. L. Newcomb

Member, Geological Survey

JWA:t/er 3/7/55
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

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

420 Custom House
555 Battery Street
San Francisco 11, Calif.

February 8, 1955

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Attached are four copies of the Operator's Final Report on the above-cited project.

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachment

Copy to: A. C. Johnson (with copy of report)
Roscoe Smith, USGS
George Mavor
F. Horton

WARD MINE
WHITE PINE COUNTY, NEVADA

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

OPERATOR'S FINAL REPORT

Re: Docket No. DMEA 2257
Contract Idm-E 442
Walker Corporation
Ward Mine
White Pine County, Nevada

The Ward Mine, White Pine County, Nevada, has been the object of an exploration campaign conducted by Walker Corporation, under Contract Idm-E 442, DMEA Docket No. 2257. Results have been entirely negative and discouraging and the project is abandoned.

The Ward Mining District is a small zinc-lead-copper district. Results of the recent exploration campaign has shown that the ore bodies are controlled by the irregular dike-sedimentary rock contacts, by the type of sedimentary rock (pure limestones are apparently preferred), and location in fairly well established centers of mineralization in the district. Possibilities do not justify additional exploration work.

Details of work accomplished are available in the Operator's Monthly Reports.

The Exploration Project at Ward Mine consisted of two parts, Part I and Part II.

Part I was the exploration below the plane of the Ward Fault Zone (a post mineral fault) for the continuation of the North Good Luck Ore body.

Part II was the exploration of the downward extension of the Defiance Ore body in the sulphide zone below the gossan outcrop.

The basis of the exploration project were the following three beliefs:

1. The dikes in the district were relatively straight and the contacts between the dike walls and the sediments guided the ore solutions and served as a control for the ore deposits.

2. The mineralization, before oxidation, was a zinc-lead sulphide ore and would be valuable for both lead and zinc (and copper).

3. The change in rock type, with depth, from relatively pure limestones to to impure limestones would have little effect on size and grade of ore bodies.

Results of work on both Part I and Part II have shown that zinc is present as predicted, in about the ratio anticipated. Copper is also present. This is the only belief fully substantiated by the exploration program.

Results of work on both Part I and Part II have shown that the change in rock types has had a profound and extremely adverse effect on the size and grade of the ore bodies. No ore bodies of commercial size or grade were discovered by the campaign. We are led to the conclusion that ore bodies of commercial size and grade will only be found in the purer limestone horizons.

Results of work on both Part I and Part II have shown that the porphyry dikes are irregular, that sills are common, and that the walls cannot be satisfactorily projected or used as guides in an exploration campaign. The dike walls, together with associated veins, have served to guide the ore solutions. The intersection of the walls and purer limestone horizons are believed to offer the best guide to additional ore bodies.

It is my belief that exploration of Part I has not solved the Ward Fault Problem, but results have generally been so disapointing that I have come to the conclusion that the solution is no longer attractive. It is possible that the area of weak mineralization explored in Part I may actually represent the downward continuation of the North Good Luck Orebody, but the intrusive pattern does not match, as it should if we have solved the problem.

I believe that small ore bodies could be discovered by exploration of the purer limestone beds along the dike contacts in the mineralized areas of the district, but do not believe that these targets are of sufficient size to be of interest.

Attached is a financial statement for the venture, with the expenditures separated for the time before and after the DMEA loan became effective. A total of 2,065 feet of drifting was completed and 3,723 feet of diamond drilling.

The attached maps and sections are self explanatory and reflect my interpretation of results obtained.

Walker Corporation
612 Dooly Building
Salt Lake City, Utah
W. J. Walker, mgr.

W. J. Walker

Docket No. DMEA 2257
Idm-E 442

FINAL REPORT - WARD MINE

FINANCIAL STATEMENT

December 31, 1954

	As of November 1 1952	Added under D M E A Contract	As of December 31 1954
Investment:			
Walker Corporation:	$35,000.00	$89,307.23	$124,307.23
Income from Royalties, etc.	1,357.15	6,731.53	8,088.68
Defense Mineral Exploration Administration	- - -	31,002.03	31,002.03
	$36,357.15	127,040.79	$163,397.94
Less Salvage (Buildings, equipment, cash)			10,389.26
Total Investment in Ward Mine - Walker Corp.			$153,008.68
Expenditures:			
Overhead: Office, Engineering & Assaying	629.41	4,174.14	4,803.55
Insurance	646.55	5,850.07	6,496.62
Taxes	423.53	2,622.79	3,046.32
Transportation	863.00	3,175.35	4,038.35
Watchman		692.38	692.38
	$2,562.49	16,514.73	19,077.22
Warehouse, cash, etc.	1,655.42	4,408.70	6,064.12
	$4,217.91	20,923.43	25,141.34
Equipment Repairs, salvage, etc.			
TD - 9 repair		4,041.36	4,041.36
Equipment repair		58.26	58.26
Salvage		1,546.57	1,546.57
Moving equipment		689.13	689.13
		6,335.32	6,335.32
Equipment Purchased:	$2,568.37	2,340.00	4,908.37
Buildings:	7,246.11	1,866.89	9,113.00
Roads:	4,394.52	1,199.08	5,593.60
	$14,209.00	5,405.97	19,614.97
Rehabilitation, Mtn. Pride Tun'l:	8,277.56	- - -	8,277.56
Exploration:			
Drifting & Raising: (2,064.9 total footage)	$ 9,652.68	66,922.58	76,575.26
Diamond Drilling: (3,723 total footage)	- - - -	27,453.49	27,453.49
TOTAL EXPENDITURES:	$36,357.15	127,040.79	$163,397.94
Less Salvage (Cash, warehouse, equipment)			10,389.26
NET TOTAL EXPENDITURES:			$153,008.68

Distribution:	WALKER CORPORATION:	$113,917.97
	D M E A	31,002.03
	Income	8,088.68

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

420 Custom House
555 Battery Street
San Francisco 11, Calif.

December 10, 1954

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442

Reference is made to your letter of December 6, 1954, regarding the status of the above-subject contract.

The operator stated in his last narrative report dated September 24, 1954, that in view of the unfavorable results of drilling to date, he did not propose to continue the program.

Mr. A. C. Johnson, in his covering letter of October 4, 1954, submitting MF-104 Form and MF-104A Form and narrative report referred to above, recommended that the project be terminated as suggested by the operator.

Final audit report has been made as of November 18, 1954, by Mr. George Mavor and final MF-104's have been audited and processed for payment.

Roscoe Smith and I are of the opinion that the contract should be concluded and a final joint Bureau of Mines-Geological Survey report be prepared. We believe that although no commercial ore has been discovered , the project has fulfilled its purpose. Our recommendation as to whether a certificate of discovery should be issued will be determined from data in final report.

S. Ricker
Executive Officer
DMEA Field Team, Region III

Copy to: A. C. Johnson, Reno
Roscoe Smith, USGS

File Copy
Surname
J. W. Alt
Griswold
Selfridge
Johnson
Mattendorf

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

DEC - 6 1954

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. 2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-2442

Dear Mr. Ricker:

Will you please advise us regarding the status of the cited contract. By the terms of the contract the work of the project was to be completed in two years or on November 12, 1954.

The last MF-104 in our file is for the month of April 1954 and the latest inspection report is that of Henry W. Jones, dated August 27, 1954.

If the work on the project is still active, it will be necessary to allow an extension of time to complete the work of this contract.

We would appreciate hearing from you regarding this contract at your earliest convenience.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JAB)
JWAlt/er 12/2/54
Copy to: Docket
Admr. R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

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

Thor H. Kiilsgaard
Member, Geological Survey (JAB)

R.C.S.

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

420 Custom House
555 Battery Street
San Francisco 11, California

August 23, 1954

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2257 (Lead, Zinc and Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-E442
Amendment No. 4

Attached are the original and two copies of Amendment No. 4, dated July 19, 1954, changing the work specified in the contract under Stage II to diamond drilling.

A justification sheet is attached to each copy of the amendment.

Proper distribution has been made of the remaining copies.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: A.C.Johnson(with copy of Amendment)
Finance Officer,Region III(with copy of Amendment)
R. M. Smith-USGS
George Mavor

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

420 Custom House
555 Battery Street
San Francisco 11, Calif.

July 23, 1954

Mr. Woodville J. Walker
Manager, Walker Corporation
Box 163
East Ely, Nevada

Re: Docket No. DMEA-2257 - Zinc-Lead-Copper
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract No. Idm-1442

Dear Mr. Walker:

Reference is made to your letters of May 24 and 25, 1954, requesting that your contract be amended to substitute diamond drilling for drifting and crosscutting.

This office gave favorable consideration to your request and as a result, the Washington office of DMEA has prepared Amendment No. 4 which seems to be in line with your wishes.

However, before I may send the amendment to you for approval and signature, the legal department of DMEA rules that new Owner's Consent to Lien must be obtained.

Seven Owner's Consent to Lien forms are attached. When properly executed, the original and five copies should be returned to this office. The copy marked "Owner's Copy" in the upper right-hand corner of the form is to be retained by the owner of the property.

Upon receipt of the executed lien form, Amendment No. 4 will be mailed to you for your acceptance and signature.

Sincerely yours,

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

Copy to: DMEA, Washington, D. C.
Roscoe Smith, USGS
Johnson, A. C., Reno

File Copy
Surname

J.W. Gill
Guisewell
Talbot
Selfridge
F.E. Johnson

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

500

JUL 19 1954

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-1442

Dear Mr. Miller:

We are enclosing the original and five copies of Amendment No. 4 (3pages), with Annex II and one map, to the cited contract, which have been signed by this office for the Government. This is in accordance with your memorandum of June 3, 1954

The legal department states that the Operator should be required to obtain new Owner's Consent to Lien on the forms attached for this purpose.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the amendment is not satisfactory and cannot be amended within your delegated authority, return all copies with your recommendation concerning any modification.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures 12

APPROVED:

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

Philip W. Guild
Member, Geological Survey (PWG)

JWAlt:er 7/14/54
Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Gildersleeve
Mr. Bishop
Chron.

R.C.B.

DMEA
File Copy
Surname
Hofflund

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

July 8, 1954

Memorandum

To: The Administrator, DMEA
Through: Mr. W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Walker Corporation, Docket No. DMEA-2257 (Lead-Zinc-Copper), Contract Idm-E442

Attached is Amendment No. 4 to the above-captioned contract in satisfactory legal form for execution, subject to the attachment of a new Owner's Consent to Lien on the forms provided herewith.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments 12

HCRubin:lm

Copies to: Solicitor's Docket
DMEA Docket
Mr. Griswold (2)
Mr. Hofflund
Mr. Rubin
Chron.

R.G.S.

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

J. ell.

June 28, 1954

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Amendment to allow Operator to change work of Part II of Contract No. Idm-E442, Docket No. DMEA-2257, Walker Corp., White Pine County, Nevada

Will you please prepare Amendment No. 4 to the cited contract. The draft of the amendment and the necessary copies of the maps are attached to the docket.

W. R. Griswold

W. R. Griswold

JWAlt/bjl

Copy to: Docket
Base Metals
Chron.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

June 25, 1954

Memorandum

To: Mr. W. R. Griswold, DMEA

From: E. L. Newcomb, USGS

Subject: Recommendation for approval

Re: DMEA-2257
Ward Mine
Ward District
White Pine County, Nev.
$59,500
Lead-zinc
Proposed Amendment

The field team recommends that the proposed amendment No. 4 be approved.

The applicant's request to change the work in Part II of his contract does not raise any serious questions so far as geological feasibility is concerned. The proposed diamond drilling will test about the same target area and at considerably less cost.

Part I of the contract provided for exploration in the more favorable area (Goodluck orebody). Though the results of this work have not detracted from the merit of the Part II project, they have served to indicate that the Defiance project is somewhat speculative.

As a drilling project, the Defiance dike zone, shows sufficient promise to justify Government assistance.

I recommend the proposed amendment which substitutes diamond drilling for crosscutting and drifting be approved.

E. L. Newcomb
E. L. Newcomb
Geologist

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

420 Custom House
555 Battery Street
San Francisco 11, Calif.

June 3, 1954

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2257 (Zinc-Lead- Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract No. Idm-E442

Attached are two copies of a letter report dated May 24, 1954, by Woodville J. Walker, Manager, Ward Mine - Walker Corporation, on Phase I of the exploration contract at the Ward mine.

You will note from Mr. Walker's report that the results of the work at the mine to date have been negative. The company has completed, according to the report, 2,128 feet of the proposed 4,146 feet of diamond drilling provided in Amendment 3 of the contract.

As stated in the last paragraph of Mr. Walker's letter, all exploration work has been recessed pending completion of surface mapping.

Attached also are two copies of a letter request dated May 25, 1954, for a modification of Part II of the subject contract.

The diamond drilling requested by Mr. Walker is to replace drifting and crosscutting. Mr. A. C. Johnson and Roscoe Smith recommend that favorable consideration be given to Mr. Walker's proposal and I concur in their recommendations. Therefore, if you agree, kindly draw up Amendment No. 4 in line with Mr. Walker's desires.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: Roscoe Smith, USGS

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE J. WALKER, MGR.

May 24, 1954

REPORT ON EXPLORATION RESULTS
AT WARD MINE, WHITE PINE COUNTY,
NEVADA

Idm-E 442 DMEA 2257

Mr. H. C. Miller
Executive Officer, DMEA Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

This report is a summary of exploration results to date on Phase I of our contract.

Certain geological premises were made to indicate the existence of the objective for Phase I of our contract. Results to date have caused considerable modification of some of these premises. I recommend that further work on Phase I be stopped until additional surface mapping can be completed.

The establishment of the sulphide extension of the North Good Luck orebody below the Ward Fault as the objective for Phase I of our contract was based on the following four premises:

The ore would be sulphide below the fault with a zinc to lead ratio of two to one.

The initial mineralization was pyritic and subsequent zinc-lead mineralization followed the same channel so that the change from limestone to lime-silicate rocks with depth would not be adverse.

The North Good Luck orebody was controlled by the intersection of two steeply west dipping porphyry dikes and plunged northerly with this intersection across the bedding of the limestone and lime-silicate rocks.

The porphyry masses in the footwall, exposed in old mine workings and diamond drill holes, were identifiable with the porphyry masses on the hangingwall side of the fault.

May 24, 1954
Idm-E 442

Attached to this report are two exhibits, the first is a geological plan of the part of the Mountain Pride Tunnel level covered by Phase I and the second is a sheet showing three cross-sections of the area.

The geological plan shows the porphyry pattern on the tunnel level, and shows it particularly well on the footwall side of the Ward Fault. The actual dips of the contacts are shown where they have been observed. The sections show the porphyry masses with a minimum of projection and include the information obtained by diamond drilling on this program.

The cross-cutting nature of the dikes on the hangingwall side is known through old workings above the plane of the Mountain Pride Tunnel, and is poorly shown on the Mountain Pride Tunnel level. The general sill-like attitude of the porphyry below the fault is shown by exposure in old workings but to best advantage by the diamond drill holes, particularly 1, 2, 4 & 5. Although neither the map nor section shows it, the bedding dips easterly at an angle parallel to the flat dipping porphyry sills in the footwall. The dip of the formations is the same and essentially parallel on both sides of the fault.

The original interpretation of the significance of the sill-like contacts in the footwall of the fault was that these contacts were simply local variations from the predominantly dike contacts, and that such variations coincided with similar variations known above the fault in places. The diamond drilling program furnished sufficient information to show that this is incorrect.

I believe that additional surface mapping north and south of the mine area may give us sufficient information to establish the correct position of the extension of the North Good Luck Orebody below the fault plane. Until this mapping has been completed and a new objective determined, I see no point in continuing with our present campaign.

We have completed 2,128 feet of the proposed 4,146 feet of diamond drilling provided in Ammendment No. 3. I have stopped drilling and other exploration work until I can complete the surface mapping.

Respectfully submitted,

Woodville J. Walker

Walker Corporation
Woodville J. Walker, mgr.

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE J. WALKER, MGR.

May 25, 1954

PROPOSED AMMENDMENT NO. 4
Docket No. DMEA 2257
Lead - zinc - copper
Idm-E 442

Mr. H. C. Miller
Executive Officer, DMEA Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, California

Modification of PART II

Dear Mr. Miller:

We submit an ammendment to change the cross-cutting and drifting requirements in Part II of our contract (Defiance Tunnel Project) to a diamond drilling program.

When the Ward Mine program was first submitted and approved, prices and conditions were such that ore of the grade anticipated in the Defiance Tunnel Project was commercial. Under present conditions, the anticipated ore will be of doubtful commercial value, and consequently the exploration program will be primarily concerned with demonstrating the existence of the projected orebody and its grade, and this ore would not be mined under present conditions unless the grade was considerably better than expected. With this change in mind, we recommend modification of the contract to permit the use of a drilling campaign for exploration.

On the attached map I have shown the Upper and Lower Defiance Tunnels, the projection of the dike to the lower level, and the position and extent of the approved drifting and cross-cutting program, projects 2-a, 2-b, and 2-c. You will recall that Part II was to be done in two stages, with a total cost of $63,900.00. In red lines I have indicated five diamond drill holes on this map. I estimate the program at about 2210 feet. Hole No. 1 will give us a "fix" on position of the dike and the orebody and will therefor control the direction and depth of the balance of the holes. For this reason I have shown No. 1 hole as passing through the dike while the balance of the holes are stopped on the east side of the dike.

I estimate the proposed ammendment will cost a total of $20,000.00 versus the approved $63,900.00 for Part II. The program can be completed in five months from the date of approval of the ammendment.

Diamond drill experience at Ward has been satisfactory with an average 85-90 per cent core recoveries in AX drilling. Total cost to date (direct cost) has been $7.53 per foot. The cost for the proposed campaign should be somewhat less than this as only one drill station will need to be prepared and the contractor is prepared to offer a smewhat reduced rate for the actual drilling. Savings in cost will be offset somewhat by the cost of hauling drill water to the tunnel portal, but the breakdown indicated below is believed to be reasonable:

Preparation:	Road work, 2 days tractor plus two men:		$256.00
	Moving compressor from Mountain Pride to Defiance: one day tractor, two days two men:		160.00
	Clean up Defiance Tunnel:		224.00
	Air Line (New 2" black iron, 1200' @ 38.75)		465.00
	Water Line (new 1" black iron, 1200' @ 18.00)		216.00
	Fittings:		48.48
	Labor installing:		192.00
	Diamond drill station:		64.00
	Supervision for above, foreman:		550.00
	Transportation costs for above: $6.00/day		120.00
			$2,295.48
Diamond Drill Costs:	Labor for helper, per foot:	1.66	
	Contract rate: per foot	$3.70	
	Transportation: (men) per foot	.24	
	Drill water: per foot	.88	
	Fuel oil & lubricating oil	.40	
	Insurance & compensation	.38	$7.26
	2210 feet @ $7.26		$16,044.60
	Assaying, core handling, reaming, lost casing, cementing, lost time, etc., use a flat sum to be drawn against at the same rates as those approved in Ammendment No. 3:		1,659.92
			$20,000.00

In the above expense items, labor for helper on the diamond drill includes the helper and the foreman (who will also take care of the compressors).

Respectfully submitted,

Woodville J. Walker

Walker Corporation
W. J. Walker, mgr.

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

May 17, 1954

Memorandum

To: Operating Committee, DMEA, Interior Building
Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract Idm-E442
Amendment No. 3

Attached are the original and two copies of Amendment No. 3, dated April 14, 1954, drawn up in connection with subject contract.

A justification sheet is attached to each copy of the amendment.

The usual distribution has been made of the remaining copies of the amendment.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: A. C. Johnson, Reno (With copy of amendment)
Finance Officer, Region III (With copy of amendment)
Roscoe Smith, USGS
George Mavor

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

April 20, 1954

Mr. Woodville J. Walker, Manager
Walker Corporation
Box 163
East Ely, Nevada

Re: Docket No. DMEA-2257 (Lead, Zinc, and Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-2442
Amendment No. 3

Dear Mr. Walker:

Reference is made to your letter dated February 15, 1954, requesting an amendment for the purpose of completing the program of diamond drill exploration approved by Amendment No. 2, dated December 2, 1953.

We are enclosing the original and five copies of Amendment No. 3 to the cited contract, signed by the Administrator for the Government. If the amendment meets with your approval, kindly sign all six copies, retain the copy marked "Operator's Copy" for your records, and return the original and four carbon copies to this office.

Sincerely yours,

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Enclosure

Copy to: DMEA, Washington, D. C.
Roscoe Smith, USGS
A. C. Johnson, Reno

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

J. W. Alt
Harwood
Chamberlin
Selfridge
Hedges

APR 15 1954

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Walker Mine
White Pine County, Nevada
Contract No. Idm-E442

Dear Mr. Miller:

We are enclosing the original and five copies of Amendment No. 3 to the cited contract, signed by this office for the Government. This amendment was requested in your memorandum of March 8.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute in the usual manner. In the event that the amendment is not satisfactory and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modification.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures 6

JWAlt/bjl (4/13/54)

APPROVED:

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

D. M. Larrabee
Member, Geological Survey (GCS)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Kinkel
Mr. Bishop
Chron.

R.C.G.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

March 19, 1954

Memorandum

Re: DMEA-2257
Walker Corporation
Ward District
White Pine County, Nev.
068,410
Lead-zinc

To: Mr. W. R. Griswold

From: E. L. Newcomb

Subject: Recommendation for approval of proposed amendment

The applicant proposes an amendment which would allow 3,700 feet (10 holes) of drilling instead of 1,200 feet (8 holes) as stipulated in amendment No. 2. The funds for the additional 2,500 feet of drilling would be obtained by diverting the remaining funds under Part I to this project.

The field team has recommended the proposed amendment be approved.

Two holes have been completed on the project under amendment No. 2. This work has indicated that longer holes will be needed to test the sulfide zone beneath the Ward fault. Hole No. 3 cut about 4 feet of sulfide ore assaying 9.7 oz. of silver, 8.0 percent zinc and 9.0 percent lead. The field team has previously postulated that the north ore body rakes northward. As Hole No. 5 was barren and farther south than Hole No. 3, there appears to be a good chance that additional sulfide mineralization will be found to the north in Holes Nos. 2, 4, and 10.

As the objectives of the proposed drilling are similar to those recommended for amendment No. 2, the amendment should be approved.

Though 10 holes are included in the proposed project, Holes 1-5 should be completed first and the results evaluated by the field team examiners before Holes 6-10 are drilled. It is possible that at this stage further modification of the exploration program will be advisable.

I concur with the field team and recommend that an additional 2,500 feet of drilling be allowed so that the operator can test the primary target zone beneath the Ward fault.

E. L. Newcomb

E. L. Newcomb
Geologist

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

March 8, 1954

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2257 (Lead, Zinc, and Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract No. Idm-E442

By letter (copy attached) dated February 15, 1954, Mr. Woodville J. Walker, Manager, Ward Mine, Walker Corporation, reports that operations under Amendment No. 2, drawn up in your office, have pointed to the need for another modification of procedure.

Mr. Walker's letter, though addressed to me in San Francisco, was delivered to Mr. A. C. Johnson in Reno, who thus had an opportunity to comment on the proposal before it was sent to me. A copy of Mr. Johnson's transmittal memorandum, dated March 3, 1954, also is attached. You will note that our Reno engineers recommend that Mr. Walker's request be given favorable consideration.

As was the case when I referred the request for Amendment No. 2 to your office, I am again under the impression that I would exceed my authority if I drew up an amendment along the lines desired by Mr. Walker. I am, therefore, referring the entire matter to you, with the request that the Washington office prepare Amendment No. 3 along the lines suggested by Mr. Walker.

H. C. Miller, Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: Roscoe Smith, USGS (With enclosures)
A. C. Johnson, Reno

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE L. WALKER, MGR.

Feb 15, 1954

PROPOSED AMMENDMENT NO. 3
Docket No. DMEA 2257
Lead - Zinc - Copper
Idm-E 442

Addition to Project 1-g

Mr. H. C. Miller
Executive Officer, DMEA Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

We submit an ammendment for the purpose of completing the program of diamond drill exploration approved in Ammendment No. 2 on December 2, 1953.

Original exploration work on this exploration project (Part I) was based on the expectation that the Ward Fault would prove to be a normal fault with most of the displacement straight down dip, and only minor horizontal movement. Work to date has shown this not to be the case, and the present results of diamond drilling indicate that there must be a very considerable horizontal shift and apparently negligible dip slip. Diamond drill holes No. 1 and No. 2 show the porphyry dike contact along which the ore is found to be some 250 feet slope distance below the plane of our tunnel instead of the one hundred feet or so allowed in Ammendment No. 2.

Ammendment No. 2 provides for four drill holes from Station 2, with a total depth at this station of 480 feet of drilling. We have drilled two of the four holes and have had to drill a total distance of 666 feet to complete these holes alone.

The great depth to the mineralized contact, plus the fact of the present depressed lead-zinc market leads us to recommend your consideration of a proposal to divert all of the remaining available funds for Part I of this loan to further diamond drilling, on the same cost basis as that allowed in Ammendment No. 2. We believe that necessary additional information regarding the size and value of the sulphide orebody can best be determined from additional diamond drilling. If this proposal meets with your approval, we would appreciate your making it retroactive to include drilling in excess of the 1200 feet allowed in Ammendment No. 2, as we intend to carry on our present campaign over this figure.

We plan to continue with the program outlined in Ammendment No. 2, with the modification that the holes will necessarily be deeper.

Part I of the exploration project had an original estimate of $68,410.00. According to our last report (January, 1954) we have used $40,567.50 of this amount, leaving the sum of $27,842.50, distributed as follows:

project 1-b:	100 feet of drift @ $35.00	$3,500.00
	30 feet of cross-cut @ $35.00	1,050.00
project 1-c:	100 feet of winze @ $54.00	5,400.00
	20 feet of raise @ $54.00	1,080.00
project 1-d:	200 feet of winze @ $54.00	10,800.00
	20 feet of raise @ $54.00	1,080.00
project 1-a:	3 feet of drift remaining, @ $35.00 per foot:	110.00
		$23,020.00
project 1-g:	Ammendment #2, diamond drilling . .	4,822.50
		$27,842.50

We recommend that the sum of $23,020.00 be allocated to the diamond drilling program, subject to the control of the Bureau of Mines engineer, and that every effort be made with this sum to definitely locate and block out the sulphide expension of the North Good Luck orebody below the main strand of the Ward Fault. We propose that the rates approved in Ammendment No. 2 be used throughout, that items such as lost time ~~time~~, cementing, and the like, be approved in proportion to the drilling done.

Available funds should be sufficient to allow some 2,500 feet of additional drilling, should that be found desirable.

Respectfully submitted,

Woodville J. Walker

Woodville J. Walker, mgr.
Ward Mine - Walker Corporation

ADDITION:

Mr. A. C. Johnson has suggested that sketches showing direction and depth of proposed diamond drilling be attached to this ammendment.

Attached is a copy of the sketch that originally accompanied the proposal for ammendment No. 2. Two additional holes have been added to the sketch, No. 10 from Station 2 and No. 9 from Station 3.

All holes are to be drilled in a plane parallel to the plane of the Ward Fault on the footwall side of the fault. This plane will be between thirty and fifty feet in the footwall of the fault to avoid broken ground and adverse drilling conditions.

The distribution of the drilling is estimated to be as follows:

Station 1:	Horizontal drill hole due west (Hole No. 1 on sketch map, will be hole No. 3 as drilled)	554 feet
Station 2:	Fan of inclined drill holes, No. 2, 3, 4, 5, and 10 on sketch map, total estimated footage:	1698 feet
Station 3:	Fan of inclined drill holes, No. 6, 7, 8, 9, on sketch map, total estimated footage:	1448 feet
		3700 feet
Allowed in AMMENDMENT NO. 2:		1200 feet
	Additional footage requested:	2500 feet

Whether or not a certain hole is drilled will depend on the success of adjacent holes, and we believe that the decision of the order of drilling, and as to desirability of eliminating certain holes can best be achieved through co-operation between the management and the Bureau of Mines engineer while the program is underway.

Very truly yours,

Woodville J. Walker

Woodville J. Walker, mgr.
Ward Mine - Walker Corp.

Note: This ammendment is identical with Ammendment No. 2, already approved, except that the requested footage now reflects the known position of the objective.

March 3, 1954.

Memorandum

To: Mr. H. C. Miller, Executive Officer, DMEA Field Team Region III

From: Chief, Mining Division, Region III

Subject: Docket DMEA-2257 (Zinc, lead and copper)
Walker Corporation, Ward Mine,
White Pine County, Nevada
Contract Idm-E442 - Proposed Amendment No. 3

Enclosed are four copies of proposed amendment No. 3 to the subject contract which have been prepared and submitted by Mr. Woodville J. Walker.

According to Mr. Walker, and substantiated by Mr. Henry W. Jones' interim report of February 16, diamond drill holes 1 and 2 (3 and 5 as shown on attached map) which were completed under amendment No. 2 encountered the contact as projected but at a much greater depth below the level of the tunnel than anticipated. The subsequent increased length of the drill holes will, therefore, use the allowed 1200 feet in 4 holes instead of the proposed 8 holes, and will not furnish all the desired information regarding the size and grade of the extension of the North Good Luck ore body below the main strand of the Ward fault.

Mr. Walker now proposes to continue the drilling program outlined under amendment No. 2 but with the addition of two holes; one each from Stations 2 and 3. Total drilling will aggregate an estimated 3700 feet; an additional 2500 feet. Drilling will be substituted for projects 1 c and 1 d under Part I of the contract, which designate winzing and raising. The greater known depth thethe ore contact makes it doubtful if winze sinking would now be justifiable. The long Paymaster tunnel has been driven to within a few hundred feet of this intercept.

A description of the proposed drill holes is given on page 3 of the amendment request and the location of the holes is shown on the accompanying sketch.

The amendment that has been requested has merit and it is recommended that it be given favorable consideration.

A. C. Johnson

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

1012 Flood Bldg.
870 Market Street
San Francisco 2, Calif.

January 13, 1954

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 - Zinc-Lead-Copper
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract Idm-E442

For your records, enclosed herewith are two copies of a narrative report submitted by subject Operator, showing that no work was performed on this project during the months of November and December 1953.

H. C. Miller
Executive Officer, DMEA Field Team
Region III

Attachment

Copy to: Roscoe Smith, USGS
Finance Officer, Region III (With 2 copies of report)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 18 1954

OPERATOR'S MONTHLY REPORT

NOVEMBER & DECEMBER, 1953

Walker Corporation
Box 163 - East Ely, Nev.
Docket No. DMEA 2257
Lead - Zinc - Copper
Idm-E 442

Mr. H. C. Miller
Executive Officer, DMEA Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, Calif

Dear Mr. Miller:

No work was done during the months of November and December on DMEA projects at the Ward Mine. One hundred ninety-three feet of raising was completed on company account during this period.

The DMEA ammendment to our contract to approve diamond drilling was received and signed during December and all preliminary preparations completed. Drilling was started January 1, 1954.

Very truly yours,

Woodville J. Walker

Woodville J. Walker, mgr
Walker Corporation

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

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

December 29, 1953

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Zinc, Lead, and Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract Idm-E442
Amendment No. 2

Attached are the original and two copies of Amendment No. 2, dated December 2, 1953, drawn up in connection with subject contract.

A justification sheet is attached to each copy of the amendment.

The usual distribution has been made of the remaining copies of the amendment.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: A. C. Johnson, Reno (With copy of amendment)
Finance Officer, Region III (With copy of amendment)
E. H. Bailey, USGS
George Mavor

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

December 9, 1953

Mr. Woodville J. Walker
Manager, Walker Corporation
Box 165
East Ely, Nevada

Re: Docket DMEA-2257 (Lead, Zinc & Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract No. 1em-142
Amendment No. 2

Dear Mr. Walker:

Your request of October 12, 1953, for an amendment to the subject contract was referred to the Washington Office of the Defense Minerals Exploration Administration for their attention.

If you are in accord with the attached amendment executed on the part of the Government, will you kindly sign all of the six copies enclosed, returning the original and four carbon copies to this office, retaining the copy marked "Operator's Copy" for your records.

Sincerely yours,

S. Ricker

S. Ricker for E. C. Miller
Executive Officer
DMEA Field Team, Region III

Enclosure

Copy to: DMEA, Washington, D. C.
E. H. Bailey, USGS
A. C. Johnson, Reno

500

FILE COPY
SURNAME: 913

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

DEC 3 - 1953

J. W. Alf
Raymond
Chapman
Selfridge
Richmond
Matthews

Mr. H. C. Miller, Executive Officer
DMA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. MEA-2257 (Zinc, Lead & Copper)
Walker Corporation
Yard Mine
White Pine County, Nevada
Contract No. Idm-1442

Dear Mr. Miller:

We are enclosing the original and five copies of Amendment No. 2 to the above contract, signed by this office for the Government. This amendment was requested in your memorandum of November 4, 1953.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute in the usual manner. In the event that the amendment is not satisfactory and cannot be amended within your delegated authority, return all copies with your recommendation concerning any modification.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHH)

Enclosures 6
Concurred:

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

D. M. Larrabee
Member, Geological Survey (JHH)

JWA/t/hmj (11-27-53)
CC to: Docket
Adm. R. File
Op. Committee
Mr. Kinkel
Mr. Bishop
Base Metals Division
Chron.

R.C.S. 12-3-53

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

DEPARTMENT OF THE INTERIOR
RECEIVED

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

November 4, 1953

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2257 (Lead, Zinc, Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada
Contract Idm-E442

By letter dated October 12, 1953, Mr. Woodville J. Walker, Manager, Walker Corporation, Box 163, East Ely, Nevada, requested an amendment to the captioned contract covering substitution of diamond drilling for work remaining undone in the Mountain Pride tunnel as outlined under Project 1a, Part I, of Exhibit "A" of the contract.

Before recommending whether or not consideration should be given to Mr. Walker's request, we asked Roscoe Smith, of the Geological Survey, to study the request and give us his recommendations. This was done and a copy of his memorandum to Edgar H. Bailey, dated October 29, 1953, is attached. We concur with Mr. Smith's recommendations.

Mr. A. C. Johnson also reports that the requested work has considerable merit and recommends that it be given favorable consideration.

A copy of the proposed amendment, as requested by Mr. Walker, and dated October 12, 1953, also is attached.

Inasmuch as the requested work is a complete change over from the work allowed under the contract, I do not believe it is within my authority to prepare the required amendment. It will be appreciated, therefore, if your office will prepare the amendment along the lines recommended by Mr. Smith.

H. C. Miller, Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno (With copy of Smith's memo)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR
Bureau of Mines
RECEIVED
1953

RECEIVED
NOV 1 1953
U. S. GEOLOGICAL SURVEY
SAN FRANCISCO, CALIF.

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
October 29, 1953

Memorandum

To: Edgar H. Bailey

From: Roscoe M. Smith

Subject: DMEA 2257 (Lead) Idm-E442
Ward Mine, Walker Corporation
White Pine County, Nevada

I have your memorandum of October 26 regarding a request for an amendment to the Ward Mine contract.

The success of the Ward mine project is dependent upon the accuracy of two geologic projections; (1) the inferred northerly rake of the ore bodies above the Ward fault, and (2) the displacement along the Ward fault. The northerly rake is evidently reasonably close to that which was inferred, judging from Hank Jones' last interim report that ore has been found in the 313 crosscut. The inferred net displacement along the Ward fault has been revised by the operator from new data to include a strike-slip component. As only the dip-slip component is measurable on the surface no strike-slip could be predicted at the start of the program. The new data was obtained in 301 crosscut where the faults and dikes do not occur in the positions predicted. The revised interpretation of the net displacement results in a new projected position of the faulted continuation of the ore body. The operator has illustrated this new projection in the map and cross section with the application and as there is no means of testing it except through further underground exploration, he proposes to do this by diamond drilling from Stations 2 and 3.

Station No. 1, Hole No. 1. This drill hole is principally to obtain geologic information which will lead to the most advantageous placing of subsequent diamond drill holes. I recommend that it be approved.

Station 2, Holes 2, 3, 4, and 5. The purpose of these holes is to cut the west wall of the Paymaster dike in the area of the latest projected position of the faulted continuation of the North Good-luck ore body. Drilling from station 2 should be contingent upon the results found in drill hole No. 1. In addition, each succeeding hole should be contingent upon the results of the preceding one.

Station No. 3, Holes 6, 7, and 8. The objective of these holes is a southward extension of the same objective area that is to be tested from Station No. 2. The Geological Survey should evaluate the program at the conclusion of drilling from Station 2. In order to make sure of this I suggest that holes from Station 3 be made contingent upon the results of previous holes and subject to the prior approval of the government.

According to his oral communication, Mr. Walker expects to accept the bid submitted by MacPherson. This work will use nearly all of the funds allowed for project 1-a. Additional funds for winzing allowed by the contract should still be available to follow up any leads revealed by the drilling.

RHS/rs

Ronson

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 20 1953

PROPOSED AMMENDMENT

Docket No. DMEA 2257
Lead - Zinc - Copper
Idm-E 442

Walker Corporation
Box 163
East Ely, Nevada

WARD MINE
White Pine County
Nevada

October 12, 1953

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE J. WALKER, MGR.

Oct. 12, 1953

PROPOSED AMMENDMENT
Docket No. DMEA 2257
Lead - Zinc - Copper
Idm-E 442

PROJECT 1-g, Proposed

Mr. H. C. Miller
Executive Officer, DMEA Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

We submit a proposed ammendment covering the cost of a diamond drilling program to be added to Part 1 of the present contract in place of the remainder of project 1-a, which we propose to stop.

There remains in project 1-a of Part 1 some 297 feet of drifting and cross-cutting @ $35.00 per foot, a total of $10,395.00. Work to date indicates that it will be a waste of time and money to continue with project 1-a, and we therefore propose to divert this monet to this proposed project 1-g.

Attached is a plan and section of the North Good Luck Orebody area. Our original projections indicated that it was probable that the North Good Luck Orebody would project above the plane of the Mountain Pride Tunnel on the footwall side of the Ward Fault. Work to date, particularly cross-cuts No. 301 and 313 have shown that this will not be the case.

We believe that a diamond drilling program will give us more information at less cost than attempting to winze down to the contact and then drifting along the dike contact on a sub-level.

We recommend the following diamond drill program:

Hole No. 1:

We propose to drill this hole due west from the face of 301 cross-cut, a distance of 400 feet, to establish the dike pattern in the footwall of the Ward Fault and to prospect the contacts of the Mountain Pride and Silver King Dikes.

Hole No. 2, 3, 4, & 5.:

All of these holes will be drilled in a -50° plane from Station #2 in the 301 cross-cut. No. 2 will be drilled due east and the others at such bearing as may be necessary to intercept the west wall of the dike at seventy-five foot centers from No. 2. The total of these four holes will be about 480 feet.

Holes No, 6, 7 & 8, Station 3:

We propose to drill these holes from Station 3 to be established in an old cross-cut as shown on the accompanying map. Hole No. 6 will be drilled due east at -50° and holes 7 & 8 will be drilled on a proper bearing to intercept the west wall of the Paymaster Dike at seventy five foot intervals from No. 6 and in the same plane as No. 6, parallel to the Ward Fault. These three holes should not total more than 317 feet in depth.

The entire program will consist of 1197 feet of drilling as a maximum.

We have obtained bids from Boyles Brothers Drilling Company of Salt Lake and MacPherson Drilling Company of Montrose, Colorado. These bids are attached to this application. Our estimate of the cost of drilling is governed by the following assumptions:

Drilling will average 20 feet per shift.
We will fail to recover $300.00 worth of casing for each 1000 feet drilled.
We will spend 50 hours cementing for each 1000 feet drilled.
We will have 20 hours lost time chargeable to the mine for each 1000 feet drilled.
We will use 25 sacks of Lumnite cement for each 1000 feet of hole drilled.
We will have to ream and case 500 feet of each 1000 feet drilled.
We will spend $100.00 on each 1000 feet drilled for assaying core and sludge.

Cost of Station 1 - nil		
Cost of Station 2:	$225.00	
Cost of Station 3:	300.00	$525.00
Core care and storage:		
2 carrying trays:	$ 60.00	
5 storage trays: (10% of core saved and stored):	150.00	
2 sludge settling traps:	30.00	$240.00
Mine Charges:		
Compressor man @ $16.00 per day:	$0.80 per foot	
Compressed air @ $12.00 per day:	0.60 per foot	
Foreman (half time @ $500/mo):	0.50 per foot	
Transportation to and from Ely:	0.17 per foot	
	$2.07 per foot	

Total costs per foot, comparing MacPherson and Boyles:

	MacPherson	Boyles
Mobilization	-	$0.30
Casing lost	$0.30	0.30
Cementing time	0.25	0.30
Standby time	0.10	0.12
Lumnite cement	0.09	0.09
Reaming & Casing	0.75	0.95
Contract Rate per foot, AX	4.25*	3.40**
Company helper	-	1.00
	$5.74	$6.46
Drill stations, preparation	0.53	0.53
Caring for and handling core	0.24	0.24
Assaying	0.10	0.10
Compressor man	0.80	0.80
Compressed air	0.60	0.60
Foreman (supervision)	0.50	0.50
Transportation	0.17	0.17
	$8.68	$9.40

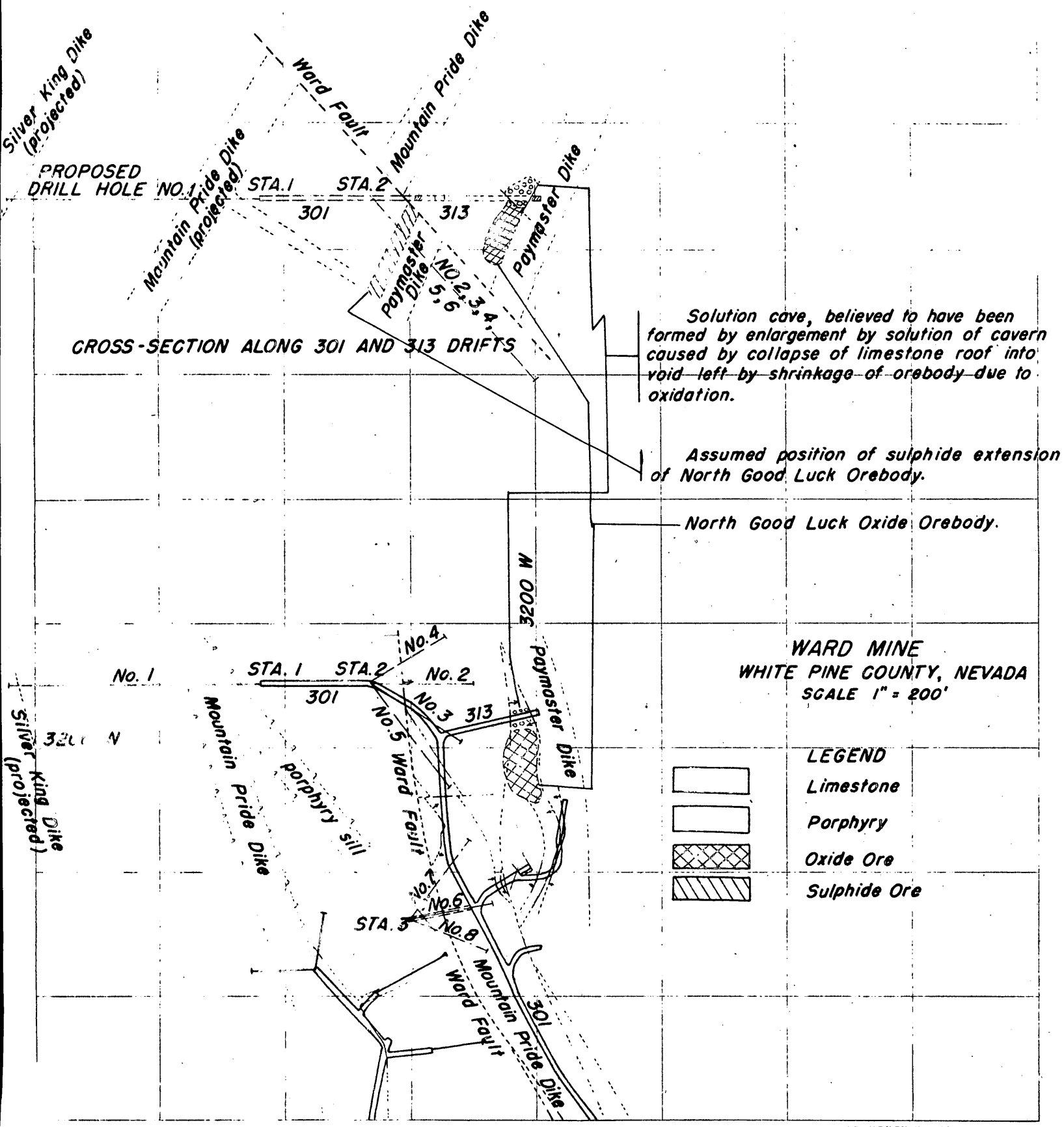
*MacPherson includes two drillers.
**Boyles include one driller, helper to be furnished by the company.

We sincerely believe the above estimate to be a true picture of the costs of this ammendment and hope that this proposed project will meet with your approval.

Respectfully submitted,

Woodville J. Walker

Walker Corporation
Woodville J. Walker, mgr
October 12, 1953



"ALBANENE" No. 198M K&E CO., N.Y.
REG. U.S. PAT. OFF.

September 18, 1953

Ward Mine - Walker Corp.
Box 163
East Ely, Nevada

Attention: Mr. Walker

Gentlemen:

We are pleased to comply with the request made during the conversation between Mr. Walker and Mr. H. L. Baker for a quotation on Diamond Drilling at your property near Ely, Nevada.

1. Mobilization: $300.00
   This sum to be refunded if drilling exceeds 1500 feet.

2. Drilling AX hole:
   0 to 400' $ 3.40 per ft.
   400 to 600' 3.90 " "

3. Reaming AX to BX: $1.90 per ft.
   Casing lost in the hole to be paid for at the current list price.

4. Cementing, if necessary: $6.00 per hour. Cement or cement substitute to be paid for by the Mining Company.

5. Delays caused by the Mining Company that are beyond our control, to be paid for at the rate of $6.00 per hour.

6. Water and air for drilling to be provided by the Mining Company.

7. The drill helper is to be provided and paid for as requested by the mining Company.

Work can be started within ten days from date of notification.

Your signature in the space provided will suffice in lieu of a formal contract.

Yours very truly,

Wm. D. West

William D. West

WDW:rfb

_____

Date

By_____

A G R E E M E N T

This agreement made and entered into by and between the WARD MINE - WALKER CORPORATION, a Nevada corporation, hereinafter called the FIRST PARTY, and the MACPHERSON DRILLING COMPANY, hereinafter called the SECOND PARTY.

Whereas first party desires to employ second party to perform certain drilling and other services upon property of first party commonly known as the WARD MINE, Ward Mining District near Ely, White Pine County, Nevada, and second party is willing to undertake the performance thereof.

Now therefore, in consideration of the premises and the mutual agreements and payments provided, it is hereby covenanted and agreed between the parties as follows:

1. Second Party agrees to drill, or cause to be drilled, not less than One thousand (1.000) or more than Two thousand (2.000) linear feet of hole from underground drill sites located at said property, at drill sites to be designated by First Party, and Second Party shall supply all necessary industrial diamonds, diamond drill machinery, and two drill operators required in connection therewith, all at the expense of Second Party, except as herein provided.

2. No hole shall exceed the depth of 500 linear feet, and Second Party shall use its best endeavors to complete all holes according to the specifications of the First Party, but should cavities or loose or caving material be encountered of such a nature as to prevent successful completion of any hole, it dose not guarantee to drill to any certain depth, but shall drill as deep as practicable under the conditions and shall be paid for such hole or holes at rates herein specified for all footage completed.

3. All holes shall be drilled with double tube core barrels of size AX receiving 1 1/8 inch core, and the drill crew shall exercise resonable care and precaution to recover as high a percentage of core as the nature of the ground drilled will permit, and shall deliver all such core at the drill site to the person or persons designated by First Party.

4. Should First Party desire drilling deeper than 500 feet and should Second Party be willing to perform such deeper drilling, it shall be performed under conditions and at such rates as may be mutually agreed between the partys in writing.

5. Measurements of all holes shall be from the original contour of the ground except in such cases where First Party prepares drill stations, in which event measurements shall be from collar of holes.

6. Necessary core trays and sludge sample sacks will be provided by First Party.

7. First Party shall fix the location and specify the course and angle of each hole and provide drill stations for ten feet pulls. In the event it becomes necessary to drillfrom any location where staging is required for foundation, First Party will furnish and supply all timber necessary at no cost to Second Party.

8. Drilling shall commence on or about November 1st, 1953.

9. First Party shall designate the location of the next hole to be drilled prior to the completion of the hole being drilled.

10. First Party agrees to pay to Second Party for such drilling Four Dollars Twentyfive Cents (425) per linear foot of hole for the first One Thousand (1.000) linear feet. From (1001) feet to (1,500), Three Dollars Ninetyfive Centsper linear foot of hole.

From (1.501) feet to (2.000) feet Three Dollars Seventy Cents (3.70) per lienear foot of hole drilled as above provided.

11. That should the reaming of holes be found necessary or advisable for the completion thereof First Party agrees to pay Second Party according to the following schedule. Reaming and setting BX size casing (1.80) per foot. Reaming and setting of AX size casing (1.50) per foot. Reaming and setting of EX casing (1.25) per foot.

12. That should the cementing of holes be found necessary or advisable for the completion thereof, First Party agrees to pay Second Party Five Dollars (5.00) per crew hour, plus such cement or cement substitutes as may be required.

13 13. Should it be found necessary or advisable in order to complete any hole or holes to the required depth after drilling as deep as the ground will permit with AX - equipment and if specifically requested by First Party, Second Party agrees to insert EX - Casing and continue drilling of hole or holes with EX - equipment receiving 1 15/16 core at the same rates as quoted for the drilling of an AX- hole.

14. All casing supplied by Second Party shall remain the property of the Second Party who may pull and salvage the same upon the completion of the drilling of each hole, unless otherwise directed by First Party such casing or casings left in hole or holes shall be payed for as set forth. BX - size casing $2.05 per linear foot, AX - size casing $1.90 per linear foot, EX - size casing $ 1.50 per linear foot.

15. TERMS OF PAYMENT.

Second Party shall properly certify and present to First Party on the last work day of each month an invoice or voucher for all footage drilled and all other items for which payment is claimed, payable ten days after date of invoice.

16. Should First Party fail to pay the amount due to Second Party at the time herein provided, Second Party shall have the right and option, in addition to all other remedies, of declaring this agreement terminated.

17. Second Party agrees after commencement of said drilling to prosecute the same with reasonable diligence and to work two eight - hour crew shifts per day. Should any delay in operations result from the negligence, fault or omission of First Party, its agents or servants, First Party shall pay to Second Party as liquidated damages for such delays and for Second Party's loss and expense resulting therefrom, the sum of Five Dollars (5.00) per hour for each hour of the sixteen crew hours per day lost thereby.

18. First Party agrees to provide not less than One Thousand (1,000) linear feet of drilling work to be done by Second Party hereunder.

19. First Party shall provide all Water and Air Power necessary for drilling operations at no cost to Second party. First Party will furnish when found necessary one drill helper for each shift at no cost to Second Party.

20. Second Party shall maintain in force Workmen's Compensation Insurance covering its employees during all of said operations and shall conduct all work in a manner reasonably consistent with the safety of the property of the First Party, its agents and servants, and the public in general.

21. First Party shall pocure all necessary easements, rights of way, rights of possession, licenses or permits required by law, regulation, ordinance, or by reason of private rights, for the prosecution of said drilling operations, and First Party agrees to save Second Party harmless from all liability, costs or expenses resulting from any failure mmk to procure such rights or permits.

22. Upon completion of said operation Second Party shall have a reasonable time to remove all temporary buildings, fixtures, machinery, equipment, appliances, facilities and supplies from said property occupied in the course thereof.

23. Neither party shall be liable for any loss or damage caused by strikes, accidents, acts of God, action of the elemrnts or any other causes beyond its control.

24. No waiver, alteration or amendment of the terms of this agreement or of any part thereof shall be binding upon the parties or either of them unless the same be in writing signed by the parties.

25. Neither party may assign its interest in this agreement without the approval in writing of the other party.

Executed this _____ day of _____ , 1953.

WARD MINE -- WALKER CORPORATION

By_____

First Party

MACPHERSON DRILLING COMPANY

By 666_____

Second Party

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

July 9, 1953

Mr. Woodville J. Walker, Manager
Walker Corporation
Box 163
East Ely, Nevada

Re: Docket DMEA-2257
(Zinc, Lead, and Copper)
Walker Corporation
Ward Mine, White Pine County,
Nevada, Contract Idm-Ehh2
Amendment No. 1

Dear Mr. Walker:

Reference is made to Amendment No. 1 to Contract Idm-Ehh2, which you signed and returned our five copies to us with your letter dated June 19, 1953.

Upon receipt of our five copies, it was noted in this office that Annex I which modifies Article 9 of the contract form was not attached to the copies of the amendment sent to you for signature, although it is stated in the amendment that it "is attached hereto and made a part hereof."

I took the matter up with the Washington Office of the Defense Minerals Exploration Administration and have been informed that Annex I inadvertently was not attached to the Amendment No. 1. Six copies of Annex I have now been received in this office and your copy is attached herewith.

You will find that Annex I in no way affects the work of the amendment and we trust that you will accept it and our apology for having had you sign an incomplete document.

Sincerely yours,

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Enclosure

Copy to: DMEA, Washington, D. C.
E. H. Bailey, USGS

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

July 9, 1953

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Zinc, Lead, and Copper)
Walker Corporation, Ward Mine
White Pine County, Nevada, Contract Idm-E442
Amendment No. 1

Attached are the original and two copies of Amendment No. 1, dated June 10, 1953, drawn up in connection with subject contract, together with copies of Annex I.

A justification sheet is attached to each copy of the amendment.

The usual distribution hasbeen made of the remaining copies of the amendment.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: A. C. Johnson, Reno (With copy of amendment)
Finance Officer, Region III (With copy of amendment)
E. H. Bailey, USGS
George Mavor

7-13

FILE COPY
SURNAME: 013

140

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

JUL 7 1953

Air Mail

Mr. M. C. Miller
Executive Officer, DMEA
Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2257
(Zinc, Lead, and Copper)
Walker Corporation, Ward Mine
White Pine County, Nevada
Contract No. Idm-E442
Amendment No. 1

Dear Mr. Miller:

Reference is made to your memorandum of June 29 from which it appears that, inadvertently, Annex I was not attached to Amendment No. 1.

I am therefore enclosing six copies of Annex I so that a copy can be attached to each copy of the Amendment that you have and distribution thereof made in the usual manner.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

J. M. Hedges
For Bureau of Mines

A. R. Kinkel, Jr.
For Geological Survey

Enclosures

AEKane:ep 7-2-53

Copy to: Mails & Files
Admr. R. File
Oper Comm.
Mr. Griswold
Mr. Hofflund
Mr. Kane
Chron.
Pending

R.C.H. 7-7-53

Extra Copy

WALKER CORPORATION
EXPLORATION PROJECT CONTRACT
DOCKET NO. DMEA-2257

ANNEX I

The following provisions are in lieu of all of paragraph (a) of Article 9 which precedes the colon:

If at any time the Government considers that a discovery or 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 final report and final account required by the exploration project contract, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development. The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land which is the subject of the exploration project contract, as follows: (1) Regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by the contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of 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, as follows:

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

June 29, 1953

AIR MAIL

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Zinc-Lead, and Copper)
Walker Corporation, Ward Mine
White Pine County, Nevada, Contract Idm-E442
Amendment No. 1

Reference is made to your letter dated June 12, 1953, transmitting the original and five copies of Amendment No. 1 to the above contract, which has been signed by the Government.

Mr. Woodville J. Walker, Vice-President, of the Walker Corporation, has signed all six copies and has returned five copies to us. However, when preparing to send out the Government's copies my attention was called to Item 2 of the Amendment which reads as follows: "2. Annex I which modifies Article 9 of the contract form, is attached hereto and made a part hereof."

Annex I was not attached to the contract and we believe failure to do so was an oversight on the part of the Washington Office.

Will you, therefore, send us the six needed copies of Annex I to attach to the contract. One copy of the Annex will be sent to Mr. Walker upon receipt.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno

Office of
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

June 16, 1953

Mr. Woodville J. Walker, Manager
Walker Corporation
Box 163
East Ely, Nevada

Re: Docket DMEA-2257 (Zinc, Lead, and Copper)
Walker Corporation, Ward Mine,
White Pine County, Nevada
Contract Idm-E442

Dear Mr. Walker:

Your request of May 7, 1953, for an amendment to subject contract was referred to the Washington Office of the Defense Minerals Exploration Administration for their attention.

If you are in accord with the attached amendment executed on the part of the Government, will you kindly sign all of the six copies enclosed, returning the original and four carbon copies to this office, retaining the remaining copy marked "Operator's Copy" for your records.

Sincerely yours,

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Enclosure

Copy to: DMEA, Washington, D. C.
E. H. Bailey, USGS
A. C. Johnson, Reno

FILE COPY
SURNAME:

500

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

JUN 12 1953

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine
White Pine County, Nevada
Contract No. Idm-D442

Dear Mr. Miller:

Enclosed are the original and five copies of Amendment No. 1 to the above contract, which have been signed by the Government.

If the amendment meets with your approval, kindly present it to the Operator for signature and, when executed, distribute in the usual manner. In the event that the amendment is not satisfactory, return all copies with your recommendation concerning any necessary modification.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures 6

JWAlt/bjl (6/8/53)

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Kinkel
Mr. Bishop
Chron.

500

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

June 8, 1953

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Justification for Amendment No. 1 to Docket No. DMEA-2257, Contract No. Idm-E442, Walker Corporation, Ward Mine, White Pine County, Nevada (Zinc-Lead-Copper)

In concurrence with the examining engineers, this office approves allowing the Operator to do 350 feet of crosscutting. This amount of work allows two crosscuts to be driven at Coordinate 3200 N., one crosscut to be driven eastward 150 feet, called the hanging wall crosscut, and one westward 200 feet, called the footwall crosscut.

These crosscuts are necessary to obtain geological information before proceeding with the other work as proposed in the contract.

The proposed work of this amendment will not increase the cost of this project nor will it decrease the area to be explored. The 350 feet of crosscutting is to be done by taking this amount from the 1300 feet of drifting of Item 1 of Part I of the contract. It will not decrease the area to be explored because, prior to the signing of the contract, the Corporation had completed 400 feet of drifting on their own account. This amount of drifting was included in the contract.

Part 1, Item 1, is amended to allow the Walker Corporation to do 950 feet of drifting and 350 feet of crosscutting at $35.00 per foot, a total cost of $45,500.00, which is the same amount as was to be paid for 1300 feet of drifting.

W. R. Griswold

W. R. Griswold

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

Office of
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

May 22, 1953

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA, Washington 25, D.C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Zinc, Lead, and Copper)
Walker Corporation, Ward Mine,
White Pine County, Nevada, Contract Idm-E442

As per the attached letter dated May 7, 1953, from Mr. Woodville J. Walker, Manager, Walker Corporation, this Corporation is requesting an amendment to its contract.

Under this amendment the Corporation desires to do an additional 350 feet of crosscutting to determine the footwall wall of the Ward fault. The matter was taken up with Mr. A. C. Johnson who reported that, although a certain amount of crosscutting is good mining practice in order to avoid the possibility of missing some mineralization in an exploration project of this type, the crosscut driven by the Corporation on its own account encountered some old workings that more or less give information on the hanging walls side. Our first indication was to deny the request for an amendment with the thought that the Corporation could clean out these old workings and obtain the desired information without doing any new work. To us it seemed the hanging wall crosscut proposed by Mr. Walker was a duplication of work.

According to the maps submitted with Mr. Walker's letter, one branch of the old workings has been driven toward the footwall side of the fault but perhaps not far enough to obtain the desired information on the footwall side. As the footwall crosscut maybe necessary, it was decided to have Mr. Roscoe M. Smith, Geologist, U. S. Geological Survey, examine the mine to evaluate the geological aspects of the proposed amendment.

I have just received one copy of Mr. Smith's memorandum to Edgar H. Bailey, dated May 20, 1953, and this copy is being sent to

you herewith. You will note that after studying the matter on the ground, Mr. Smith and Mr. Tillman are of the opinion that reopening the old workings would not yield information on the location and rake of the ore body. They recommend, therefore, that the work proposed by Mr. Walker be allowed.

Mr. Walker is not asking for any more money. He proposes to finance the proposed work out of what was saved under the contract when the Corporation drilled 400 feet of the 1300-foot drift on its own account before the date of the contract.

However, since there is a possibility of a shift in the position of the major target area for project 1 - a, I do not have the authority to draw up the proposed amendment. The information and recommendations, therefore, are being sent to you for help in preparing the amendment in the Washington Office.

H. C. Miller
Executive Officer
IMEA Field Team, Region III

Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno

Enclosures: 2

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE J. WALKER, MGR.

May 7, 1953

PROPOSED AMMENDMENT
Docket No. DMEA 2257
Lead - Zinc - Copper
IDM-E 442

PROJECT 1-F, Proposed

Mr. H. C. Miller
Executive Officer, DMEA Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

We submit a proposed ammendment covering the cost of some three hundred and fifty feet of cross-cutting to be added to Part 1 of the present contract.

It is necessary at the present time to review exploration work on project 1-a of Part 1 of this contract.

Project 1-a is aimed at discovering the faulted continuation of the North Goodluck Orebody below the three major strands of the Ward Fault Zone. The proposed and approved method of attack is shown on Figure 2 of the contract itself.

Referring to Figure 2 of the contract, you will observe that our projection of the hangingwall strand of the Ward Fault Zone is shown passing some seventy-five feet west of the old workings on the 280 level. The present exploration work has shown that this projection is in error by some one hundred feet, and that the hangingwall strand of the Ward Fault Zone does in fact pass through the old workings and lies one hundred feet, more or less, east of its projected position. This new position is shown on the sketch accompanying this application for an ammendment to the contract.

We know that the North Goodluck Orebody has a plunge to the northwest. The fact that the hangingwall strand is much farther east than originally projected means that the orebody will be cut off closer to the plane upon which we are conducting our exploration work, and consequently that the extension of this orebody between the main strand and the hangingwall strand should more nearly come up to the plane of exploration and should be somewhat farther south than previously supposed. Aside from swinging the main heading toward the east and shifting the position of project 1-d (200' inclined winze) toward the east, this error in projection will have little effect on project 1-a.

In order to prove the continuation of the North Goodluck Orebody to and through the plane of exploration,

we herewith recommend the hangingwall cross-cut contained in this proposed ammendment. This cross-cut is shown on the attached sketch. This hangingwall cross-cut will have three objectives; first will be to definitely determine the position of the hangingwall strand of the Ward Fault (this is also essential so that project 1-d can be properly located and work started thereon); second will be to show the continuation of the oxidized portion of the North Goodluck Orebody to and through the plane of exploration and to determine the eastern limits of this orebody (Paymaster Dike); and third to prove the existence of commercial lead oxide ore in this orebody at this elevation.

This cross-cut must be driven, in part at least, before project 1-d can be started, as the definite location of the winze and any additional work from the winze will be predicated upon the location of the hanging-wall strand of the Ward Fault and upon the results obtained by cross-cutting.

The proposed hanginwall cross-cut will be approximately 150 feet long and will cost about $5,250.00, of which the Government will pay one half, or $2,625.00.

The knowledge that the hangingwall strand of the Ward Fault actually lies about one hundred feet east of the original projection leads to the belief that the main and footwall strands of the Ward Fault may also lie a considerable distance east of the projected positions.

If this is shown to be the case, then the continuation of the North Goodluck Orebody below the faults will be found much farther South than shown on Figure 2 of the contract.

In view of there being a distinct possibility of a shift in the position of the major target area for project 1-a, we recommend a footwall cross-cut of sufficient length to cut and thereby fix the position of both the main strand and the footwall strand of the Ward Fault Zone. We anticipate that this cross-cut will have a maximum length of two hundred feet. This cross-cut will cost about $7,000.00 of which the Government will pay half, or $3,500.00.

Should this cross-cut show that the objective is north of us, then part of this cross-cut may be used as the main heading, if it seems desirable at that time.

The two cross-cuts total 350 feet of cross-cutting, as a maximum, for a total of $12,250.00, the Government participation being $6,125.00. There will not need to be any revision in the face value of the contract, as Walker

Corporation had driven a total of 400 feet of drift ($35.00 per ft.) after the application for a DMEA loan had been filed and before it was approved. This amount ($14,000) was included in the contract but the Government will not be called upon to participate in this because it had been driven prior to the signing of the contract.

SUMMARY:

Two cross-cuts are proposed in this ammendment. The project is to be known as 1-F. The maximum length of the cross-cuts will be 350 feet, the cost, based on the present contract rates, will be $12,250, of which the Government participation will be one half, or $6,125.00.

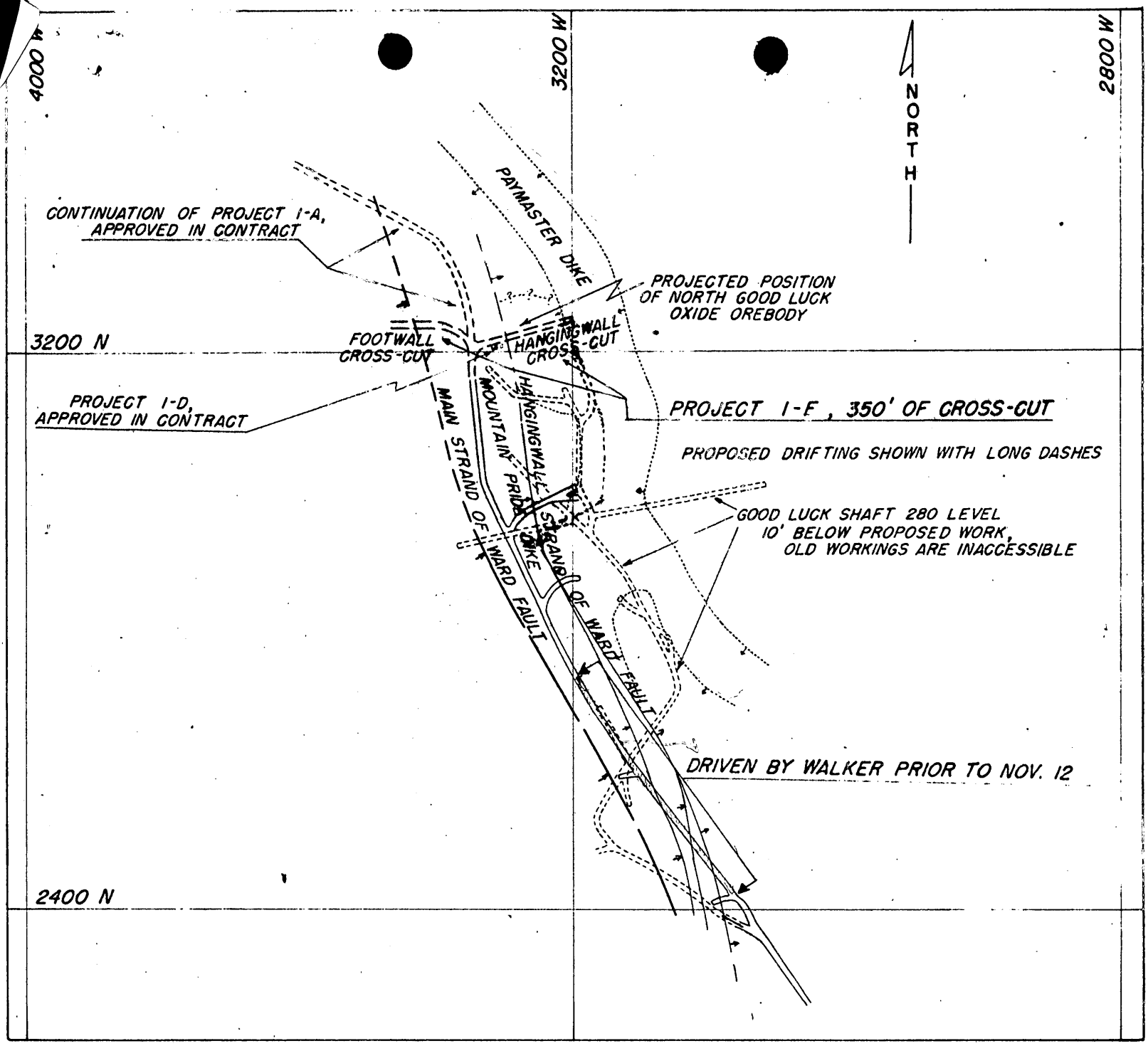
We believe that these two cross-cuts are absolutely essential to the discovery of the downward extensions of the North Goodluck Orebody. We have reached the point where adequate plans for the additional work cannot be made without evidence upon which to base the detailed plans.

We hope that the proposed cross-cuts will meet with your approval. We will be in position to start the cross-cuts within fifteen days and will stop the main heading pending receipt of word from you whether or not the cross-cuts will be included in the present program.

Respectfully submitted,

Woodville J. Walker

Walker Corporation
Woodville J. Walker, mgr.



LEGEND

PORPHYRY

LIMESTONE

POSSIBLE OXIDE ORE

PROPOSED PROJECT 1-F

WARD MINE - WALKER CORPORATION
WHITE PINE COUNTY, NEVADA

0 200 400 600 FEET
SCALE

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Room 208, 222 South West Temple
Salt Lake City, Utah

May 20, 1953

Memorandum

To: Edgar H. Bailey

From: Roscoe M. Smith

Subject: DMEA 2257, Idm-E 442 (lead, zinc, copper), Ward Mine, White Pine County, Nevada. Proposed amendment.

An examination of the Ward mine was made May 20, 1953 by R. M. Smith and C. G. Tillman to evaluate the geological aspects of an amendment proposed by Mr. W. J. Walker in a letter to Mr. H. C. Miller, dated May 7, 1953.

The proposed work consists of two crosscuts, both on the Mountain Pride level at coordinate 3200 N, one eastward 150 feet called the hanging wall crosscut and one westward 200 feet called the footwall crosscut.

The objectives of the proposed hangingwall crosscut are to determine the location of the hanging wall strand of the Ward fault, and to determine the existance and location of the North Goodluck orebody at the elevation of the Mountain Pride level.

On the map accompanying the DMEA application the hanging wall strand of the Ward fault was projected to lie west of all old mine workings shown on the attached map. New work has connected with these workings but the fault is not revealed in either the new or old work. It is concluded that the fault lies east of the accessible workings. The position of the North Goodluck orebody on the Mountain Pride level is inferred from the rake of the orebody on higher levels, but has not been determined on the Mountain Pride level.

The objective of the footwall crosscut is to determine the location of the main strand of the Ward fault, last exposed about 300 feet back of the face.

The location of the faulted segment of the orebody lying between the strands of the fault (project 1d) can be determined only by knowing the location of the hanging wall strand, and the rake of the orebody. The location of the faulted segment of the orebody below the main strand (project 1a) can be determined only by knowing the location of the main strand and the rake of the orebody.

As the hanging wall strand is not at the projected location it is inferred that the main strand also may not be at its projected location. It is essential to the success of both projects to determine the departures from those locations.

Although reopening the old workings would probably reveal the location of the fault it would not yield information on the location and rake of the orebody. It is concluded, therefore, that the desired information can best be determined by the proposed work, and it is recommended that proposed amendment be approved.

cc: H. C. Miller
A. C. Johnson

Greenwold
Betty

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 9 1953

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, California

March 3, 1953

Mr. Woodville J. Walker, Manager
Walker Corporation
Box 163
East Ely, Nevada

Re: Docket DMEA-2357 (Zinc, Lead, and Copper)
Walker Corporation, Ward Mine,
White Pine County, Nevada
Contract Idm-2412

Dear Mr. Walker:

We appreciate your letter of February 17, giving us further information on the additional work you are proposing should be allowed under the above captioned contract. On the basis of what you wrote in your letter, I referred the entire correspondence relating to your request to the U. S. Geological Survey and they too are not willing to recommend to our Washington office that your proposed work be allowed.

Mr. E. H. Bailey, Supervising Geologist of the Survey, states, in regard to the siliceous silver-copper-lead ore body, that though the ore body was mined on the west wall of the Paymaster dike near the surface, the exact location along the contact is not known by him. However, it appears to him that the unexplored area on the Mountain Pride Tunnel level (260 level) is very limited. A raise extended up from the 260 to the 230 level along the contact at approximately the intersection of coordinate 3000 N and 3200 W. A second raise, just south of the 3200 N coordinate along the 3200 W coordinate, extended up from the 260 level for an unknown distance. Workings from the 130 level penetrated the favorable area between these raises. It thus appears unlikely to Mr. Bailey that any sizable ore body was missed. More pertinent, however, is the fact that the near-surface ore was rich in silver and (according to Mr. Bailey's memory of conversations he has had with Mr. Roscoe Smith of the Survey at Salt Lake City) very lean in copper and lead, which makes it doubtful if a search for this ore could qualify under DMEA, as silver is not on the list of minerals to be sought under this program. It would be of interest to us to know the average lead and copper content of the siliceous silver-copper-lead ores mined along the west wall of the Paymaster dike near the surface.

As far as the North Good Luck oxide ore body is concerned, Mr. Bailey agrees with me that the easiest way to explore for this ore body on the 260 level is by means of a direct crosscut, which would have to be about 200 feet long and should be driven from a point near the intersection of the Mountain Pride Tunnel and the 3200 N coordinate.

Your contract was granted for the exploration for possible upfaulted segments of the downward extension of the North Good Luck ore body. It is quite possible that the ore body bottomed above the Mountain Pride Tunnel. However, if you would be willing to search for the ore body on the Tunnel level by means of a crosscut, with the understanding that no further work be done on the completion of the proposed extension of the Tunnel beyond the crosscut if no ore is found, we would be in favor of recommending to our Washington office that consideration be given to amending your contract to that extent.

We welcome your further thoughts on the matters here discussed.

Sincerely yours,

H. C. Miller

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Copy to: DMEA, Washington, D. C. (2)
E. H. Bailey, U. S. Geological Survey
A. C. Johnson, Reno, Nevada

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED

FEB 20 1953

Office of
Executive Officer
DMA Field Team
Region III

1082 Flood Building
870 Market Street
San Francisco 2, Calif.

February 16, 1953

Mr. Woodville J. Walker, Manager
Walker Corporation
Box 163
East Ely, Nevada

Re: Docket DMA-2257 (Zinc, Lead, and Copper)
Walker Corporation, Ward Mine,
White Pine County, Nevada
Contract Idm-8442

Dear Mr. Walker:

Your letter of February 3 requesting an amendment to your contract to permit you to drive the following crosscut is acknowledged:

"Commencing at a point 2940 N and 3890 W in the present heading now being driven as project 1-a; thence, crosscut northeasterly to the west wall of the Paymaster Dike (about 150 feet); thence, drift northerly along this dike contact about two hundred feet; thence crosscut northwesterly about fifty feet to the center of the North Good Luck Oxide Orebody, as projected. The entire project to consist of 400 feet of combined drifting and crosscutting, at a cost of $14,000.00."

We have considered your request which we regret we cannot approve for the following reasons:

The Good Luck Orebody has been mined down to the 230-foot level and on the 280-foot level which is only 10 feet below the proposed workings. The area was extensively prospected by workings (now inaccessible) without finding the orebody. We note that you believe the orebody flattens out between the 230- and 260-foot levels and that the 280-foot workings, therefore, were too far south.

Nevertheless, assuming that the orebody did flatten out, why run a 400-foot crosscut, of which approximately 380 feet will be almost directly above and only 10 feet over the workings which did not find the orebody?

It would seem more reasonable to consider exploring for the Good Luck Orebody on the 260-foot level, if the workings on the 280-foot level were too far south, by running a northeast crosscut from the

Mountain Pride tunnel at a point starting approximately at 3150 N and 3425 W. Such a crosscut would be only about 200 feet long to get to the center of this supposed orebody and its cost would be only half of the cost of the work you propose. I am not inferring that even such work will be approved but am citing the possibility as one means of prospecting for the orebody at considerably less cost than the method you propose. Consideration might be given also to the possibility of exploring for the orebody by diamond drilling from the Mountain Pride tunnel.

Sincerely yours,

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Copy to: DMEA, Washington, D. C.
E. H. Bailey, USGS

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

December 2, 1952

Memorandum

To: Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Contract Idm-E442
Docket DMEA-2257 (Zinc, Lead, and Copper)
Walker Corporation
Ward Mine, White Pine County, Nevada

Reference is made to Mr. Frank E. Johnson's letter of November 12, transmitting to this office the original and five copies of subject contract.

The contract has been executed on the part of the Operator and one copy retained by him. Proper distribution has been made of the Field Team's and Finance Officer's copies, and the original and two remaining copies are returned herewith.

In accordance with your instructions, newly executed Owner's Consent to Lien forms have been submitted by the Operator, and an executed copy has been attached to each copy of the contract.

Kindly note that the Operator has changed his mailing address from Box 917, Leadville, Colorado, to Box 163, East Ely, Nevada. This correction has been made on all copies of the contract.

cae
12-8

H. C. Miller
Executive Officer, DMEA Field Team
Region III

Attachment

Copy to: E. H. Bailey, USGS
George Mavor
A. C. Johnson, Reno (With copy of contract)
Finance Officer, Region III (With copy of contract)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 2 - 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

November 18, 1952

Air Mail

Mr. Woodrow J. Walker, Vice President
Walker Corporation
Box 917
Leadville, Colorado

Re: Contract Idm-8442
Docket DMEA-2257 (Zinc-Lead-Copper)
Walker Corporation
Ward Mine, White Pine County, Nev.

Dear Mr. Walker:

You have received a letter from Mr. C. O. Mittendorf, Administrator, Defense Minerals Exploration Administration, dated November 12, advising you that your contract has been forwarded to this office and that you are to submit new Owner's Consent to Lien forms. Upon receipt by this office of these forms, the copies of the contract will be sent to you for your signature.

Kindly air mail or wire us how soon after November 12 (the date of the contract) you will be able to commence work on the exploration project.

Sincerely yours,

H. C. Miller
Executive Officer, DMEA Field Team
Region III

Copy to: Operating Committee, DMEA, Washington
E. H. Bailey, USGS

FILE COPY
SURNAME:

500

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

NOV 12 1952

Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
J. W. Alt
Mr. Bishop
Mr. McKnight
Chron.

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2257 (Zinc, Lead, and Copper)
Walker Corporation, Ward Mine
White Pine County, Nevada

Dear Mr. Miller:

We are enclosing the original and five copies of the above-referenced Exploration Project Contract, signed by this office for the Government, together with Exhibit "A" (4 pages), Appendix I (2 pages) and three maps.

Before this contract can be executed, it will be necessary to obtain newly executed "Owner's Consent to Lien" forms. The executed copies should be attached to each copy of the contract and become a part thereof. To expedite the signature of the contract, we are sending six copies of the aforementioned forms directly to the Applicant.

If the contract meets with your approval kindly present it to the Applicant for approval and signature, and when completed distribute in the usual manner. In the event the contract is not satisfactory, return all copies with your recommendation concerning any modification.

It will be necessary to insert in the contract, in the space provided under Article 3, the number of days from the date of the contract in which work shall commence.

Sincerely yours,

(signed) FRANK E. JOHNSON
Chairman, Operating Committee

11-12-52

APPROVED:

J. H. Hedges
Member, Bureau of Mines

O. R. Kinkel, Jr.
Member, Geological Survey

Enclosures 6

JWAlt/bjl (written 11/4/52)

FILE COPY
SURNAME:

500

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

NOV 12 1952

Mr. Woodrow J. Walker, Vice President
Walker Corporation
Box 917
Leadville, Colorado

Re: Docket No. DMEA-2257 (Zinc, Lead and Copper)
Walker Corporation, Ward Mine
White Pine County, Nevada

Dear Mr. Walker:

Enclosed are six blank forms of an Owner's Consent To Lien. Kindly fill out these forms correctly and obtain the owner's signature thereto. We are sending these forms directly to you in order to expedite the final approval and execution of the proposed exploration project contract, covering the work to be performed in the subject application.

On this day, six copies of the contract are being sent to:

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Mr. Miller will contact you shortly to obtain your approval and signature to the aforementioned contract. At that time you should present the executed forms of the Owner's Consent to Lien to Mr. Miller for their inclusion as a part thereof of the contract.

Sincerely yours,

C. O. Mittendorf (for)
Administrator

HFKeller/bjl (written 11/4/52)

Enclosures 6

Copy to: Docket
Admr. R. File
Op. Committee
H. F. Keller (2)
Mr. Alt
Mr. Bishop
Mr. McKnight
Reg. III (2)
Chron.

140

FILE COPY
SURNAME:

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

October 30, 1952

n.s. in R.R.

Memorandum

To: Administrator

Through: H. F. Keller

From: Chief Counsel

Subject: Walker Corporation, Docket No. DMEA-2257

There is attached, in satisfactory legal form for execution, a contract covering the above-described project, subject to the execution and attachment to the contract of a new Owner's Consent to Lien form, prior to execution of the contract. A new lien form is necessary because the Landlord's Subordination Agreement previously executed has been limited by the Landlord to the old form contract.

R E Kane
For J. L. Hofflund
Chief Counsel

Attachments

XXX HCRubin/ema
cc to; Mails and Files
Mr. Hofflund
Mr. Rubin
Mr. Keller
Chron.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 14 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

October 10, 1952

Memorandum

To: Operating Committee, DMEA, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Lead-Zinc)
Walker Corporation, Leadville, Colorado
Ward Mine, White Pine County, Nevada

This is in reference to Mr. Ault's telephone request of October 1 to this office and to Mr. G. C. Selfridge's letter of August 25, relating to legal description of the property which would be subject to royalty payments.

We are quoting below letter of October 8 from the manager of the Ward Mine, Mr. Woodville J. Walker, addressed to the writer;

> "I enclose copies of a letter just written to A. C. Johnson regarding the area from which repayment will be made on our DMEA application. I have read this letter to him over the phone and he has suggested that I mail the carbons directly to you in order to save as much time as possible. He has stated to me that he believes the letter as written will answer all objections of your people on this question.
>
> "I have examined our copy of the landlord's subordination agreement and no new agreement will be necessary. I hope that this letter will answer all the objections left to our application and that we may expect some immediate response."

Copies of Mr. Walker's letter to Mr. A. C. Johnson, together with the sketch referred to therein, are enclosed herewith.

H. C. Miller
Executive Officer, DMEA Field Team
Region III

Attachments 2

Copy to: E. H. Bailey, USGS

Oct 8, 1952

Mr. A. C. Johnson, Chief
Mining Division
U. S. Bureau of Mines
Reno, Nevada

Re: WARD MINE - WALKER CORP
WHITE PINE COUNTY
NEVADA
DMEA - 2257

Dear Mr. Johnson:

You have informed me by telephone that our application for a Defense Minerals Exploration Loan is being held up in Washington by the limitations of the area that will be subject to the repayment provisions contained in the application. I presume that this objection has to do primarily with the Good Luck Orebody area, to be explored through the Mountain Pride Tunnel, but am making a blanket modification to include all of the Ward Mine Property in order to expidite the granting of this loan.

I attach a sketch of the North Good Luck Oxide Orebody, which is not a subject or part of this exploration program, as earlier work has blocked out this orebody from the 230 Level of the Good Luck Shaft to the surface of the ground. This oxide orebody has had nearly continuous small scale production for a number of years and has furnished the owners of this property with their only income, except for slag dumps, mill dumps and mine dumps, which must also be excluded. The Mammoth Mine area of the Ward Mine is not a subject of this exploration program, and inasmuch as low grade ore has been mined from workings near the surface here, this area must also be excluded. Aside from these limitations I do not expect the owners of the Ward Mine to object to modifying their Landlord's Subordination agreement to cover the balance of the property as outlined below.

The applicant for this loan hereby agrees that any and all ores produced anywhere on the property of the Ward Mine (a claim map with the claims owned by the Ward Mine accompanies the original application, owned claims are colored yellow) except those areas listed below, will be subject to the repayment provisions contained in the application for the loan:

1. That block of ground lying above the sill of the 230 Level of the Good Luck Shaft, as driven, being approximately thirty (30) feet above the sill of the Mountain Pride Tunnel as it will be driven, and lying within the following tract, described by metes and bounds and shown with horizontal hatching on the accompanying sketch map:

Begin at a point on the northeasterly side line of

the PAYMASTER LODE, U. S. SUR. 37, from whence the northeast corner (Corner No. 6) of the said PAYMASTER LODE bears northwesterly along said side line a distance of two hundred (200) feet:

Thence, the first course, due East two hundred (200) feet:

Thence, the second course, South 50° East three hundred (300) feet:

Thence, the third course, due South four hundred (400) feet:

Thence, the fourth course, due West two hundred and fifty (250) feet:

Thence, the fifth course, North 73° West six hundred and thirty (630) feet to the place of beginning.

2. All mine dumps, slag dumps, and mill tailings dumps accumulated prior to the granting of this application. Later dumps are to be kept seperate and will be subject to repayment provision.

3. All ores mined from the following claims, which claims are in no manner a part of the exploration projects contained in the application:

INDEPENDENCE, U. S. SUR. 3709
CAROLINE, U. S. SUR. 41
MAMMOTH, U. S. SUR. 40
WELCOME STRANGER, U. S. SUR. 3709

With the above three exceptions and exclusions, the applicant herewith agrees that any and all ores mined anywhere on the premises of the Ward Mine will be subject to the repayment provisions of the application.

Very truly yours,

Woodville J. Walker, mgr
Ward Mine - Walker Corp

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
~~GEOLOGICAL SURVEY~~
WASHINGTON 25, D.C.

October 7, 1952

Memorandum

To: Mr. H. F. Keller

From: E. T. McKnight, USGS
O. M. Bishop, USBM

Re: DMEA-2257
Walker Mining Company
Ward Mine (Defiance Tunnels)
White Pine County, Nevada
$59,500
Lead, zinc

Subject: Recommendation for approval of docket

The original docket proposes two essentially distinct projects which, because of a difference in accessibility, have been separated in order to start action on the favorably situated one first. This memorandum concerns the higher level project which could not be examined earlier by the field team because of snow conditions.

Oxidized ore valued at $2,500,000, mostly in precious metals, has been mined in the past from three ore bodies lying 2,000 feet east of, and 1,000 feet lower than the Defiance prospect. This ore occurred in large part as a limestone replacement in Pennsylvanian limestone bordering thick quartz monzonite porphyry dikes. At the Defiance prospect, a similar dike about 50 feet wide on the outcrop and dipping steeply westerly shows oxidized lead minerals in a zone up to 50 feet wide and 600 feet long in the limestone bordering the footwall, and iron oxides in the hanging wall. Two upper tunnels were driven at some time in the past and showed enough mineralization to encourage driving a long low level adit to intercept the downward extension of the mineralization in depth. Although 1130 feet of the adit were driven, the project was never completed. Pyritic replacement of limestone at least 300 feet east of the projected position of the dike has been exposed in the adit. The present proposal is to extend the adit 350-550 feet to cut both the footwall and hanging wall of the dike, and to drift a total of 1150-1250 feet on these walls. The map (exhibit E) suggests that more of the drifting will be done on the eastern or footwall of the dike than on the hanging wall; the field team proposes 800 feet and 450 feet respectively.

The applicant estimates that perhaps 300,000 tons of inferred sulfide ore may be developed above the adit level. The field team report suggests that this estimate should be cut to one quarter. It is of uncertain grade, as the grade must be surmised from examination of the oxidized zone from which most of the zinc has been removed. The proposed adit will intersect the ore horizon probably 400 feet down dip from the high level workings in the oxidized zone, and the original

character of the ore could have changed considerably in this interval. If the ore is unoxidized as indicated at the adit level, it could contain a high percentage of zinc. Applicant surmises that the ore could contain 11.2% zinc, 2.8% lead, and 1.3% copper, which is not unreasonable.

The field team recommends approval of this section of the application. We concur with this recommendation. Although the proposed adit may not develop a very large tonnage of sulfide ore above the adit level, if it intercepts sulfide ore this ore can be worked by a winze below the adit or by a long crosscut from the eastern and lower workings. With deposits as variable as these limestone replacements are known to be, the proposed exploration could conceivably discover a much better ore body than that indicated in the present outcrops which are in marginal or submarginal oxidized ore.

Edwin T. McKnight

Edwin T. McKnight
Geologist

O. M. Bishop

O. M. Bishop
Mining Engineer

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

October 7, 1952

Memorandum

To: A. C. Johnson, Bureau of Mines, Reno, Nevada

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Lead-Zinc), Walker Corp., Leadville, Colorado, Ward Mine, White Pine County, Nevada

Reference is made to my subject memorandum to you, dated September 11, to which I attached a copy of a letter, dated August 25, from Mr. G. C. Selfridge. In that letter Mr. Selfridge asks a number of questions concerning the subject property.

In response to my September 11 memorandum, you contacted Mr. Woodville J. Walker, Manager, Ward Mine, and copies of his reply to you, dated September 19, were received and sent to the Washington Office.

During my absence from the office last week, Mr. Ricker received a telephone call from Mr. Alt in Washington, requesting a better description of the Walker property. Mr. Alt stated that everything else in the August 25 letter had been answered, so I am assuming that he was referring to the paragraph on the second page of Mr. Selfridge's letter which reads as follows:

> "We would appreciate it if you would contact the Applicant in regard to this legal description of the property which would be subject to royalty payments, and obtain his consent to the withdrawal of the limitations."

This paragraph was not answered by Mr. Walker, so kindly get in touch with him again and obtain the requested information, which I will then transmit to the Washington Office.

H. C. MILLER

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 29 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

September 25, 1952

Memorandum

To: DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2257 (Lead-Zinc), Walker Corporation, Leadville, Colorado, Ward Mine, White Pine County, Nevada

In connection with the subject application, I requested Mr. A. C. Johnson when he was in this office on September 9 to check on the applicant's estimated costs for doing underground work at the Ward Mine. This he did and the original and two copies of a reply, dated September 19, from Mr. Woodville J. Walker, Manager of the Ward Mine to A. C. Johnson are attached.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

Copy to E. H. Bailey, USGS

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE J. WALKER, MGR.

Sept. 19, 1952

Mr. A. C. Johnson,
Chief, Mining Division
Region III
U. S. Bureau of Mines
Box 1551
Reno, Nevada

Subject: DMEA-2257
WARD MINE - WHITE PINE COUNTY
NEVADA

Dear Mr. Johnson:

I enclose five copies of a breakdown on anticipated costs on the Defiance Tunnel Project of the Ward Mine, White Pine County, Nevada.

In your letter of September 16, 1952, you mention that your people in Washington were questioning the accuracy of my anticipated cost of raising of $54.00 per foot. You pointed out that as my anticipated sinking cost was $54.00 per foot, it would appear that the raising cost should be about half as much, or $27.00 per foot. Ordinarily I would agree with this analysis, but under the circumstances, I believe my estimated costs are about correct. I anticipate sinking about a 4' x 6' single compartment inclined winze, using an air tugger for hoist. My costs for the first fifty or sixty feet will probably be less than the anticipated $54.00 per foot, but thereafter, the slowness of hoisting will rapidly add to my costs. Now these proposed raises are to be driven from the bottom of these inclined winzes, cross-cutting the lower parts of the oxidized South Goodluck orebody and the oxidized North Goodluck orebody. It is going to cost me just as much to get the muck out of these raises as if I were still sinking, the only saving to be made is in not having to add rail in the winze. This saving will be more than used up in the extra cost of hoisting. I could do better by renting a larger air hoist, but I don't have sufficient air to run it. I have no electricity, so am stuck with a tugger hoist.

I phoned Mr. Frank E. Johnson in Washington the other day and he mentioned that the people there thought that any ore mined through the Mountain Pride Tunnel Level should pay royalty, if the DMEA loan was going to help rehabilitate the tunnel. I told him then and am repeating for your records that we have completely rehabilitated the Mountain Pride Tunnel at our own expense. In addition to this rehabilitation, we have re-built the roads to the Mountain Pride Tunnel and built a new road to the Defiance Tunnel. We are now driving the Mountain Pride Tunnel at our own expense.

I sincerely hope that this letter and the accompanying cost breakdown will answer all questions regarding this loan application. I greatly appreciate the interest you have taken in this loan, particularly as we seem to have run into so many delays in getting the loan through. The application was mailed from Leadville, Colorado on November 7, 1951. It did not come up for investigation by your field team until February. At that time we were suffering through the heaviest winter this part of Nevada has ever seen and the mine was inaccessible for examination. The late spring delayed examination until early May. Various delays this summer have brought us to this 19th day of September without an answer as yet. I would greatly appreciate your continuing xx your efforts to speed this application to a decision at as early d date as possible. Should any more questions arise I will be glad to go to Washington at my own expense and answer the questions or make what modifications as may be necessary.

Very truly yours,

Woodville J. Walker

Ward Mine - Walker Corporation
Woodville J. Walker, mgr.

WARD MINE - WALKER CORPORATION

BOX 163

EAST ELY, NEVADA

WOODVILLE J. WALKER, MGR.

Sept 19, 1952

Subject: DMEA-2257, WARD MINE
WHITE PINE COUNTY, NEV.

Mr. A. C. Johnson,
Chief, Mining Division
Region III
U. S. Bureau Of Mines
Box 1551
Reno, Nevada

Defiance Tunnel Project

Dear Mr. Johnson:

In response to our telephone conversation of September 16 and to your letter of September 16, I herewith submit an estimated breakdown of costs for the DEFIANCE TUNNEL PROJECT of the Ward Mine, DMEA-2257.

I want to call your attention to the fact that those items fully covered in the Mountain Pride Project are excluded from this estimate, in view of our understanding that we are to run both projects simultaneously. In brief these items are Supervisory Expense, Depreciation on Surface Buildings, Rental of Pickup and Suburban Trucks, and Hand Tools, as well as Office Rent and other such overhead expenses.

DEFIANCE TUNNEL PROJECT

Breakdown of anticipated drifting costs.

The following breakdown is based on an assumed average advance of four feet (4') per day (single shift basis), working six days per week.

LABOR: 2 miners @ $14.50 per day*
1 trammer @$13.50 per day*
1 compressorman @ $16.00 per day*

Labor expense is $380.24 per week for 24' advance,

or $15.84 per foot*

*Note: I have had to raise my rate of pay to that prevailing in the district since filing the estimate of costs on the Mountain Pride Project (Goodluck Orebody Project).

Compensation, etc. : $2.41/foot

$18.25/foot

SUPPLIES:

Pipe: 2" and 1" with valves and fittings:	$0.6035/foot	
Rail: 16#, complete with splice bars, spikes, bolts, and ties:	$1.145/foot	
Timber: Estimated:	$0.80 /foot	
Powder, fuse & caps:	$3.03/foot	
Drill Bits, Drill Rods & Hose:	$1.408/foot	
Vent Line:	$0.73/foot	
Fuel Oil:	$0.507/foot	
Miscellaneous supplies & small repairs:	$2.00/foot	
		$10.22

EQUIPMENT RENTALS:

300 CFM Air Compressor: $200.00/mo.

	$2.00/foot	
Light plant @ $30.00/month:	$0.30/foot	
Dodge Power Wagon @ $100.00/mo	$1.00/foot	
Mucking Machine @ $50.00/mo	$0.50/foot	
		$3.80/foot

EQUIPMENT PURCHASES:

Swede Jackleg Drill: $575.00 Depreciation $287.50/year	$0.16 per foot	
Compressed Air Locomotive: $2350.00, Depreciation five years, or	$0.26/foot	
Blower, $100.00:	$0.06/foot	
		$0.48/foot

OVERHEAD:

Supervision:	None charged if project runs simultaneously with Goodluck Orebody project.	
Office rent:	ditto	
Surface Plant Dep. & Ins.	ditto	
Truck rental:	ditto	
Truck operation:	$50.00 per month:	$0.50/foot
Water Hauling:	$80.00 per month:	$0.80/foot
~~Fire Insurance~~		
		$1.30/foot

SUMMARY:

Labor:	$18.25/foot
Supplies:	10.22/foot
Equipment Rentals:	3.80/foot
Equipment Purchases:	0.48/foot
Overhead:	1.30/foot
TOTAL:	$34.05/foot

REPAIRS & REHABILITATION OF DEFIANCE TUNNEL:

Construction of one 20 x 20 frame and sheet metal compressor house, with installation of compressor and light plant.

Estimated Cost: $2,000.00

Putting track in tunnel: 1250 feet @ $1.145/foot.

Estimated Labor:	$1431.25 360.00	
		$1,791.25

Putting 2" and 1" pipe in tunnel:

1250 feet @ $0.6035	$754.37	
Estimated Labor:	360.00	
		$1,114.37

Putting vent pipe in tunnel, installing blower:

1250 feet @ $0.73	$912.50	
Labor:	$180.00	
		$ 992.50

Re-timber approximately fifty feet of badly caved ground at the face:

50 feet @ $40.00/foot: $2,000.00

Rehabilitation cost, exclusive of building: $4.72/ft. $7,898.12

TOTAL COSTS:

Rehabilitation:	$7,898.12
Cross-cutting & Drifting: 1700 feet @ $34.05/foot:	57,885.00
DEFIANCE PROJECT:	$65,783.12

CONCLUSIONS:

The above costs are belived to be reasonable estimates. The difference between the anticipated cost of the Defiance Project now and that filed at the time of the original application last November 7, 1951, is due in large part to the rising cost of labor and to the more slowly rising cost of supplies, coupled with the obtaining of actual cost figures on supplies as compared with estimates made at the time of the original estimate.

Respectfully submitted,

Woodville J. Walker

Walker Corporation
Woodville J. Walker, mgr.

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

September 12, 1952

Memorandum

To: DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2257 (Lead-Zinc), Walker Corporation, Leadville, Colorado

Reference is made to a letter to me from Mr. G. C. Selfridge, dated August 25, requesting additional information on the subject docket.

Attached are four copies of a supplemental report, entitled Docket DMEA-2257 (Lead-Zinc), Walker Mining Co., Ward Mine, Defiance tunnel, Project No. 2, White Pine County, Nevada, (Supplemental Examination) by Roscoe M. Smith, Geologist, U. S. Geological Survey, dated August 19, 1952.

The examining geologist concludes in his report that there is a reasonable chance that as much as 414,000 tons of sulfide-bearing material may occur along the Defiance dike. Although the grade of the material is not predictable, it may contain enough copper, lead, and zinc to be commercial, and should, therefore, be tested by the exploratory work which the applicant proposed.

Mr. Bailey's (U. S. Geological Survey) comments on the report are that the geologist's conclusion about the possibility of there being 414,000 tons of sulfide-bearing material above the Paymaster Tunnel is somewhat misleading, as the Paymaster Tunnel is far below the level of the proposed exploration and probably should not have been drawn into the discussion here at all. The pertinent block of "ore" that is lying above the proposed exploration on the Defiance lower tunnel level, might contain 75,600 tons according to the geologist, and this figure should be used in evaluating the application. It also should be emphasized that there is no reliable way of ascertaining if this "ore" will be commercial, as only the leached gossan is exposed at the present time.

(Chief, USBM Reno)

We have not as yet received our reply from A. C. Johnson to our request for cost data and other information asked for by Mr. Selfridge in his August 25 letter. These will be forwarded to you as soon as received.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

Copy to E. H. Bailey, USGS
A. C. Johnson, Reno, Nevada

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

Docket DMEA-2257 (Lead-Zinc) Walker Mining Co., Ward Mine, Defiance tunnel, Project No. 2 White Pine County, Nevada

(Supplemental Examination)

Roscoe M. Smith, Geologist
U. S. Geological Survey

August 19, 1952

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Supplemental Examination, Defiance tunnels - Project No. 2

Docket DMEA-2257 (Lead-Zinc) Walker Mining Co., Ward Mine,

White Pine County, Nevada

INTRODUCTION

The Defiance mine workings were examined July 8-9, 1952 by R. M. Smith, geologist of the U. S. Geological Survey, to evaluate the applicant's Project No. 2 in which he proposes a $59,500 program of crosscutting and drifting to explore for the downward continuations of ore bodies mined in the Defiance upper tunnel. The Defiance mine workings (fig. 2)[1] are located about 2,000 feet west of and 1,000 feet higher than the North Goodluck ore body.

[1] Note: The figure numbers used in this report refer to the illustrations in the original report.

This report of examination is to supplement the report on the applicant's Project No. 1, the Mountain Pride Tunnel, by Roscoe M. Smith and Russell R. Trengove, dated July 10, 1952.

HISTORY AND PRODUCTION

The mine was discovered about 1867 and a few hundred tons of sorted high grade ore containing about 30 percent lead and 8 oz. of silver to the ton is reported to have been shipped to smelters at Eureka, Nevada. The property has been inactive since about 1900; it is now owned by the Walter W. Mining Company and leased to the Walker Corporation. The Landlord's Subordination Agreement submitted with the application covers this property as well as the Goodluck property.

WORKINGS

The Defiance workings are about 2,000 feet west of and 1,000 feet higher than the North Goodluck ore body (fig. 2). The road from the North Goodluck workings to the Defiance workings has grades as steep as 20 percent, but the road is passable by trucks.

The Defiance workings consist of three adits: (1) the Dog tunnel, (2) the Defiance upper tunnel, and (3) the Defiance lower tunnel (fig. 2). The Dog tunnel consists of about 200 feet of crosscut and drift. The Defiance upper tunnel consists of 300 feet of crosscut and 400 feet of drift connected with the surface by shafts, raises, and small irregular stopes along the ore bodies. Two winzes reported to be 80 feet deep extend below the upper tunnel level and are connected by a drift 80 feet long, 80 feet below the level. The shafts, raises, and winzes are nearly vertical and now contain no timber; the portal is partly caved and in two places the main tunnel level is partly filled by caved stopes. The Defiance lower tunnel is a 5 x 7 crosscut adit 1130 feet long, 400 feet below the upper tunnel. A 40-foot raise near the face of the tunnel was being retimbered at the time of the examination. The portal is partly caved but the rest of the tunnel is in excellent condition, although it contains no pipe or rail.

GEOLOGY

The country rock in the mine area is thin-bedded to massive limestone and interbedded shale of the Ely formation of Pennsylvanian age which strikes N. 65° W. and dips 25°-45° NE. These rocks are cut by the Defiance quartz monzonite porphyry dike which is about 50 feet wide, strikes north, and dips steeply: above the upper tunnel the dip of the dike is about 85° E.; in the winzes below this level the dike appears to dip about 85° W; about 900 feet north of the mine and

at about the same altitude the topographic expression of the dike outcrop indicates a dip of about 60°W.

ORE DEPOSITS

The ore bodies are small bodies of oxidized lead minerals (derived from lead sulfide by leaching of the wall rock) deposited in adjacent fractures and solution cavities. The ore mineral is principally yellow lead oxide; a little malachite, as well as a little monheimite ($(Fe \cdot Zn)\ CO_3$) locally accompanies the lead. The gangue minerals are clay and iron oxide.

The ore occurs in a gossan zone of leached limestone along the east side of the Defiance dike. The gossan zone is fairly continuous for about 600 feet along the contact, and ranges from a few inches to about 50 feet in width; this variation in width was probably caused by selective replacement of favorable limestone beds by sulfides. The gossan, or oxide zone extends down the dip of the contact below the upper tunnel, but not as far as the lower tunnel; in the mine area it is estimated to extend to a depth of 375 feet below the surface, or to an altitude of about 9150 feet. The western side of the dike is explored by the Dog tunnel where small quantities of iron oxide but no leached gossan were found in the 150-foot drift.

In addition to the oxide showings in the upper tunnel, sulfide showings are exposed in the lower tunnel. Here a limestone bed about four feet thick is, in part, selectively replaced by pyrite as much as 300 feet east of the dike.

ORE RESERVES

There are no measured or indicated ore reserves in the Defiance mine.

The applicant has inferred (Appendix 1) that there are 437,000 tons of oxide, and 1,725,000 tons of sulfide ore containing commercial quantities of silver, lead, zinc, and copper, present in the block above the Paymaster tunnel

level, 600 feet long, 25 feet wide, and extending down the dip 375 feet in the oxide zone, 1150 feet in the sulfide zone.

This estimate of tonnage of oxide ore is not reasonable. As the samples taken during the examination do not show ore of minable grade in the old workings, no reserve of oxide ore can be inferred.

The estimated tonnage of sulfide ore also appears to be too large. In making his calculation of inferred sulfide ore, the applicant estimated the width of the gossan zone to be 25 feet based on the location of surface float and of old surface pits. Float is not a reliable guide to the size and continuity of the gossan and the surface pits appear to have been dug on narrow mineralized limestone beds which extend eastward from the main body of the gossan.

The leached gossan zone averages about 12 feet wide where it is exposed in the upper tunnel. If the inferred sulfide ore body is the same size as the leached gossan, then the ore body may extend with fair continuity for about 600 feet along the strike. It is reasonable to expect that not more than half of the volume will be ore of minable grade. On this basis, it is inferred that there may be as much as 414,000 tons of sulfide-bearing ore in the block 600 feet long, 12 feet wide, and extending 1150 feet down the dip from a point about 210 feet above the Defiance lower tunnel level (altitude 9150 feet) to the Paymaster level (altitude 8000 feet). Of this inferred tonnage about 75,600 tons is above the Defiance lower tunnel level. A factor of 10 cubic feet per ton was used for this calculation.

The grade of the inferred ore is not predictable, but as the oxide zone yielded small bodies of commercial lead ore and also traces of zinc and copper (mostly removed by oxidation), it may well be that the primary sulfide ore contains enough combined lead, zinc, and copper to be commercial.

PROPOSED EXPLORATION

The applicant has proposed to explore the downward continuation of the mineralized zone exposed in the Defiance upper tunnel by extending the Defiance lower tunnel as much as 350 feet to crosscut to the projected position of the dike, and by drifting along the east and west sides of the dike for a total of 1250 feet. He estimated that the cost of the work would be about $59,500. This program appears to be sound, but it is suggested that it be divided into two stages: (1) crosscut to the east side of the dike and drift 800 feet along the dike (projects 2a and 2b) and, (2) in the event that sulfide ore is revealed by this work, then crosscut to, and drift 450 feet along the west side of the dike (project 2c).

CONCLUSIONS AND RECOMMENDATIONS

There is a reasonable chance that about 414,000 tons of sulfide-bearing material may occur along the east side of the Defiance dike above the Paymaster tunnel level. Although the grade of this material is not predictable, it may contain enough copper, lead, and zinc to be commercial--a possibility which should be tested by exposing the sulfide body for sampling. It is recommended therefore, that the application be approved and that the Defense Minerals Exploration Administration enter into a contract with the applicant to do the proposed work. The government's share of the cost would be $29,750.

Docket
FILE COPY
SURNAME:
500

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

AUG 25 1952

Mr. H. C. Miller
Executive Officer, Region III
DMEA Field Team
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2257 (Lead-Zinc)
Walker Corporation
Leadville, Colorado

Dear Mr. Miller:

In reviewing the recommendations made by the Field Team in their report on the above referenced docket, we would like to inquire if the Field Team engineers and the Applicant had considered the feasibility of extending the western lateral of the Mountain Pride Tunnel which reaches within 600 feet of the main target, or extending the 280 level which is 500 feet from the target. The proposed project is to extend the Mountain Pride Tunnel a distance of 1300 feet.

We do not doubt that there is justification for the proposed work, but we wish to know the reason for doing it, rather than doing the work from either of the other locations.

In answer to item 1(c) of Form MP-103, Goodluck Orebody Project (Mountain Pride Project), the Applicant states:

> "The Goodluck Orebody Project will be conducted through the Mountain Pride Tunnel. This project has as its objective the discovery of the faulted continuations of the North and South Goodluck Orebodies. The known oxidized portions of these orebodies are excluded from the premises from which royalty will be repaid in the event of discovery of the faulted extensions.
>
> "That part of the following claims lying below a horizontal plane at elevation of 8454 feet (fifty (50) feet above the sill of the Mountain Pride Tunnel Level at the portal of said Tunnel)."

The Commodity specialists of the Base Metals Division, DMEA, R. T. McKnight, U. S. Geological Survey, and O. M. Bishop, Bureau of Mines, in regard to the first paragraph of the above statement, question this and state:

> "If there is question as to whether the Government's contribution to exploration can be repaid, short of levying a royalty against these 'known' orebodies, it would seem that development of these bodies by the proposed exploration tunnel should make them liable for repayment. This is particularly true for the South Goodlnck block which apparently has not been rich enough in its explored levels to have made any production to date."

The second paragraph of the statement by the Applicant so limits the area subject to royalty payments in the upward extension of any orebodies that might be found, that we would not feel justified in committing the Government to a contract with those limitations. We believe that all ores extracted through the Mountain Pride Tunnel should be subject to royalty payments after that tunnel is rehabilitated, since the Government's participation in that work would make possible the mining and extraction of that ore.

We would appreciate it if you would contact the Applicant in regard to this legal description of the property which would be subject to royalty payments, and obtain his consent to the withdrawal of the limitations.

We are in accord with the Field Team's recommendation on the cost of sinking, but we think that the cost of driving 20-foot raises should be approximately half of the cost as estimated.

We are of the opinion that this contract could be on the Short Form Contract and the rehabilitation, drifting, crosscutting, raising and sinking could be on the unit cost basis for work completed.

Upon the receipt of the requested information, we shall continue processing this application.

Sincerely yours,

J.N. 8-25-52

D. C. Selfridge (NB)

ACTING Chairman, Operating Committee

JWAlt-mb
August 21, 1952
Copy to: Docket
Adm. Reading File
Operating Committee
Mr. Keller (2)
Mr. Alt
Mr. Bishop
Mr. McKnight
Region III
Chron

APPROVED:

C. N. Johnson (NB)
Member, Bureau of Mines

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

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
~~GEOLOGICAL SURVEY~~
WASHINGTON 25, D. C.

Memorandum August 14, 1952

To: Mr. Keller

From: E. T. McKnight, U. S. Geological Survey
O. M. Bishop, U. S. Bureau of Mines

Subject: Approval of project

Re: DMEA 2257
Walker Corporation
Ward Mine
White Pine County, Nevada
$72,840
Lead, Zinc, Copper

Mine has produced 100,000 tons of ore averaging .07 oz. gold, 15 oz. silver and 8½% lead from the oxidized zone within 280 feet of surface. The ore occurs (1) as a replacement of limestone adjacent to quartz monzonite porphyry dikes and (2) in cross cutting quartz veins in the porphyry dikes. The main replacement ore shoot (North Goodluck ore body) is cut off at a depth of about 330 feet by the moderately dipping (40° - 45°) Ward fault which is made up of 3 or 4 strands. This fault is believed by the applicant to be post-ore. The displacement is believed to be dip-slip and about 250 feet, based on a coordination of all the geologic information available. Thus, the problem is to locate the extension of the ore body in depth, below the fault.

Applicant proposes to extend the Mountain Pride drift 1,300 feet to reach the block of ground calculated to contain the downward and offset extension of the North Goodluck ore body. This extension may be unoxidized, and if so, will contain appreciable zinc and probably some copper in addition to lead. The proposed tunnel will pass close to the downward extension of a second and hitherto unproductive mineralized block (the South Goodluck block) known from a surficial gossan zone in limestone; a short lateral cross cut and inclined shaft will test this block in depth, both below and above the uppermost strand of the Ward fault. A similar test will be made of the basal part of the North Goodluck orebody in the hanging wall of the Ward fault when the main objective in the footwall has been reached. Not all of the ore was removed from this hanging wall block, as the basal part was unoxidized and had little value in the days before flotation. Another short subsidiary exploration will test one of the previously productive quartz veins (Paymaster vein) adjacent to the proposed tunnel. These three subsidiary explorations to test secondary objectives are listed in the middle of page 2 of the field team report.

The field team has examined the property, and although unable to make an underground examination, they conclude that the project has enough chance of success to warrant Government participation. Three uncertainties that could complicate the exploration are listed on page 12 of the field team report. Of these, the most important is No. 2 - the uncertainty as to the amount and direction of offset on the Ward fault. This factor could be serious enough to lead to failure of the project. However, the target sought could be very productive if the geologic projections of the applicant are correct. Senior applicant is a well known commercial geologist of wide experience and sound reputation. We believe that the chances are good enough to warrant approval.

A point on which no comment has been made by applicant or field team is the reason why the main objective could not be reached by a much shorter exploration from existing workings. The application as approved by the field team calls for rehabilitation of 1,500 feet of the Mountain Pride tunnel. An estimated cost of $905 for retimbering, with other costs of the rehabilitation charged to installation of water, air and ventillation lines, evidently means that the first 1,500 feet of this tunnel is still largely open. A western lateral of this tunnel reaches to within 600 feet of the main target (see fig. 2 of field team report), and workings on the 280 foot level in the North Goodluck orebody lie within 500 feet of the target and only 20 feet lower than the proposed extension of the Mountain Pride tunnel (see fig. 2 and 3 of field team report). Experience of DMEA in certain other rehabilitation jobs should doubtless be ample caution against proposing any new ones. As there appears to be no obvious development advantage, to the applicant, of the proposed new tunnel over either of the old routes of access, presumably the applicant would have proposed one of the old tunnels if such proposal had any financial advantage. Nevertheless, we believe that a statement is needed from either the field team or applicant in order to eliminate these older workings from consideration.

In answering item 1c of Form MF103, applicant states "The known oxidized portions of these ore bodies (North and South Goodluck orebodies) are excluded from the premises from which royalty will be repaid in the event of the discovery of the faulted extensions." If there is question as to whether the Government's contribution to exploration can be repaid short of levying a royalty against these "known" orebodies, it would seem that development of these bodies by the proposed exploration tunnel should make them liable for repayment. This is particularly true for the South Goodluck block which apparently has not been rich enough in its explored levels to have made any production to date.

A second phase of the original application, exploration of the Defiance deposit, could not be investigated at the time of the

field team examination because of snow, hence this phase has been deleted from the project and will be made the subject of a new application when the property becomes accessible.

Edwin T. McKnight

Edwin T. McKnight
O. M. Bishop O M Bishop.

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

OF THE INTERIOR
Administration
JUL 21 1952

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

July 17, 1952

To: DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2257 (Lead-Silver), Walker Corporation, Leadville, Colorado, Ward Mine, White Pine County, Nevada

Reference is made to subject letter to me from Mr. C. O. Mittendorf, dated February 8, 1952, requesting additional information on the Walker Corporation's property (Ward Mine) in White Pine County, Nevada.

Attached are four copies of a report - DMEA-2257, Ward Lead-Silver Deposit, White Pine County, Nevada by Roscoe M. Smith, Geologist, U. S. Geological Survey and Russell R. Trengove, Mining Engineer, U. S. Bureau of Mines, dated July 10, 1952.

The geologist of the Survey and the engineer of the Bureau of Mines are in accord that there is a fair chance that an exploratory program may reveal new ore bodies of significant size on the Ward lead silver deposit.

They have recommended that the proposed project on the Mountain Pride (260 foot level) be approved and that consideration of the Defiance be deferred until a field examination is made.

They have also stated that the Mountain Pride tunnel is the primary exploratory project. Three other secondary objectives can be tested from the heading at relatively small expense as the tunnel is advanced. These are as follows:

1. Drive the Mountain Pride tunnel along the Paymaster vein for about 100 feet from 2500 N to 2600 N to test the width and grade of ore at this level.

2. Crosscut from 2790 N northeast for 30 feet to the upper strand of the Ward fault and sink a winze just under the fault to cut the projected position of the South Goodluck mineralized shoot in the sulphide zone and also raise through the fault to cut the same shoot in the oxide zone.

3. Sink an incline from 3200 N and 3470 W just under the upper strand of the Ward fault for 200 feet to cut the projected position of the North Goodluck ore body in the sulphide zone and also raise through the fault to cut the same ore body in the oxide zone above the fault.

Apparently, the work proposed in the report has possibilities of revealing new ore reserves.

Attached also is a copy of a letter from Mr. Woodville J. Walker, Manager, Walker Corporation to me, dated June 26, indicating that he concurs with our engineer and geologist that consideration of the Defiance Project, which is included in his original application, be deferred until the property is free of snow and can be examined.

The docket is being returned herewith.

H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to E. H. Bailey, USGS

C
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P O Box 163
East Ely, Nevada

June 26, 1952

Mr. H. C. Miller, Regional Director,
Bureau of Mines, Region III
Room 1012 Flood Building
870 Market Street
San Francisco 2, Calif.

Dear Mr. Miller:

Subject: DMEA-2257, Ward Mine
White Pine County, Nev.

This letter is a request to amend the original application for a DMEA loan for the Ward Mine, White Pine County, Nevada.

The engineers for the U. S. Bureau of Mines and the U. S. Geological Survey have examined that part of the Ward Mine free from snow, and we have agreed with them to defer consideration of the Defiance Project until such time as it can be examined.

Certain additional targets have been discussed and agreed upon in the Good Luck Orebody Project and costs have been revised to fit current conditions at the Ward Mine.

The total cost of both projects in the original application was $105,000. The cost of the Good Luck Orebody Project alone under this proposed amendment is $72,840.

Very truly yours,

/s/ Woodville J. Walker
Woodville J. Walker, Mgr.
WALKER CORPORATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
(RECEIVED)
JUL 21 1952

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

on-site examination report

DMEA-2257, Ward Lead-Silver Deposit

White Pine County, Nev.

Roscoe M. Smith, Geologist
U. S. Geological Survey

Russell R. Trengove, Mining Engineer
U. S. Bureau of Mines

July 10, 1952

Reviewed by
DMEA OPERATING COMMITTEE

7-25-52
(date)

DMEA-2257, WARD LEAD-SILVER DEPOSIT

White Pine County, Nev.

SUMMARY, CONCLUSIONS, and RECOMMENDATIONS

The U. S. Geological Survey and the U. S. Bureau of Mines examined the Ward lead-silver mine, situated about 15 miles south of Ely, Nev.

The purpose of the examination was to determine if the geological conditions favored the possibility of discovering new ore bodies in and adjacent to the old mine workings. An application for a Government exploration loan, amounting to $105,000, was made on November 26, 1951. At the time of the examination, the Defiance surface and underground workings were inaccessible because of snow. As exploration of the Good Luck ore body will require about 13 months to complete, it was suggested that exploration of the Defiance ore body be made the subject of a separate application, and its consideration be deferred pending a field examination to be made at a later date. Therefore, a request has been made for an amendment to the original application in which exploration will be confined to the Good Luck ore body and the total loan reduced to $72,840.

According to a geological report by Walker & Walker, dated October 1, 1951, "The past production of the Ward mine comprises about 100,000 tons of ore, averaging about 0.07 oz. gold, 15.0 oz. silver and 8.5 percent lead per ton, with a gross metal value of about $2,500,000 at metal prices then prevailing and nearly $4,500,000 at current metal prices. All of this ore was oxidized and was mined within 250 feet of the surface."

The principal target of the exploratory program is the faulted continuation of the north Goodluck ore body below the Ward fault. Here the inferred sulfide ore reserve of about 1,000,000 tons is nowhere exposed and similar ore bodies have not been mined. Therefore, the grade of this ore must remain speculative.

Although the Mountain Pride tunnel is the primary exploratory project, three other secondary objectives can be tested from the heading at relatively small expense as the tunnel is advanced. These are as follows:

1. Drive the Mountain Pride tunnel along the Paymaster vein for about 100 feet from 2500 N. to 2600 N. to test the width and grade of ore at this level.

2. Crosscut from 2790 N. northeast for 30 feet to the upper strand of the Ward fault and sink a winze just under the fault to cut the projected position of the South Goodluck mineralized shoot in the sulphide zone and also raise through the fault to cut the same shoot in the oxide zone.

3. Sink an incline from 3200 N. and 3470 W. just under the upper strand of the Ward fault for 200 feet to cut the projected position of the North Goodluck ore body in the sulphide zone and also raise through the fault to cut the same ore body in the oxide zone above the fault.

The geologist of the U. S. Geological Survey and the engineer of the Bureau of Mines are in accord in the following conclusions and recommendations:

Although the applicant's work is impressive in size and scope, it does not conclusively demonstrate the existence of a commercial ore body below the Ward fault and, as the underground workings are inaccessible, no further data is obtainable. There are three uncertainties in the data used: 1. The rake of the ore shoot; 2. The displacement along the Ward fault; and 3. The grade of ore in the

possible faulted continuation of the ore shoot. If the North Goodluck ore shoot does continue in depth, it may reasonably be inferred to contain about 1,000,000 tons of zinc-lead sulfide ore. The grade of this inferred ore is not predictable. In addition, about 160,000 tons of inferred oxide ore containing about 12 percent lead may be present in the North Goodluck ore body above the Ward fault.

It is concluded there is a fair chance that the exploratory program may reveal new ore bodies of significant size. It is recommended therefore that the proposed project on the Mountain Pride (260) level be approved and that consideration of the Defiance exploration be deferred until a field examination is made.

INTRODUCTION

An application for a Government loan under Sec. 302 of the Defense Production Act of 1950 was made by Mr. Woodville J. Walker, Vice-President & Treasurer, Box 917, Leadville, Colo., on November 6, 1951. He will also be the mine superintendent at the Ward mine and is now making his headquarters in Ely, Nev. Mr. Robert T. Walker, the father of Woodville J. Walker, is the President of the Walker Corporation. He is a well known geologist and resides at 621 North Cascade, Colorado Springs, Colo.

An examination was made of the Ward mine by geologists[1/] of the U. S. Geological Survey and engineers[2/] of the U. S. Bureau of Mines in May 1952.

The Ward mine, fig. 1, comprising 35 patented lode mining claims

1/ Roscoe M. Smith and John Powers.
2/ Russell R. Trengove and Leopold F. Muller.

and other lands and millsites, is situated at an elevation of about 8,000 feet on the eastern flank of the Egan Range in the Ward Mining district in Secs. 9, 10, 14, 15, 16, 22 and 23, T. 14 N., R. 63 E., M.D.M., White Pine County, Nev.

To reach the mine follow paved highways 6 and 93 south of Ely a distance of eight miles, then turn west and follow good graded graveled county road (Cave Valley Road) a distance of four miles. From this point, a one-way dirt road is followed to the mine. The first mile is on a good grade but the last two miles are steep and rough.

Ely, Nevada, 15 miles distant, is the nearest residential and supply area. The nearest transmitted power and shipping point, the Nevada Northern Railroad, is also at Ely.

No mine equipment or housing facilities are on the property. There is a small constant flow of water, sufficient for mining purposes, in Ward Gulch. In addition, the various tunnels make ample water to supply drilling and cooling water for mine operation.

HISTORY (By Walker Corporation)

"The Ward Mining District was discovered in 1866. The various claims were consolidated at an early date under the ownership of the Martin White Mining Company. This company shipped gold and silver bullion worth $793,994.35 at the time of mining and smelting. Because of transportation difficulties, the company made no effort to make either lead or copper matte. This early production (to 1878) was entirely a smelter production.

"The company subsequently produced in excess of $1,000,000 by milling the Ward silver ores.

"Production from the mine and from dumps on the property have subsequently produced 67,674 tons of about $700,000 (since 1908). Old mill tailings and smelter slag have also been shipped with a gross value of $100,000 so that the total production of the district has been about $2,500,000 at the time of mining.

"The period of silver mining came to an end with the loss of the ore bodies by post-mineral faulting. The extension of these ore bodies below the fault is one of the objectives in the proposed exploration campaign.

"The various periods of mining the oxidized lead ores have been terminated by falling market prices on lead, making it uneconomic to mine this material.

"The Goodluck ore body had been discovered in 1877, and this large mass of irony lead ore inspired the Martin White Mining Company to drive a lower tunnel (The Paymaster) to explore it at depth. This tunnel was started in 1881 and stopped in 1884, but because the post-mineral fault had not been recognized, it was a failure and did not find the downward continuation of the ore body.

"In 1906 the property was acquired by the Nevada United Mines Company, who spent $300,000 between 1906 and 1912 trying vainly to find additional ore in and around the old high grade ore bodies. The Goodluck ore body was developed and some ore was shipped but was uneconomic at the metal prices prevailing. The post-mineral fault was recognized and a long westerly crosscut was driven to look for the

faulted extensions of the ore bodies. A short crosscut from the 280 foot level of the Goodluck shaft encountered low grade sulphide ore in the footwall of the hanging wall strand of the Ward fault, while a vertical winze from the 280 level found a substantial amount of sulphide ore 50 feet or so below the level. The complex nature of the ore, its high zinc and low lead ratio, coupled with the low precious metal content, discouraged further exploration of the sulphide area.

"In 1917 the property was leased to S. B. Elbert and later to Sid Barton as the Ward Leasing Company. This company operated until 1923 and shipped 38,000 tons of 12.3% lead ore to Salt Lake Smelters.

"In 1927 the Colorado National Bank, owners of the defaulted bonds of the Nevada United Mines Co., foreclosed and took over the property, title to which was then transferred to the Walter W. Mining Co., a subsidiary organized for the purpose. With one notable exception, the property has been operated by small leasers until the present time. The exception was an exploration campaign conducted on our recommendations by Newmont Mining Corp. for the Ethyl Lead Corporation. The campaign was stopped upon the exhaustion of the appropriation and was not completed. We did not direct the work for Newmont. We propose to complete this program as one part of our program."

The property was recently operated by an individual leaser by the name of Christ Orphan of Ely, Nev., who confined his activities to the oxidized outcrop of the largest ore body, the Goodluck. He has been mining about 100 tons of lead-silver ore per year. His lease expired January 1, 1952.

The property is owned by "Walter W. Mining Co.", a subsidiary of the Colorado National Bank, Denver, Colo. The property is leased with an option to purchase by the Walker Corporation, formerly of Leadville, Colo., but now P. O. Box 163, East Ely, Nev.

GEOLOGY

The sedimentary rock in the mine area is limestone of Paleozoic age which strikes north and dips gently east. It has been intruded by quartz monzonite porphyry dikes. Quartz latite lavas and tuff crop out near the mine area. All of the rocks are displaced by normal faults. The ore bodies are of two types; replacement bodies in limestone, and veins along fault.

The oldest exposed rock is the Ely limestone of Pennsylvania age, which forms the entire east slope of the range. The limestone strikes north, dips 20° to 30° eastward. It is composed of interbedded limestone, cherty limestone, and shale and is about 2500 feet thick in this area; a thin black shale unit is present at the base of the section.

The sedimentary rocks are intruded by Tertiary quartz-monzonite porphyry dikes, which are closely associated with the ore bodies in the Ward mine. The dikes range in width from a few inches to about 200 feet; in general they trend northwest and dip steeply southwest.

The sedimentary rocks and the dikes are cut by normal faults which have displacements of as much as 500 feet. These faults belong to two principal sets; one set strikes northwest and dips northeast, and the other strikes northeast and dips southeast.

The Ward fault belongs to the northwest striking set; it has a measured displacement of 500 feet dip-slip about 2 miles north of the mine. In the mine area the fault has displaced several of the dikes and ore bodies.

The dip-slip displacement of the Mountain Pride dike on the Mountain Pride tunnel level is shown as about 250- 350 feet on the map submitted by the applicant. The down dip displacement of the Lyons and Clay Chamber ore shoots by the upper strand of the fault is 20 feet.

ORE DEPOSITS

The ore bodies that have been mined in the Ward mine contained oxidized lead-silver ores. Two kinds have been productive: (1) replacement ore bodies in limestone adjacent to quartz monzonite porphyry dikes, and (2) quartz veins that cut the dikes and limestone.

The primary minerals in the replacement bodies are pyrite, sphalerite, galena, and chalcopyrite in quartz gangue. The vein deposits contain, in addition to these sulfides, small amounts of freibergite. The sulfide minerals have been oxidized to cerusite, anglesite, and cerargyrite in a gangue of iron oxide and leached wall rock. The oxidized zone extends to a depth of at least 280 feet, but in the workings above the Ward fault; the exploratory workings below the fault are reported to show small amounts of sulfide minerals, and little or no oxides. Dumps of waste from workings lying below the fault contain quartz fragments showing sulfides of zinc, lead and copper.

Two replacement bodies were mined, the North Goodluck and the Defiance. The North Goodluck ore body was mined to a depth of 280

feet and yielded 45,000 tons of oxidized ore that averaged 12.6 percent lead, 1.2 percent zinc, 3.31 oz. of silver and 0.007 oz. of gold per ton. The area of the mineralized zone is about 200 x 300 feet, but the average area mined is about 20 x 100 feet. The Defiance ore body is said to have yielded a few tons of oxidized ore of lower grade than that of the Goodluck ore body.

There may be a third replacement ore body beneath the barren gossan labeled South Goodluck ore body on the applicant's exhibits. The outcrop area of the gossan is about 150 x 300 feet. Not enough exposures of the barren gossan can now be seen to evaluate the possibility of a zone of copper enrichment below it or of a primary sulfide zone of commercial grade.

Two vein type ore bodies, the Lyons and Clay Chamber ore shoots in the Paymaster vein have been mined and they have yielded a combined total of 47,560 tons of partly oxidized ore averaging 4.8 percent lead, 2.1 percent zinc, 2.4 percent copper, and 0.14 oz. of gold and 27.8 oz. of silver per ton. The shoots were mined down to a depth of about 250 feet where they were cut off and displaced about 20 feet by the upper strand of the Ward fault. Both ore shoots were mined a few feet below this strand. Although the veins cut the dikes and the limestone, they are productive only in the dikes.

ORE RESERVES

The applicant has estimated inferred ore reserves of the North Goodluck, the Defiance, the Lyons, and the Clay Chamber ore bodies of the Ward Mine above the Paymaster level to be 1,412,500 tons of oxide ore and 3,045,000 tons of sulfide ore having metal contents as shown

in Appendix 1.

About one-half of the total inferred tonnage (2,150,000) is estimated to be in the North Goodluck ore body; 950,000 tons in the oxide zone, and 1,200,000 tons in the sulfide zone. These estimates are based on the areal extent of the mineralized zone at the surface and in the upper levels of the Ward mine. The zone averages about 8 percent lead; a smaller area (6,400 sq. ft.) averages about 12 percent lead, and as the applicant plans to mine 12 percent oxide ore, his estimate appears to be too large. A more realistic figure is 160,000 tons in the block averaging 6,400 square feet in area from the surface down to the Ward fault, a depth of 300 feet.

The principal target of the exploratory program is the faulted continuation of the North Goodluck ore body below the Ward fault (Project 1a). Here the inferred sulfide ore reserve is estimated by the applicant to be 1,200,000 tons containing 5.6 percent lead, 11.2 percent zinc, 1.3 percent copper and 2.8 oz. of silver per ton. Assuming the existence of this ore body, the applicants estimated tonnage appears to be too large. The area of the mineralized zone on the lowest (280 foot) level is smaller than it is on the surface, and the smaller area should be used. On this basis the maximum tonnage that may be inferred for the sulfide ore reserve in the block 100x250 feet in area extending from the Ward fault 400 feet down to the Paymaster level, is about 1,000,000 tons. The grade of this ore must remain speculative as it is nowhere exposed and similar ore bodies have not been mined.

The other half of the total reserves are inferred by the applicant to be in the Paymaster vein and in the Defiance ore bodies.

Two ore shoots, the Lyons and the Clay Chamber, were mined from the Paymaster vein in 1870. The value of the ore is reported to have been about $80.00 per ton, chiefly in silver. The applicant expects to find lower grade ore, which was not commercial in 1870, remaining in the unmined parts of the vein. As it has not been demonstrated that the vein contained ore between the two ore shoots, and as the principal values are in silver, no reserve estimates are made for this vein.

An ore reserve estimate of the Defiance ore bodies will be made in a separate memorandum to be written after a field examination is made.

PROPOSED EXPLORATION

The applicant has proposed two projects to explore the ore bodies at depth, the first on the Mountain Pride level, and the second on the Defiance lower tunnel level. These are subdivided as follows:

Project 1a: Extend the Mountain Pride tunnel (fig. 2) 1,400 feet to cut the projected position of the faulted continuation of the North Goodluck ore body below the Ward fault. This heading is expected to cut the uppermost part of the ore shoot below the lower strand of the fault and also the segments of the ore shoot between the lower and middle strands of the fault. The position of the faulted continuation of the ore shoot (fig. 2) was determined by projecting the north rake from the 130 foot level and the 180 foot level (fig. 3) to its intersection with the fault, then applying 250 feet of dip slip along the

fault (fig. 4). All the ore below the upper strand of the fault is inferred to be sulfide ore.

These inferences are subject to three uncertainties: (1) the north rake of the ore shoot is controlled by the limestone contact with the dike. Although the dike is known to be irregular the north rake is projected as a straight line (fig. 4). Where explored on the lower levels the ore body appears to be smaller than it is on the surface or on the upper levels. Thus there is doubt as to the continuity of the ore shoot as well as to its position at depth. The position of the faulted continuation of the north Goodluck ore body shown on figure 2 is about 200 feet north of its probable position as determined on figure 4, this discrepancy was made by the applicant as a contingency allowance for extra footage in Project 1a.

(2). The amount of offset of the ore body by the Ward fault is uncertain. The displacement 2 miles north of the mine is about 500 feet, but as the fault can be traced only intermittently on the surface, the measurement is not conclusive. In the mine area the displacement of the Mountain Pride dike (fig. 2) appears to be 250 to 350 feet, but the location of one contact must be inferred - hence this measurement is also inconclusive. The direction of the displacement is inferred to be dip slip because the Lyons and Clay Chamber ore shoots were found to be offset normally about 20 feet by the upper strand of the Ward fault. It is reasonable to expect that other strands will displace the ore bodies in the same direction. (3). The grade of primary ore as inferred by the applicant (Appendix 1) is open to question. His figures may well represent the grade of the primary ore that has been

oxidized, but it is unlikely that they can be applied to ore at greater depths or to other ore shoots. An equally valid assumption would be that the higher pyrite content of the ore on the lower levels is the result of vertical rather than lateral zoning. The examining geologists believe that neither of these assumptions is a reliable guide to the grade of ore at depth and that exploratory work is necessary to expose the ore shoots for sampling.

Although the Mountain Pride tunnel is the primary exploratory project, three other secondary objectives can be tested from the heading at relatively small expense as the tunnel is advanced.

Project 1b: Drive the Mountain Pride tunnel along the Paymaster vein for about 100 feet (from 2500 N. to 2600 N.) to test the width and grade of ore at this level.

Project 1c: Crosscut from 2790 N. northeast for 30 feet to the upper strand of the Ward fault, and sink a winze just under the fault to cut the projected position of the South Goodluck mineralized shoot in the sulfide zone and also raise through the fault to cut the same shoot in the oxide zone.

The applicant expects to find secondary chalcocite ore immediately above the upper strand of the fault based on his premise that the primary ore contained 1.3 percent copper.

As this work will test the inference that the barren South Goodluck gossan overlies commercial ore bodies in the primary and secondary zones, it is suggested that this work be done as soon as the main tunnel reaches the proper location.

Project 1d: Sink an incline from 3200 N. and 3470 W. just under the upper strand of the Ward fault for 200 feet to cut the projected position of the North Goodluck ore body in the sulfide zone and also raise through the fault to cut the same ore body in the oxide zone above the fault.

This work will explore the projected position of the ore shoot below and above the upper strand of the Ward fault and test the existence of the north rake of the ore shoot as well as the displacement along the fault strand. It is suggested, therefore, that this work be done as soon as the main tunnel reaches the proper location.

Project No. 2 Extend the Defiance lower adit about 350 feet to cut the projected position of the Defiance ore bodies, and drift on these ore bodies for about 1,250 feet.

At the time of the examination, the Defiance surface and underground workings were inaccessible because of snow. As Project No. 1 will require about 18 months to complete, it is suggested that Project No. 2 be made the subject of a separate application, and its consideration be deferred pending a field examination to be made at a later date.

The applicant has considered and rejected the possibility of exploratory diamond drilling for the North Goodluck Ore Body because the size of the target is smaller than the probable error in its projected position. The rocks are highly shattered near the Ward fault, and drilling will be costly and possibly ineffective in this area. Although the dip of the Defiance dike could be tested by drilling, considerable drifting along the contacts will probably be necessary to discover ore.

EXPLORATION COSTS

The costs of the exploration are based on current wage rates, supply and equipment costs. The exploration work will be largely in silicated limestones, both hard and tough.

(1) Rehabilitation of 1,500 feet of Mountain Pride tunnel:

Retimbering	Labor	$620		
	Timber	285	$905	
Furnishing & installing 2" air line	Labor	108		
	Material	567	675	
Furnishing & installing 1" water line	Labor	50		
	Material	245	295	
Furnishing & installing 8" vent. line	Labor	151		
	Material	1,074	1,225	$3,100 - 622 ft

(2) Extending Mountain Pride tunnel (5'x8') a distance of 1,300 feet @ $35.93/ft. $46,709

6 day week, advance 4 feet per day = 325 days or 13 mos.

Wages: Miners $1.69/hr., muckers $1.50/hr., trammers $1.50/hr., compressor-man $1.76/hr. =	$12.70/ft.	$1.64
Insurance, Social Security, tax etc.	1.63	
Powder, fuse, detonators	5.39 - high	
Timber	1.65	
Compressor supplies	1.24	
Steel, bits, water and air hose	1.40	
Misc. supplies and repairs	2.15	
13 mos. supervision @ $500/mo. 3/4 charged to tunnel = 4,875	3.75	
Rental and repair of housing	.63	
2" air line, 1" water line, valves & fittings	.60	
Rail 16 lb., ties, spikes and bolts	1.57	
Insurance on equipment & buildings	.12	
(a) Rental on equipment owned by applicant	.48	
(b) Rental on equipment not owned by applicant	2.62	
	$ 35.93	

(a) 1 Compressed air locomotive	$2,300
1 Swede Jackleg drill	575
Hand tools, misc.	1,000
	$3,875

Monthly rental $3,875 / 60 mos. = $64.58/mo. 13 mos. = $839.54

3/4 to tunnel = $629.65 or $0.48/ft.

(b)	1	315 cfm, air compressor	$200
	1	Mucking machine	50
	2	Leyner type rock drills @ $15.00	30
	6	1-ton mine cars @ $3.00	18
	1	Pickup truck	50
			$348

$\frac{\$348 \times 13 \text{ mos.}}{1300} = \$3.50/\text{ft.}$
3/4 charged to tunnel $2.62/ft.

(3) Drive heading on Paymaster vein:
100 feet x $35.93 — $3,593

(4) Crosscut from 2790 N. northeast for 30 feet to the upper strand of the Ward fault:
30 feet x $35.93 — 1,078

(5) Sink a 4'x6' winze just under the fault to cut the projected position of South Goodluck mineralized shoot in the sulphide zone:
100 feet x $54.00 — 5,400

(6) Raise (4'x6') through fault to cut same shoot in the oxide zone:
20 feet x $54.00 — 1,080

(7) Sink an incline 4'x6' from 3200 N. and 3470 W. just under the upper strand of the Ward fault:
200 feet x $54.00 — 10,800

(8) Raise (4'x6') through the fault to cut the same ore body in the oxide zone above the fault.
20 feet x $54.00 — 1,080

COST OF RAISING, SINKING

Wages:	Miners $1.69/hr., muckers $1.50/hr., trammers $1.50/hr., Compressor-man $1.76/hr. - 2 foot advance/day	$30.32
	Insurance, Social Security tax, etc.	3.26
	Powder, fuse, detonators	5.39
	Timber	-
	Compressor supplies	1.57
	Steel, bits, water & air hose	1.40
	Misc. supplies and repairs	2.46
	13 mos. supervision @ $500/mo., 1/4 charged to raises and winzes	4.27 ?
	Rental and repair of housing	.80
	2" air line, 1" water line, valves & fittings	.60

Rental on equipment owned by applicant	$0.62
Rental on equipment not owned by applicant	3.36
	$54.00

SUMMARY

(1)	$3,100
(2)	46,709
(3)	3,593
(4)	1,078
(5)	5,400
(6)	1,080
(7)	10,800
(8)	1,080
Total	$72,840

CONCLUSIONS AND RECOMMENDATIONS

Although the applicants work is impressive in size and scope, it does not conclusively demonstrate the existence of a commercial ore body below the Ward fault, and, as the underground workings are inaccessible, no further data are obtainable. There are three uncertainties in the data used: (1) the rake of the ore shoot, (2) the displacement along the Ward fault, and (3) the grade of ore in the possible faulted continuation of the ore shoot. If the North Goodluck ore shoot does continue in depth it may reasonably be inferred to contain about 1,000,000 tons of zinc-lead sulfide ore. The grade of this inferred ore is not predictable. In addition, about 160,000 tons of inferred oxide ore containing about 12 percent lead may be present in the North Goodluck ore body above the Ward fault.

It is concluded there is a fair chance that the exploratory program will reveal new ore bodies of significant size. It is recommended, therefore, that Project No. 1 be approved, and that consideration of Project No. 2 be deferred until weather permits a field examination to be made.

APPENDIX 1

The applicant has estimated inferred ore reserves of the Ward Mine above the Paymaster level to be 1,412,500 tons of oxide ore and 3,045,000 tons of sulfide ore having the following metal content:

	Tons	Oz.Au per ton	Oz.Ag. per ton	%,Pb	%,Zn	%,Cu
Replacement deposits						
North Goodluck ore body						
oxide ore	950,000	-	4.2	8.4	-	-
sulfide ore	1,200,000	0.004	2.8	5.6	11.2	1.3
Defiance Ore Body						
oxide ore	437,000	.002	2.1 ?	4.2 ?	5.6 ?	0.6 ?
sulfide ore	1,725,000	.002	1.4	2.8	11.2	1.3
Vein Deposits						
Lyons and Clay						
Chamber ore bodies						
oxide ore bodies	25,000	.01	20.0	4.0	3.0	3.0
sulfide ore	120,000	.10	20.0	4.0	2.0	2.0
Total	4,457,500					

His estimate of tonnage is based on the area in the oxide zone; the estimate of grade in the oxide zone is based on assay and production data. His estimate of grade in the sulfide zone is based on calculations of the original sulfide content required to yield the oxide ore body. These calculations and their premises are as follows:

1. Original zinc content is assumed to be twice the lead content, because assays of sulfide ore exposed in several places in the mine contain this ratio.

2. Present copper content of the oxide ore is estimated to be $7\frac{1}{2}$ percent of the original content.

3. Present iron content of the oxide ore is estimated to be seven-eighths of the original content, based on comparison of Shasta County, California ore.

4. Present lime content of the oxide ore is estimated to be 40 percent of the original content.

	Present in oxidized zone	Leached from oxidized zone	Total original content of oxidized zone	Present in sulphide zone
Silver	4.2 oz.	-	4.2 oz.	2.8 oz.
Lead	8.4 %	-	8.4 % (units)	5.6 %
Zinc	1.2	15.6% (units)	16.8	11.2
Copper	0.15	1.85	2.0	1.3
Iron	38.8	5.5	44.3	29.6
Sulphur	1.0	59.8	60.8	49.5
Lime	0.6	0.9	1.5	1.0
Insoluble	13.2	-	13.2	8.8
			147.0 %	98.0 %

The mineralogical composition of ore of such analysis would be:

Galena	6.4%
Sphalerite	16.7
Chalcopyrite	3.8
Pyrite	61.3
Gangue	9.8
	98.0%

FILE COPY
SURNAME:

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

Mont de Mayer
Hedges

FEB 6 1952

Hon. Walter S. Baring
House of Representatives
Washington 25, D. C.

Re: Docket No. DMEA 2257
Walker Corporation

My dear Mr. Baring:

With reference to Mr. W. J. Walker's letter to you concerning the application of the Walker Corporation, a copy of which was transmitted with your request for information as to status of the application.

The application of the Walker Corporation, East Ely, Nevada, for exploration project assistance at the Ward Mine was reviewed by this office and referred to the San Francisco Regional Office of Defense Minerals Exploration Administration for examination and procuring of additional information on the project.

Mr. W. J. Walker has been advised of this field referral, and final action will be taken as soon as the recommendation of the field is received.

2-8-52

Sincerely yours,

C. O. Mittendorf (fw)

Acting Administrator
Defense Minerals Exploration
Administration

DEMoulds/meh
2/4/52
cc to: Adm. R. File
Docket File Copy
Mr. Moulds
Mr. Bishop
Mr. McKnight
Region III

WALKER CORPORATION
Successor to
WALKER and WALKER
Consulting Mining Geologists

Robert T. Walker
Woodville J. Walker

Box 917
Leadville, Colorado

NEW ADDRESS
Box 251, East Ely, Nevada

Jan. 23, 1952

Mr. Walter S. Baring
Congressman from Nevada
House Office Building
Washington, D. C.

Dear Mr. Baring:

Under date of November 7, 1951, we made application, in the name of the WALKER CORPORATION, for a D.M.A. government loan (Docket No. DMEA-2257) of $52,000, for developing the Ward Mine, White Pine County, Nevada, which we have every reason to expect to contain large reserves of lead, zinc and copper. We would appreciate the courtesy if you would kindly ascertain the present status of our application; whether it is in proper form, or needs any amendment; and when, if in proper form, we may expect an examination to be made of the property.

Thanking you for this information, we remain

Very truly yours,

WALKER CORPORATION

by W. J. Walker
W. J. WALKER, General Manager

COPY

MR. MITTENDORF:

How about this? I would appreciate an early response.

Walter S. Baring
WALTER S. BARING
Congressman from Nevada

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 31 1952

Docket
500
FILE COPY
SURNAME:

Dorothy
Moulds

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

Mr. H. C. Miller
Executive Officer, Region III
DMEA Field Team
1012 Flood Building
870 Market Street
San Francisco 2, California

FEB 8 -

Re: Docket No. DMEA-2257
Walker Corporation
Leadville, Colorado
Commodity, Lead-Zinc

Dear Mr. Miller:

We are transmitting, herewith, one copy of the application for exploration assistance together with all the correspondence pertaining to above referenced docket.

The following points have been raised in the review of the application which appear necessary to examine in the field to evaluate the project and, if the project indicates the possibility of worthwhile Government participation, will be necessary to process a contract.

1. The grade of ore mined in the past has been marginal and it is not certain that an improved grade will be obtained by the proposed exploration work.

2. In listing equipment to be rented, some of these items appear to be high, such as:

   12 - 20 cu. ft. cars at $40 per month each.
   2 - 230 cfm portable compressors at $550.

All items should be checked and perhaps it would be more economical to purchase any equipment that is necessary for the project.

3. A salary of $750 for the superintendent for a project of this size appears to be high.

4. In the application, Form MF-103, Question No. 6 is listed for the project, Miner-Boss 2, Miner-2, Muckers-2, Compressor-man-2. In Form MF-100, Question 16, it is stated: "In the two exploration Projects, there will be

two miners, two muckers, and two compressor-men. There is a difference here, and this should be clarified as to the number of men for each project or the number of men for both projects.

5. This project should be set up in regards to costs into two phases.

6. Four sets of maps accompany the application. In the event that the project is approved by the field team and a contract is prepared, two additional sets of maps would be required.

7. Check list of materials to be purchased.

8. In the report by Woodville J. Walker, second paragraph, page 11, it is stated that the estimated cost per foot would be $30. What costs are included in this amount?

Any other information that you think is necessary for the processing of this application will be appreciated.

Sincerely yours,

C. O. Mittendorf (fw)

ACTING Chairman, Operating Committee
Defense Minerals Exploration
Administration.

Enclosures

APPROVED:

J. H. Hodges

Member, Bureau of Mines (fw)

L P Thayer

Member, Geological Survey (fw)

JWAlt/hmj
2-4-52
cc to: Adm. R. File
Docket File Copy
Mr. Bishop
Mr. McKnight
Region III
Mr. Moulds
Mr. Alt

Docket

500

FILE COPY
SURNAME:

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

Moulds
Thayer
Hedges

FEB 3 1952

Mr. Woodville J. Walker, Vice President
Walker Corporation
Box 917
Leadville, Colorado

Re: Docket No. DMEA - 2257

Dear Mr. Walker:

Your application for assistance in exploring the Ward Mine in White Pine County, Nevada, has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration and has been referred to Mr. H. C. Miller, Executive Officer, Region III, DMEA Field Team, 1012 Flood Building, 870 Market treet, San Francisco 2, California, for a field examination.

The Region Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

2-8-52

D. E. Moulds

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

JWAlt/hmj
2-4-52
cc to: Adm. R. File
Docket File Copy
Mr. Bishop
Mr. McKnight
Mr. Moulds
Mr. Alt
Region III

Defense Minerals Administration

Review of Application for Exploration Assistance

Mr. Harold C. Miller
Executive Officer, Field Team
Region III
1012 Flood Building
870 Market Street
San Francisco, California

Docket No. DMEA-2257

Commodity Zinc, lead, copper

Total Amount $105,000

Govt. Participation 50%, $52,500

1. Name and Address of Applicant Walker Corporation, Box 917, Leadville, Colorado

Woodville J. Walker, Vice-President and Treasurer

2. Location of Property Ward Mine, White Pine County, Nevada. Ward Mining District, situated about 15 miles South of Ely, Nevada, on east slope of the Egan Range.

3. Mineral or metal Zinc,lead,copper Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

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

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

a) Good

b) Poor

c) None

d) Don't know—needs field examination X

e) Is there an alternative and favorable project? Should be checked
(If so, attach an explanation)

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

6. If applicant is a lessee, is a copy of the lease attached? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes

a) MF-201? _____

b) MF-202? Submitted

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

a) Available manpower Yes

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

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes

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

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

_____

Is a field check needed on this point? No

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

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes

_____

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

If not, what part of it is? _____

_____

_____

_____

Is this part a worthwhile exploration project? Yes

d) Are the cost estimates detailed? Yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? Yes

f) Should more information be requested from applicant? No

g) Is a field examination necessary to complete Exhibit A? No

11. Exhibit B (question 23-d)*

a) Is it applicable? No

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

c) Is a field check needed? _____

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

a) Is it applicable? Yes

b) Sufficient data? Yes If so, attach a draft.

c) Are rents and charges reasonable? Some items are high

d) Is a field check needed? No

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

a) Are there sufficient data? Yes

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

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

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? No

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

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

(All exploration must be completed within two years)

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

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Clarify detailed statement on rentals submitted, with applicant before contract is signed. It is advisable to have a regional field team report to check the proposed work and decide on the merits of the proposed projects.

Reviewed by: H. E. Olund

H. E. Olund 1-18-52

E. J. Lyons

Date 1-31-52

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

January 31, 1952

Memorandum

To: Mr. Donald Moulds,
Chief, Lead-Zinc Branch, DMEA

From: Lead-Zinc Branch
Bureau of Mines

Subject: Walker Corporation, Box 917, Leadville, Colorado
Ward Mine, White Pine County, Nevada. DMEA-2257.

This application consists of 2 projects: the Defiance tunnel Project which consists of 550' of X-cut tunnel and 1150' of drifting along the contacts; and the Good Luck Orebody Project, which consists of extending the Mountain Pride Tunnel 1300' to explore the country below the Ward Fault. The total costs of these projects will amount to approximately $105,000.

This mine has been extensively worked since 1866 and is well known. The applicants have supplied an excellent geologic report showing the orebodies which have been worked in the past down to the Ward fault and the possible extensions of these orebodies below the fault. The maps accompanying the report are complete and show the locations of the two projects. The applicants are experienced and well-qualified to operate the property.

Work on the Good Luck project can be started within 30 days from the time the contract is signed and will take 17 months to complete. Work on the Defiance Orebody will need some road building before it can be commenced and it may be June 1 before actual mining is started. It will take about 21 months to complete.

The costs will be as follows:

Good Luck Orebody Project

Erection of compressor shed.....	$ 2,500
1300' of drifting at $23/ft.....	29,900
Equipment and supplies.....	13,738
Total cost.....	$46,138

Defiance Orebody Project

Erection of Compressor shed.....	$ 2,500	
1700' of X-cut and drifts at $23/ft.....	39,100	
Equipment and supplies.....	17,967	
Total costs.....		$59,567
Grand total, both projects		$105,705

In the list of rentals to be paid the following items are too high:

12 20 cu. ft. cars at $40/mo. each - should be purchased.
2 350 cfm. portable compressors at $550 - should be purchased.

A field team checkup would be advisable inasmuch as the grade of ore mined in the past has been marginal and it is not certain that an improved grade will be obtained by the proposed development work. Also, it may be advisable to allow only one of the proposed projects at the present time.

Lead-Zinc Branch
Bureau of Mines

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 6 1951
Defense Minerals Administration,
Production Expansion Division.

WALKER AND WALKER
CONSULTING MINING GEOLOGISTS

ROBERT T. WALKER
WOODVILLE J. WALKER

BOX 917
LEADVILLE, COLORADO

December 1, 1951

DMEA-2257
Exploration Loan
Ward Mine

Mr. Robert E. Adams, Chief
Reports & Records Unit
Defense Minerals Administration
Washington 25, D.C.

Dear Mr. Adams:

The total cost of the proposed exploration projects at the WARD MINE, WHITE PINE COUNTY, NEVADA is estimated to be $105,000.

Very truly yours,

Woodville J. Walker

Woodville J. Walker
Vice-President & Treasurer
Walker Corporation

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.
4:10 PM '51
DEC 5

Subject: DMEA-2257
Re: Exploration Loan
Ward Mine

Mr. Woodville J. Walker, Vice President
Walker Corporation
Box 917
Leadville, Colorado

My dear Mr. Walker:

This will acknowledge receipt of your application dated November 7, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2257 and referred to the Base Metals Branch

Kindly refer to DMEA-2257 in any future correspondence relating to your application.

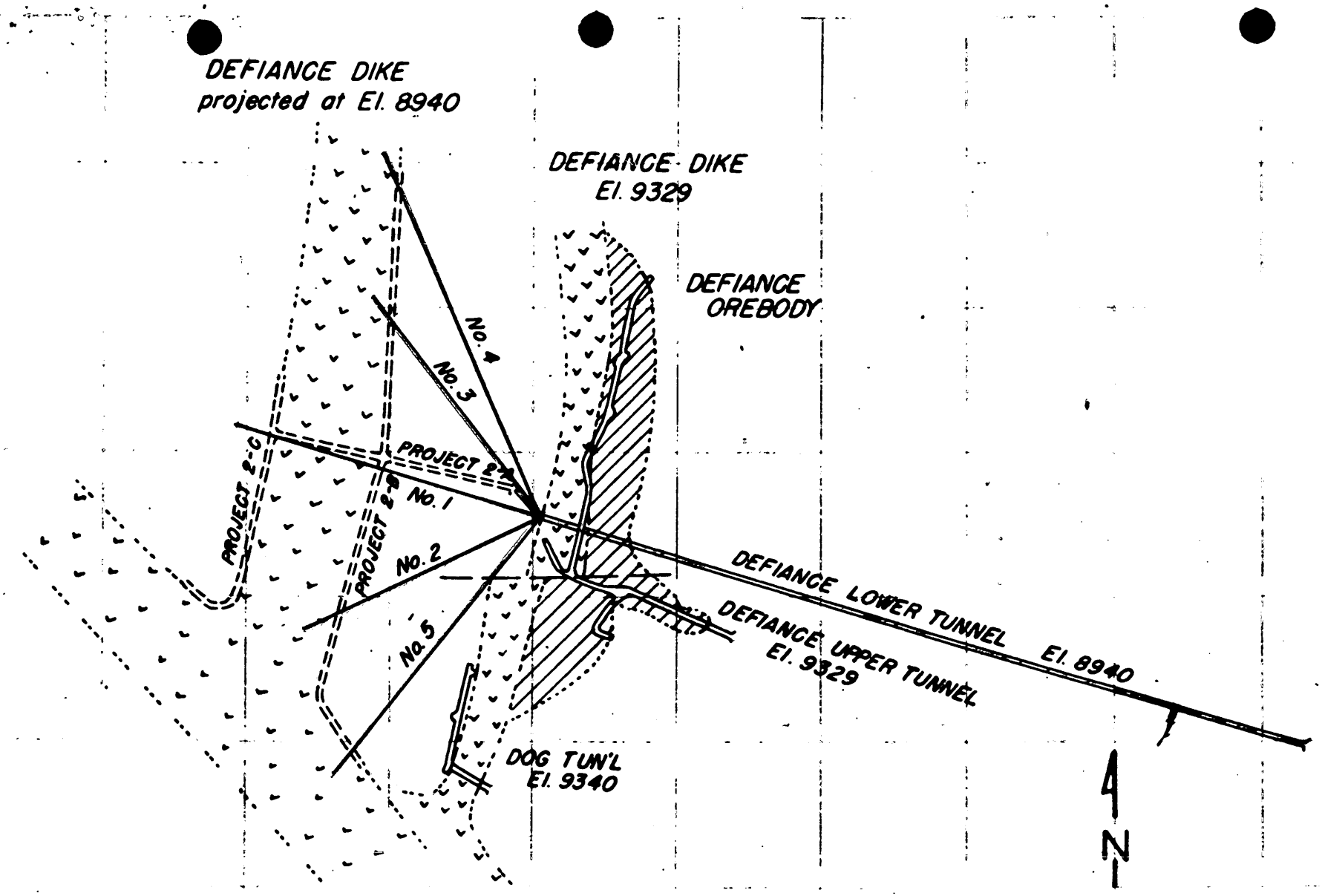
Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams, Chief
Reports & Records Unit

Kindly advise me of total cost of project.

7862



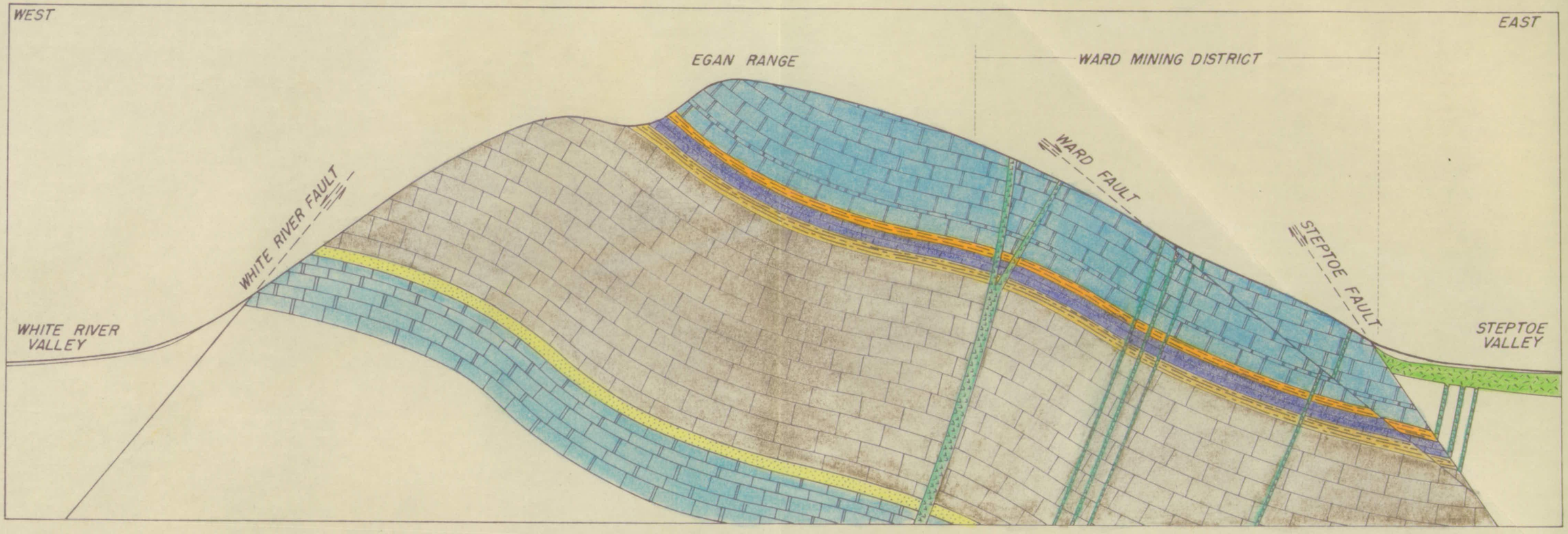
PART II

PROPOSED DRILLING PROGRAM
Docket No. DMEA-2257

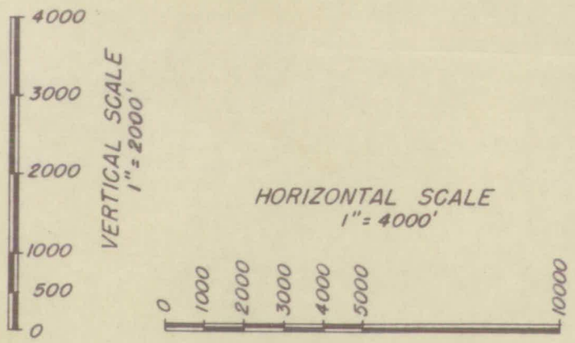
Proposed diamond drilling in place of drifting and cross-cutting shown in solid red lines.

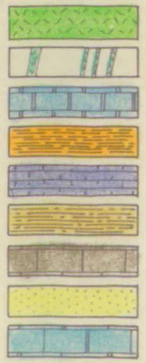
0 100 200 300 400 500

SCALE : 1" = 200'



DIAGRAMMATIC EAST-WEST CROSS SECTION OF THE EGAN RANGE, WHITE PINE COUNTY, NEVADA





QUARTZ LATITE LAVAS AND TUFFS (TERTIARY)
QUARTZ MONZONITE PORPHYRY DIKES (TERTIARY)
ELY LIMESTONE (PENNSYLVANIAN)
CHAINMAN SHALE (MISSISSIPPIAN)
JOANA LIMESTONE (MISSISSIPPIAN)
PILOT SHALE (MISSISSIPPIAN)
NEVADA LIMESTONE (DEVONIAN)
EUREKA QUARTZITE (ORDOVICIAN)
POGONIP LIMESTONE (ORDOVICIAN)

EXHIBIT "B"

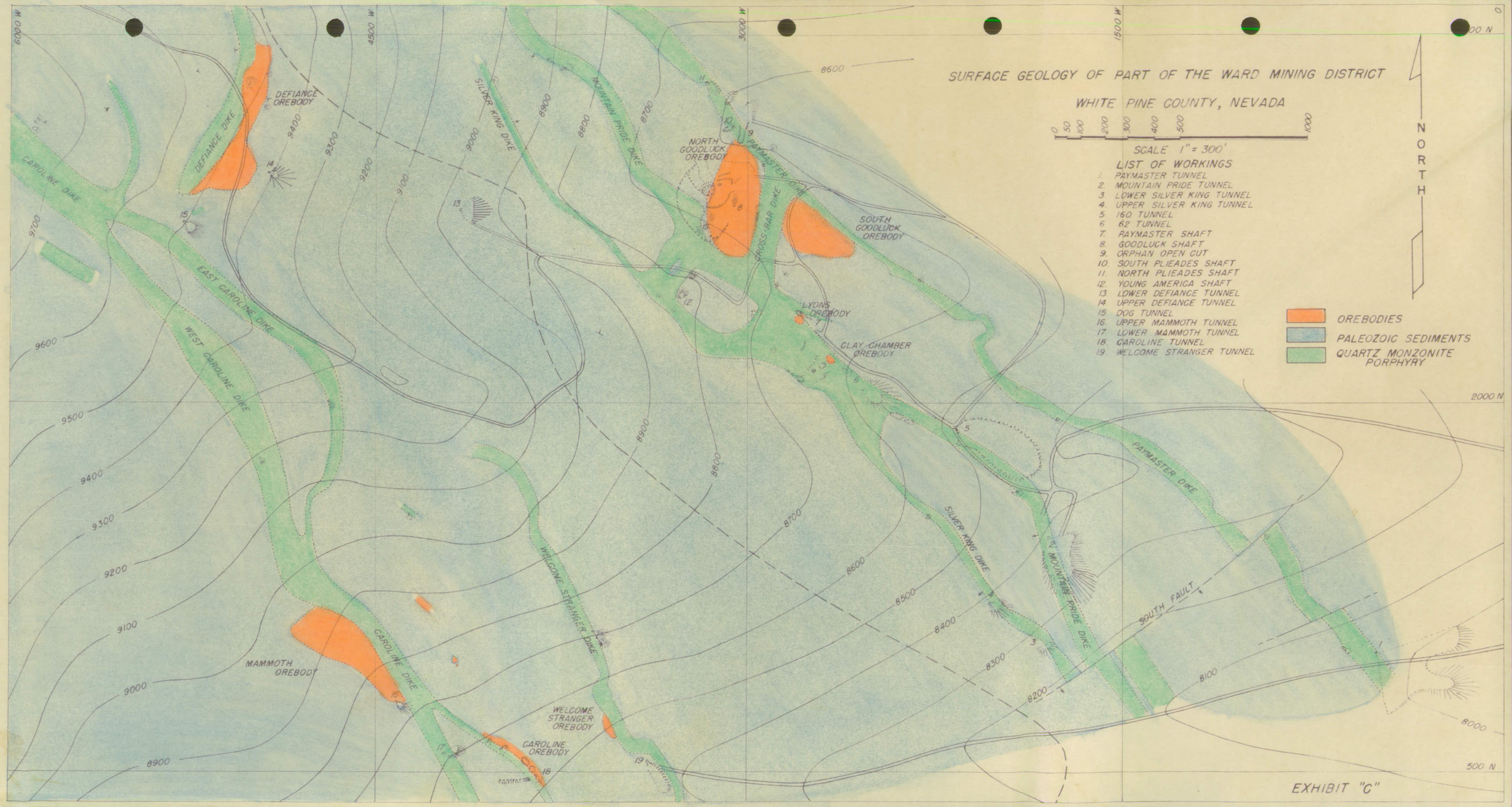
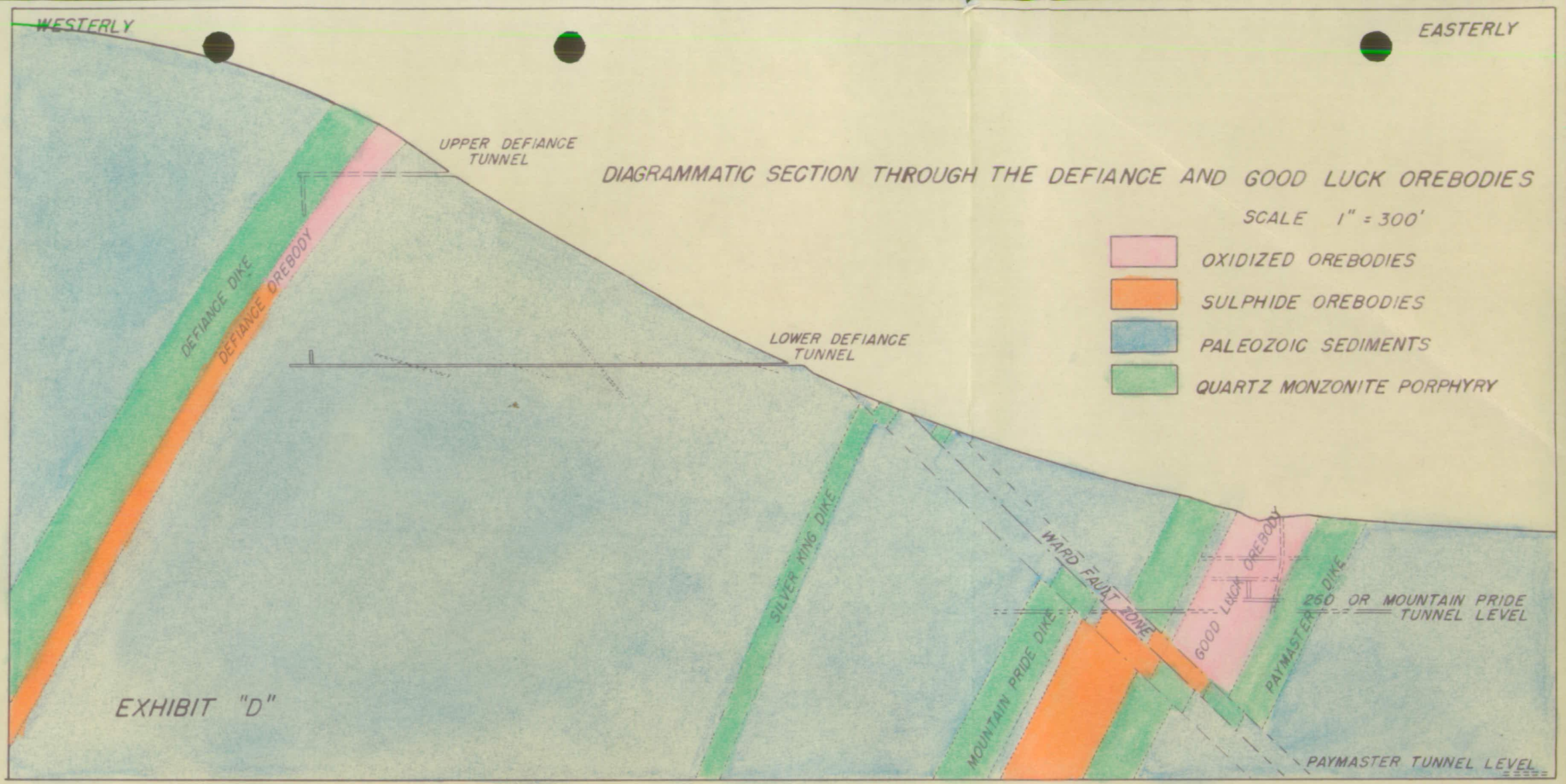
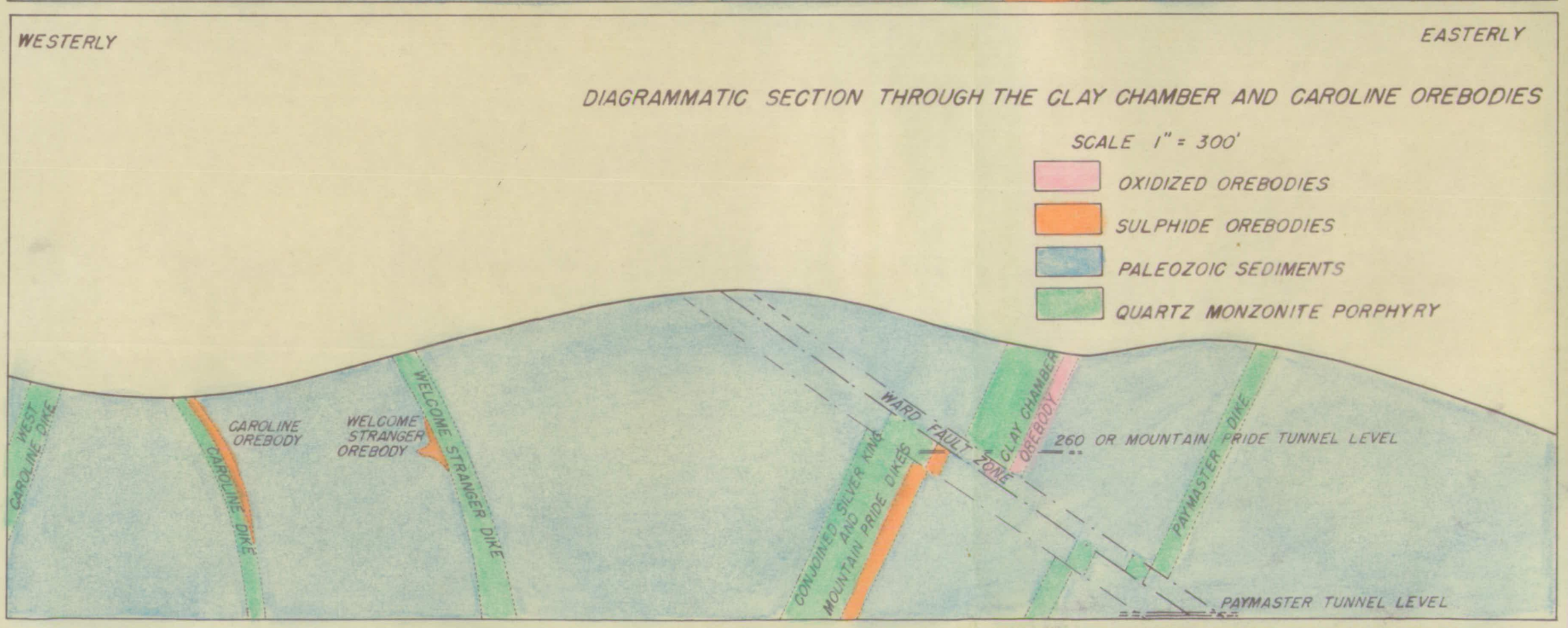

SURFACE GEOLOGY OF PART OF THE WARD MINING DISTRICT
WHITE PINE COUNTY, NEVADA
0 50 100 200 300 400 500 1000
SCALE 1" = 300'
LIST OF WORKINGS
1. PAYMASTER TUNNEL
2. MOUNTAIN PRIDE TUNNEL
3. LOWER SILVER KING TUNNEL
4. UPPER SILVER KING TUNNEL
5. 160 TUNNEL
6. 62 TUNNEL
7. PAYMASTER SHAFT
8. GOODLUCK SHAFT
9. ORPHAN OPEN CUT
10. SOUTH PLIEADES SHAFT
11. NORTH PLIEADES SHAFT
12. YOUNG AMERICA SHAFT
13. LOWER DEFIANCE TUNNEL
14. UPPER DEFIANCE TUNNEL
15. DOG TUNNEL
16. UPPER MAMMOTH TUNNEL
17. LOWER MAMMOTH TUNNEL
18. CAROLINE TUNNEL
19. WELCOME STRANGER TUNNEL
OREBODIES
PALEOZOIC SEDIMENTS
QUARTZ MONZONITE PORPHYRY
NORTH
DEFIANCE OREBODY
DEFIANCE DIKE
CAROLINE DIKE
EAST CAROLINE DIKE
WEST CAROLINE DIKE
SILVER KING DIKE
MOUNTAIN PRIDE DIKE
NORTH GOODLUCK OREBODY
PAYMASTER DIKE
CROSS-BAR DIKE
SOUTH GOODLUCK OREBODY
LYONS OREBODY
CLAY CHAMBER OREBODY
MAMMOTH OREBODY
WELCOME STRANGER DIKE
WELCOME STRANGER OREBODY
CAROLINE OREBODY
SOUTH FAULT
3000 W
1500 W
2000 N
500 N
8600
8900
9000
9100
9200
9300
9400
9500
9600
9700
8700
8800
8500
8400
8300
8200
8100
8000

EXHIBIT "C"


WESTERLY
EASTERLY
UPPER DEFIANCE TUNNEL
DIAGRAMMATIC SECTION THROUGH THE DEFIANCE AND GOOD LUCK OREBODIES
SCALE 1" = 300'
OXIDIZED OREBODIES
SULPHIDE OREBODIES
PALEOZOIC SEDIMENTS
QUARTZ MONZONITE PORPHYRY
DEFIANCE DIKE
DEFIANCE OREBODY
LOWER DEFIANCE TUNNEL
SILVER KING DIKE
WARD FAULT ZONE
GOOD LUCK OREBODY
260 OR MOUNTAIN PRIDE TUNNEL LEVEL
PAYMASTER DIKE
MOUNTAIN PRIDE DIKE
EXHIBIT "D"
PAYMASTER TUNNEL LEVEL


WESTERLY
EASTERLY
DIAGRAMMATIC SECTION THROUGH THE CLAY CHAMBER AND CAROLINE OREBODIES
SCALE 1" = 300'
OXIDIZED OREBODIES
SULPHIDE OREBODIES
PALEOZOIC SEDIMENTS
QUARTZ MONZONITE PORPHYRY
WEST CAROLINE DIKE
CAROLINE OREBODY
CAROLINE DIKE
WELCOME STRANGER OREBODY
WELCOME STRANGER DIKE
WARD FAULT ZONE
CLAY CHAMBER OREBODY
260 OR MOUNTAIN PRIDE TUNNEL LEVEL
CONJOINED SILVER KING AND MOUNTAIN PRIDE DIKES
PAYMASTER DIKE
PAYMASTER TUNNEL LEVEL

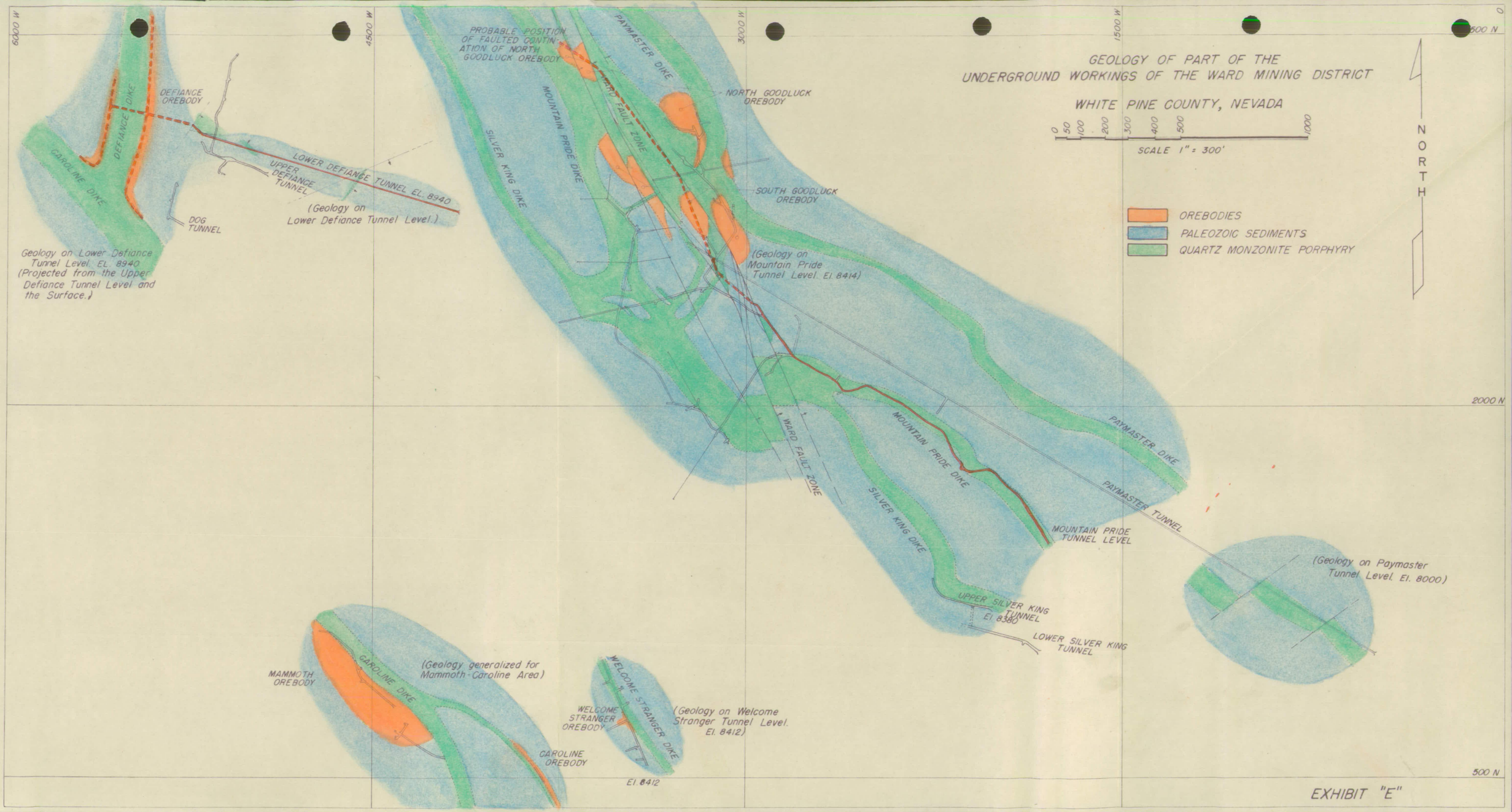
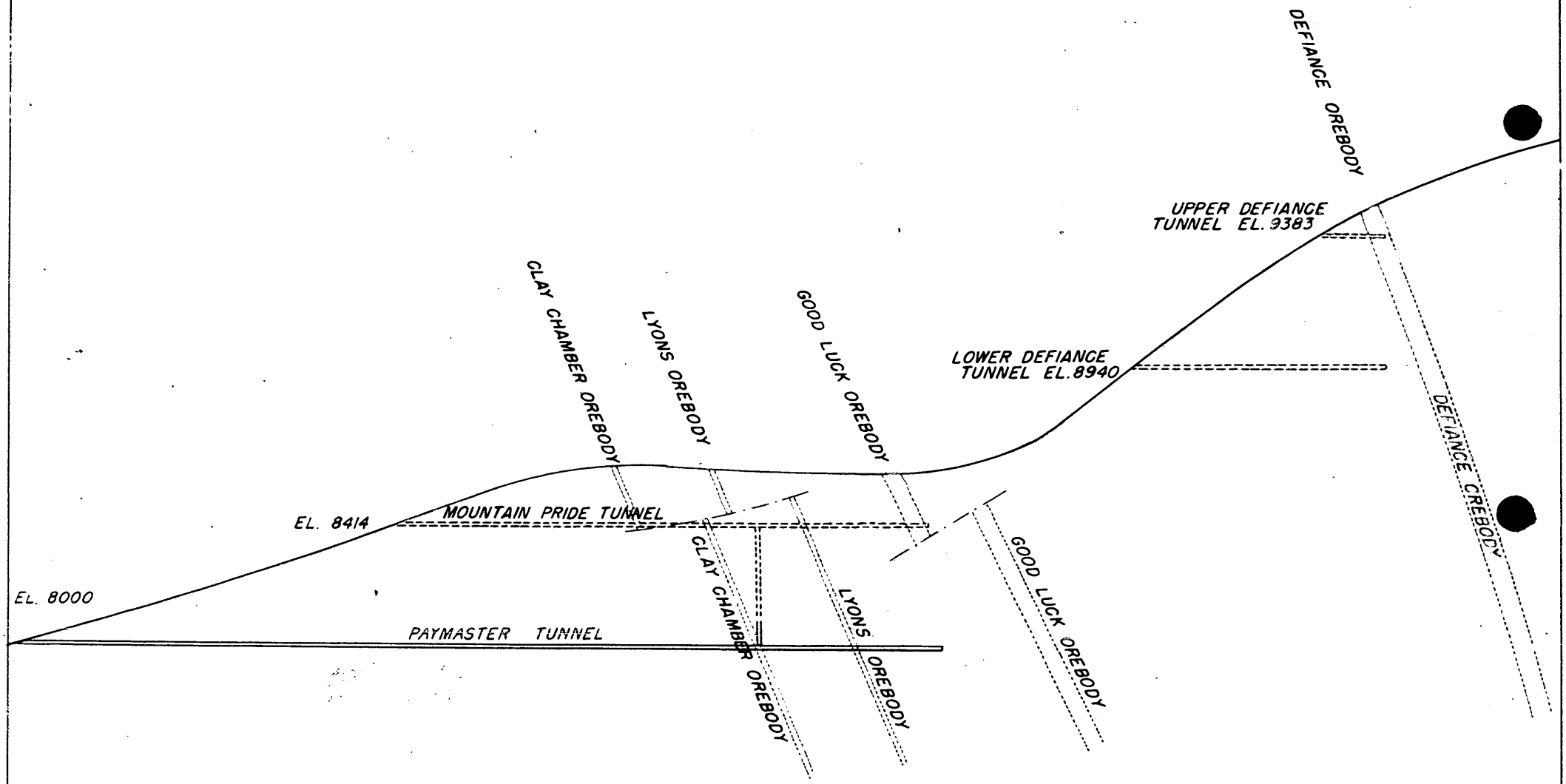

GEOLOGY OF PART OF THE
UNDERGROUND WORKINGS OF THE WARD MINING DISTRICT
WHITE PINE COUNTY, NEVADA
0 50 100 200 300 400 500 1000
SCALE 1" = 300'
NORTH
OREBODIES
PALEOZOIC SEDIMENTS
QUARTZ MONZONITE PORPHYRY
6000 W
4500 W
3000 W
1500 W
0
500 N
2000 N
500 N
DEFIANCE OREBODY
DEFIANCE DIKE
CAROLINE DIKE
DOG TUNNEL
LOWER DEFIANCE TUNNEL EL. 8940
UPPER DEFIANCE TUNNEL
(Geology on Lower Defiance Tunnel Level.)
Geology on Lower Defiance Tunnel Level. EL. 8940 (Projected from the Upper Defiance Tunnel Level and the Surface.)
PROBABLE POSITION OF FAULTED CONTINATION OF NORTH GOODLUCK OREBODY
PAYMASTER DIKE
WARD FAULT ZONE
MOUNTAIN PRIDE DIKE
SILVER KING DIKE
NORTH GOODLUCK OREBODY
SOUTH GOODLUCK OREBODY
(Geology on Mountain Pride Tunnel Level. El. 8414)
WARD FAULT ZONE
MOUNTAIN PRIDE DIKE
SILVER KING DIKE
PAYMASTER DIKE
PAYMASTER TUNNEL
MOUNTAIN PRIDE TUNNEL LEVEL
UPPER SILVER KING TUNNEL El. 8380
LOWER SILVER KING TUNNEL
(Geology on Paymaster Tunnel Level. El. 8000)
MAMMOTH OREBODY
CAROLINE DIKE
(Geology generalized for Mammoth-Caroline Area)
WELCOME STRANGER DIKE
WELCOME STRANGER OREBODY
(Geology on Welcome Stranger Tunnel Level. El. 8412)
CAROLINE OREBODY
El. 8412

EXHIBIT "E"



Diagrammatic Section Through Ward Mine Showing Development System With Relationship To Ore-bodies

SCALE 1 IN. = 500 FT.

MINED OR DEVELOPED ORE TINTED RED: UNDEVELOPED ORE TINTED ORANGE

EXHIBIT "F"

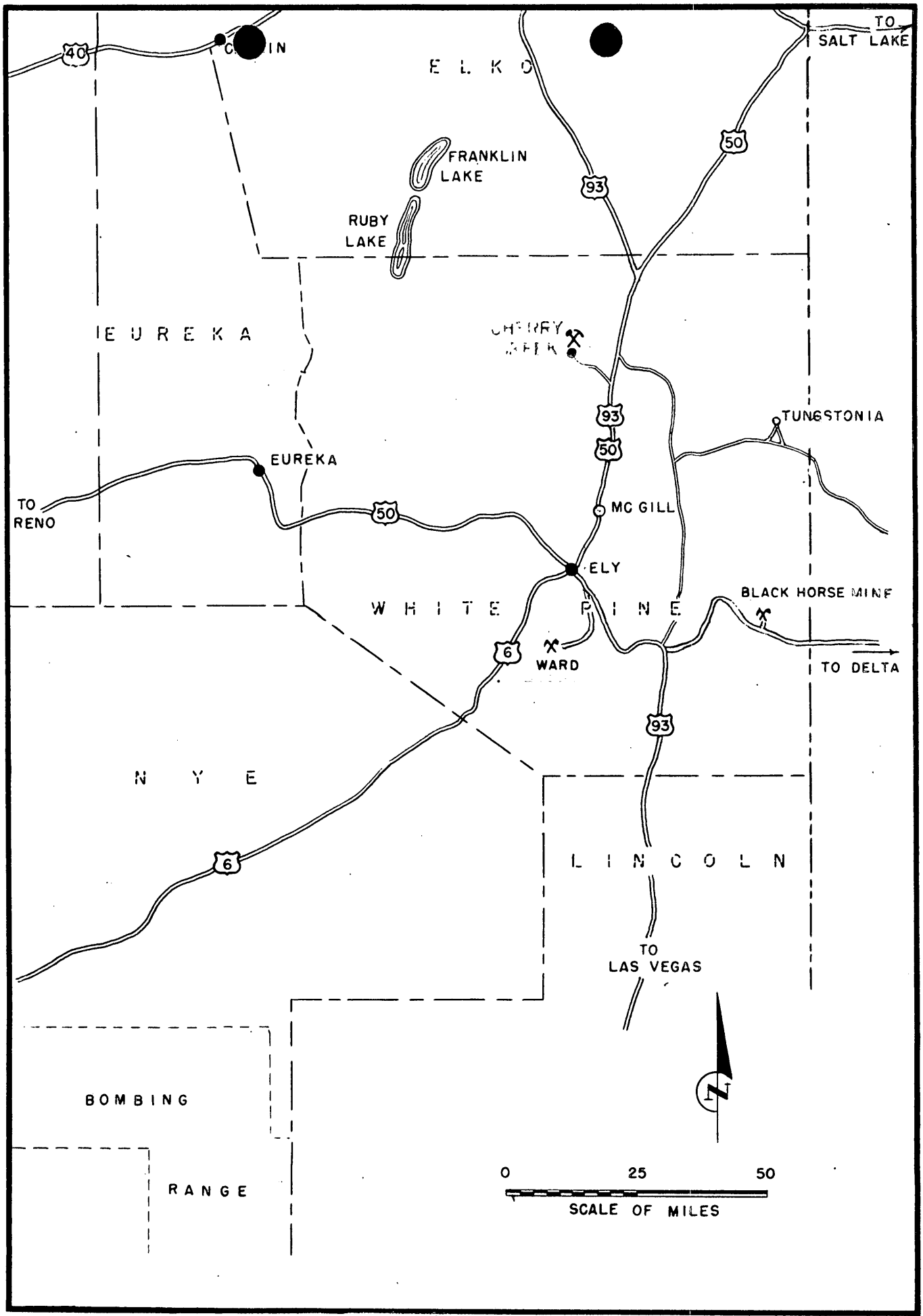
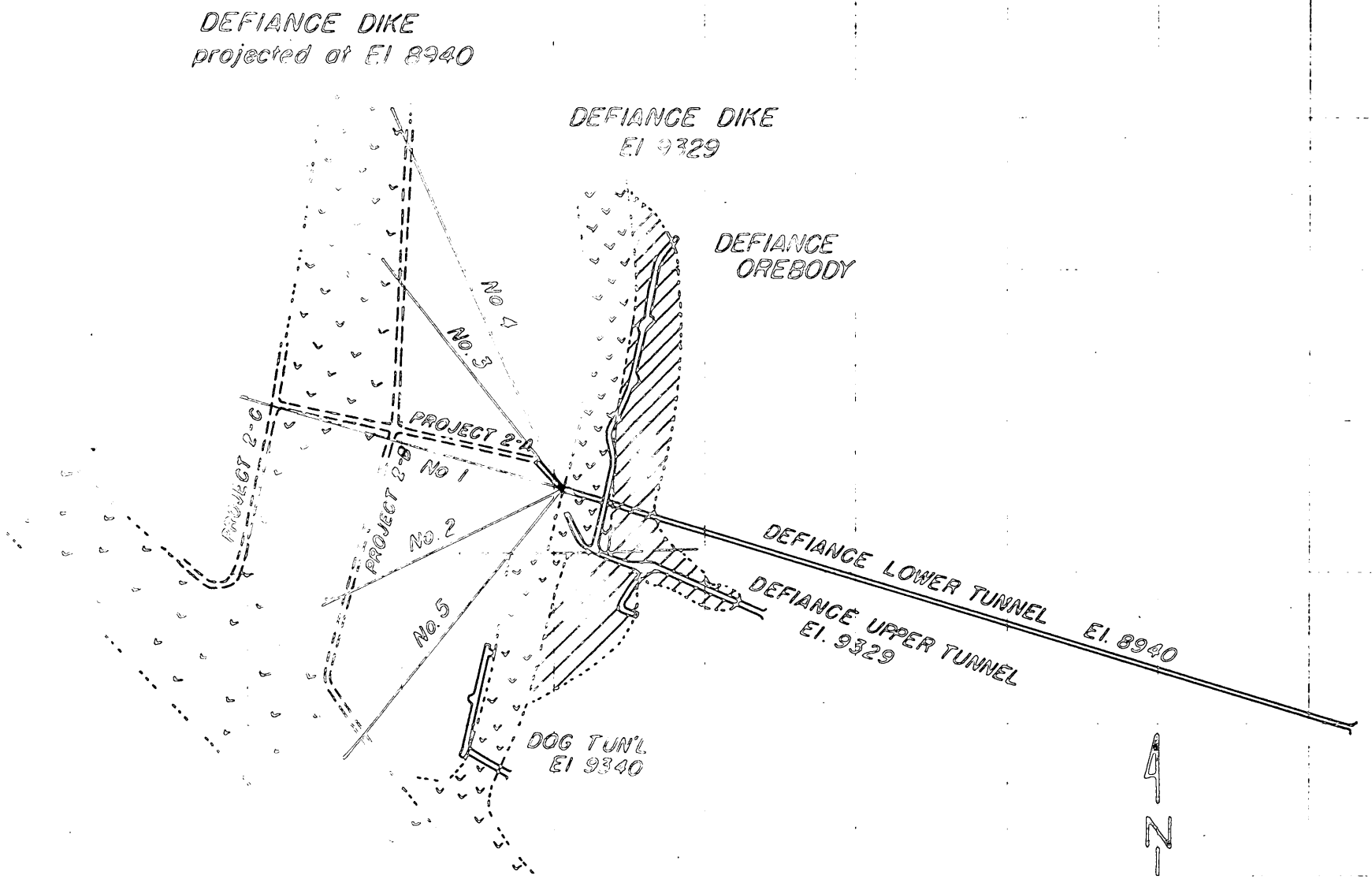


Figure 1- Location map, **WARD MINE:** White Pine Co., Nevada



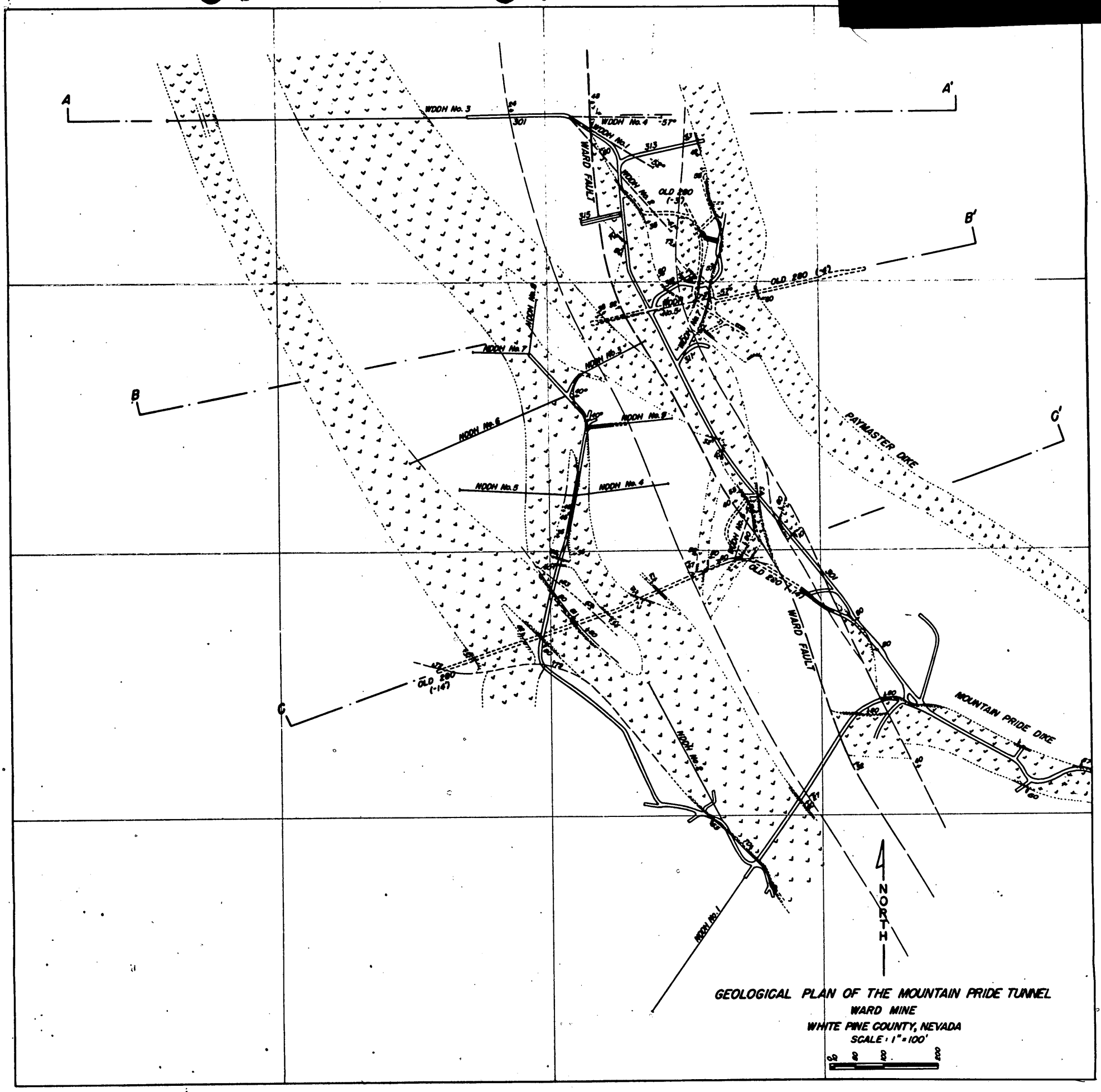
PART II

PROPOSED DRILLING PROGRAM

Proposed diamond drilling in place of drifting and cross-cutting shown in solid red lines.

0 100 200 300 400 500

SCALE 1" = 200'


A
A'
B
B'
C
C'
WDOH No. 3
WDOH No. 4
WDOH No. 1
WDOH No. 2
WDOH No. 5
WARD FAULT
OLD 280
NDOH No. 7
NDOH No. 3
NDOH No. 6
NDOH No. 9
NDOH No. 5
NDOH No. 4
NDOH No. 2
NDOH No. 1
PAYMASTER DIKE
MOUNTAIN PRIDE DIKE
NORTH
GEOLOGICAL PLAN OF THE MOUNTAIN PRIDE TUNNEL
WARD MINE
WHITE PINE COUNTY, NEVADA
SCALE: 1" = 100'

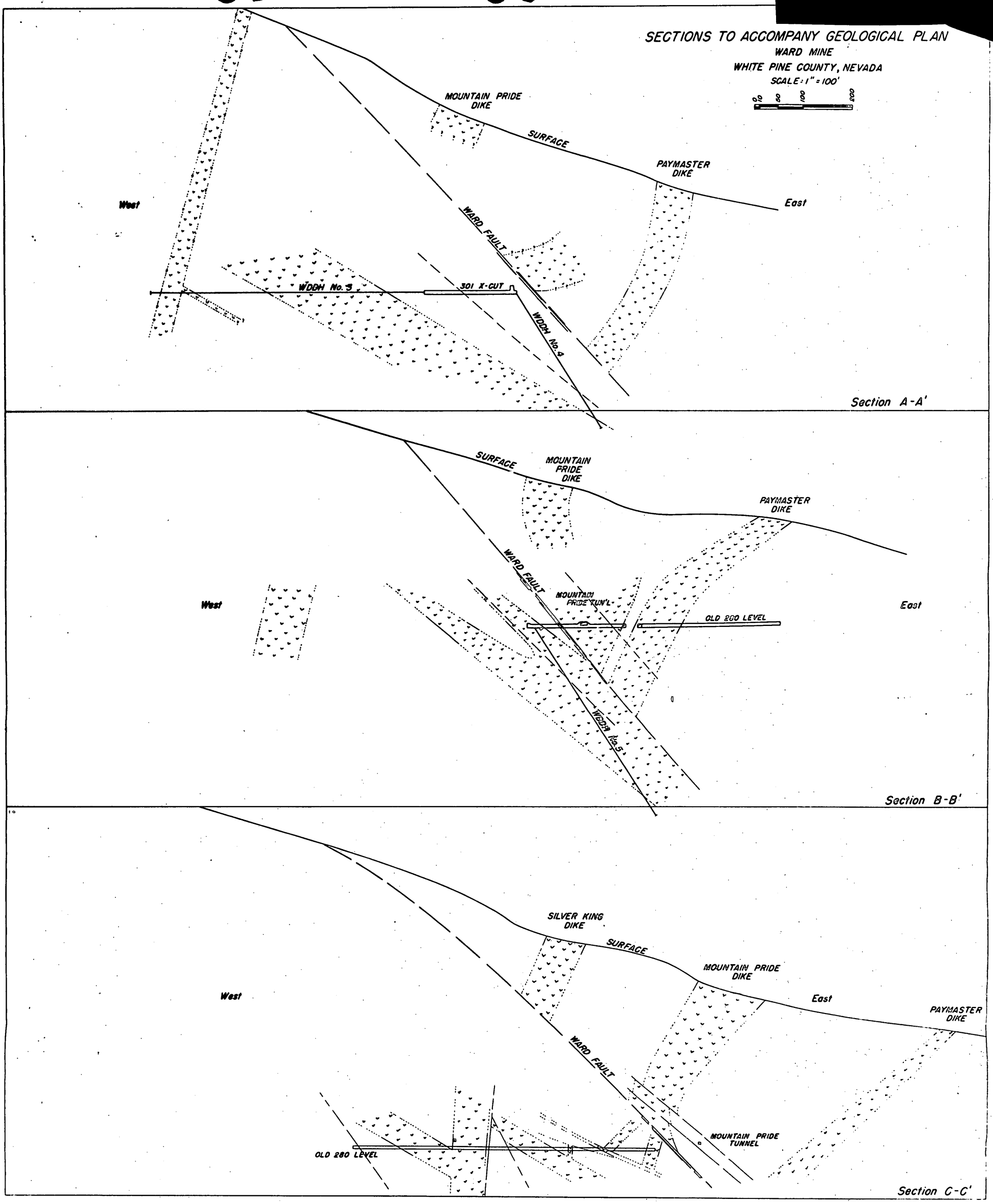
SECTIONS TO ACCOMPANY GEOLOGICAL PLAN

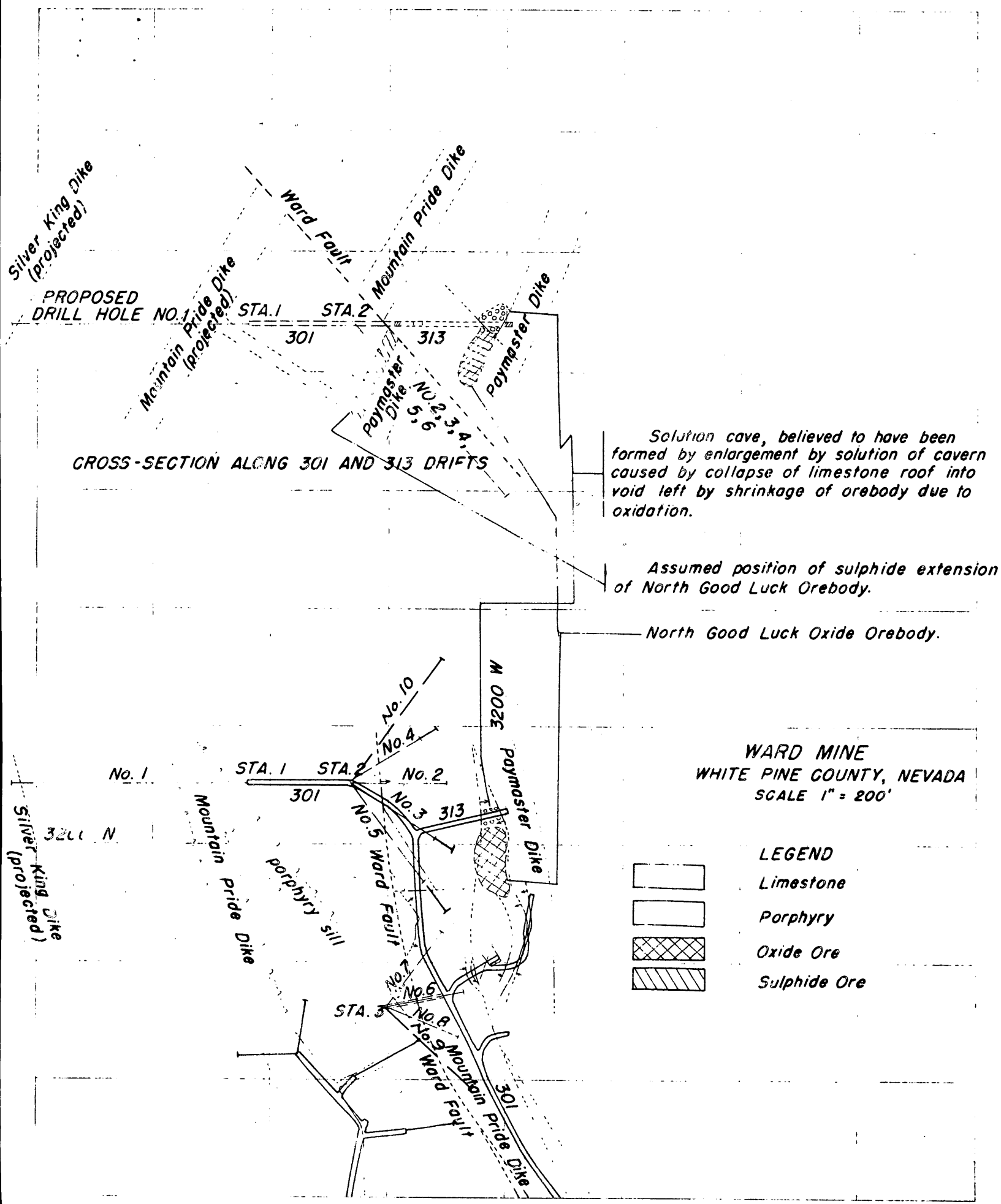
WARD MINE

WHITE PINE COUNTY, NEVADA

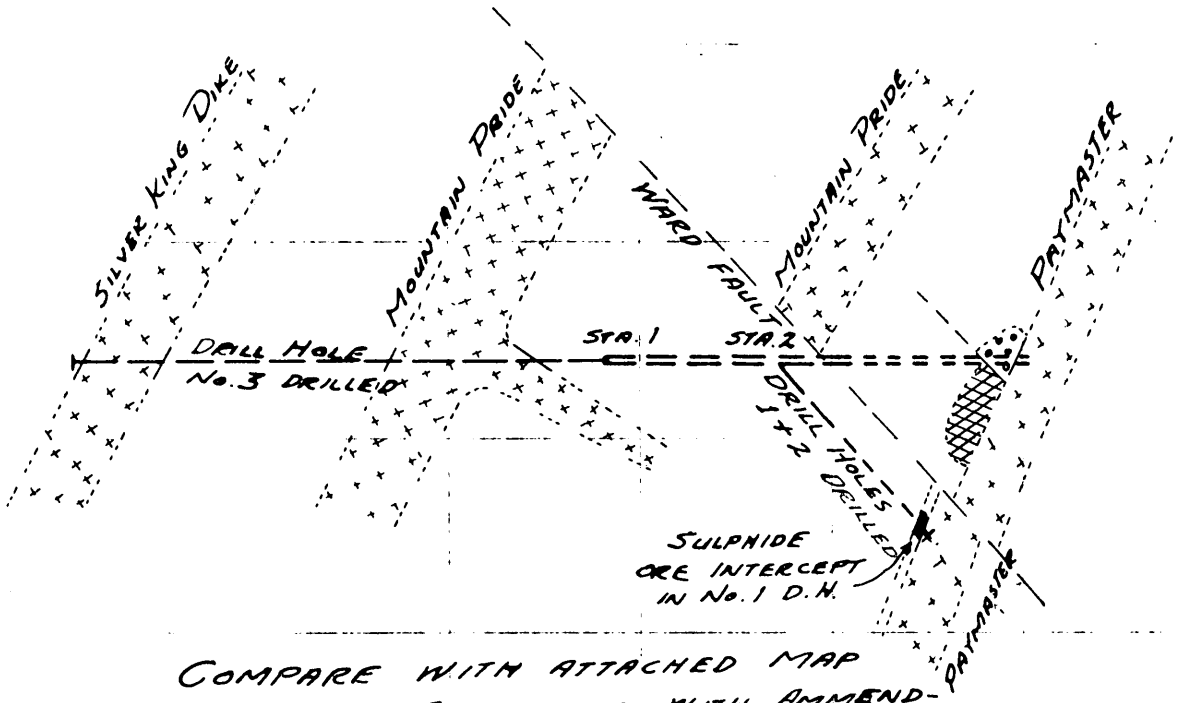
SCALE: 1" = 100'

0 50 100 200

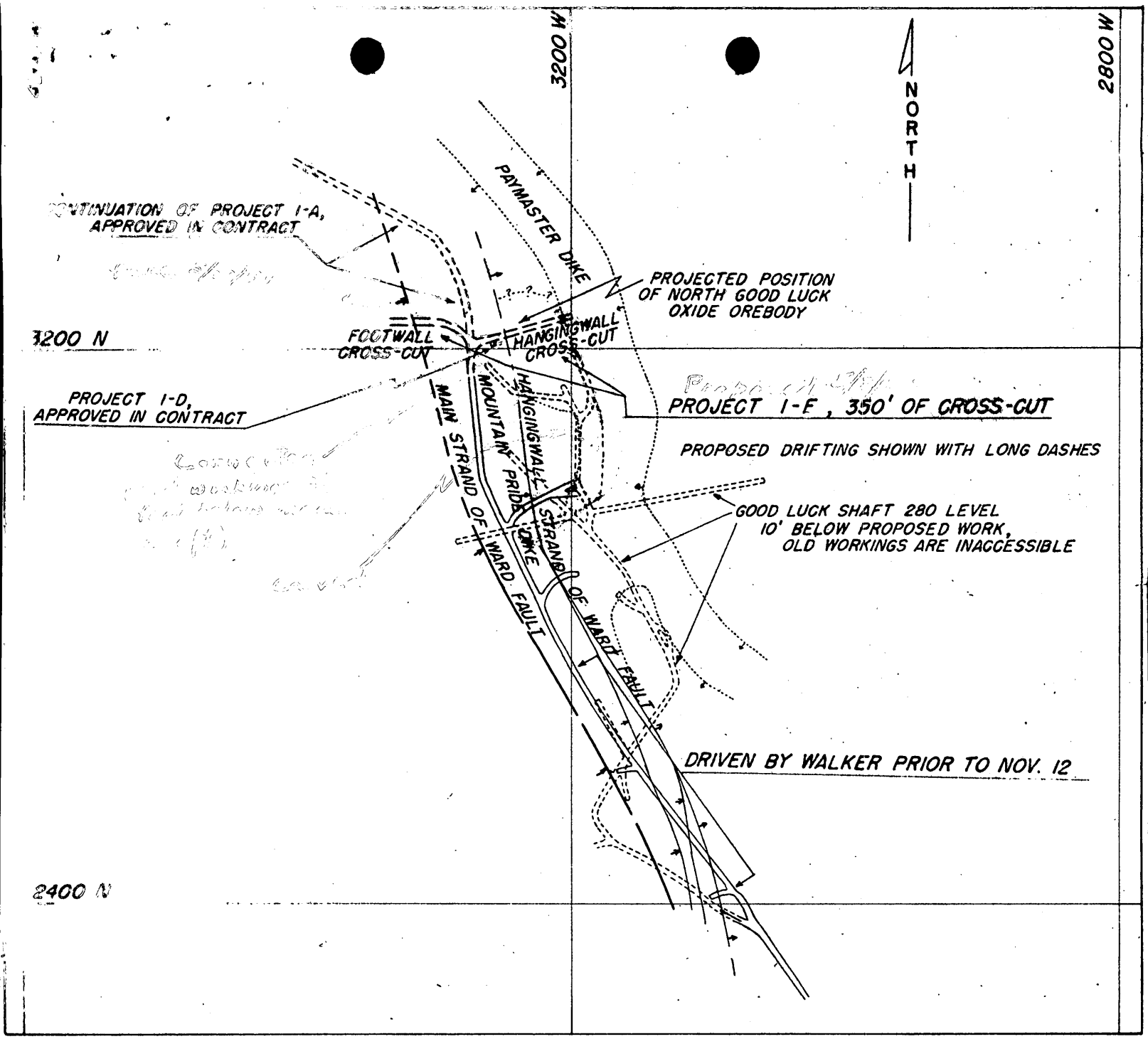




"ALBANENE" No. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF.



COMPARE WITH ATTACHED MAP AND SECTION SUBMITTED WITH AMMENDMENT No. 2.



LEGEND

PORPHYRY

LIMESTONE

POSSIBLE OXIDE ORE

PROPOSED PROJECT I-F

WARD MINE - WALKER CORPORATION
WHITE PINE COUNTY, NEVADA

0 200 400 600 FEET
SCALE

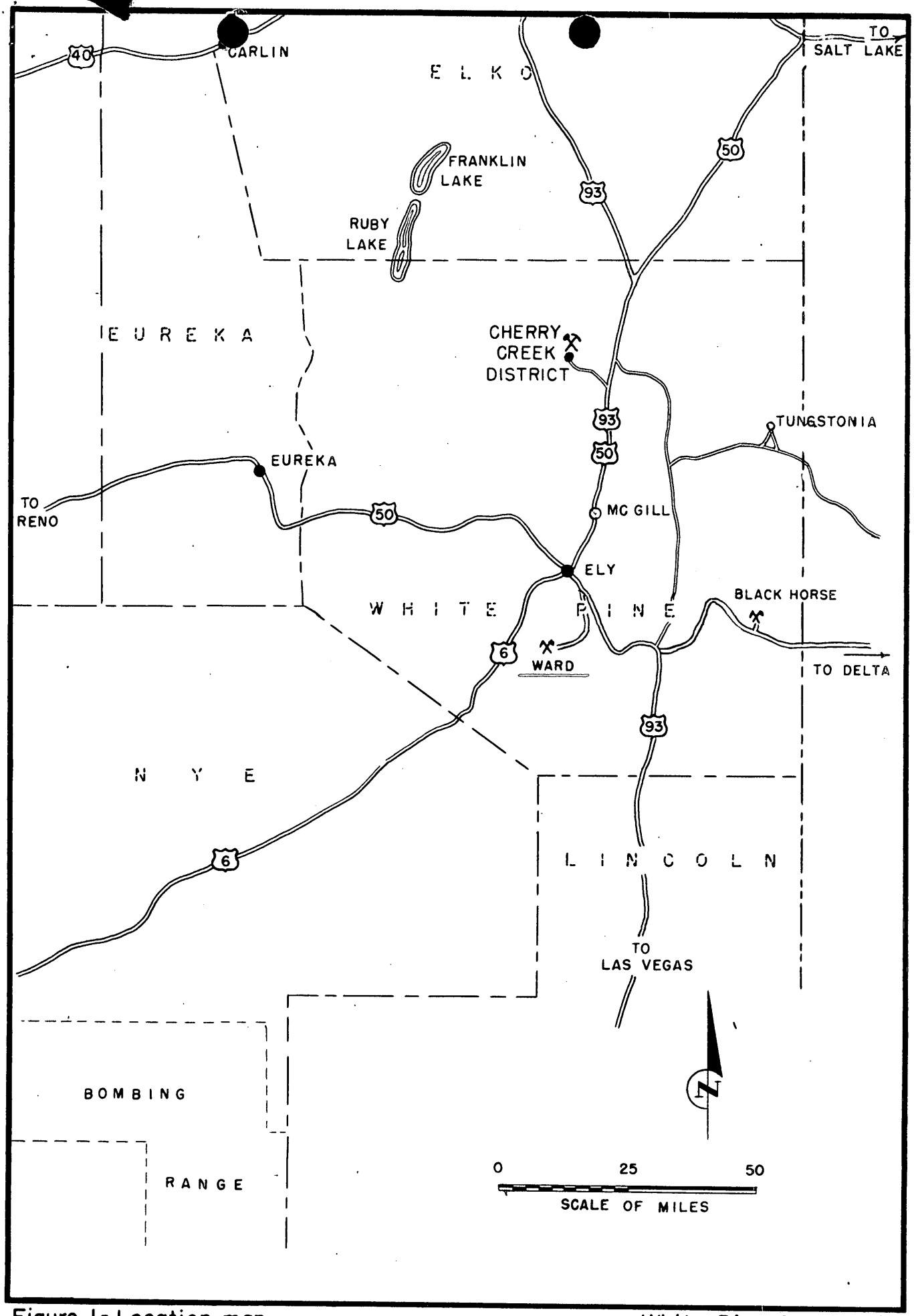


Figure 1- Location map, White Pine Co., Nevada

Form 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. dmea 2257
Metal or Mineral
Date Received 7-21-52
Amount $
Participation (Government %)

Name and address of applicant

[illegible] Corporation
Box 257
Louisville, Colorado

[illegible]
[illegible] County, [illegible]

Date November 7, 1951

If you have already filed MF-100, give date filed 23-6-51, type of assistance requested [illegible],

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.

Keller Corporation
(Name of company)

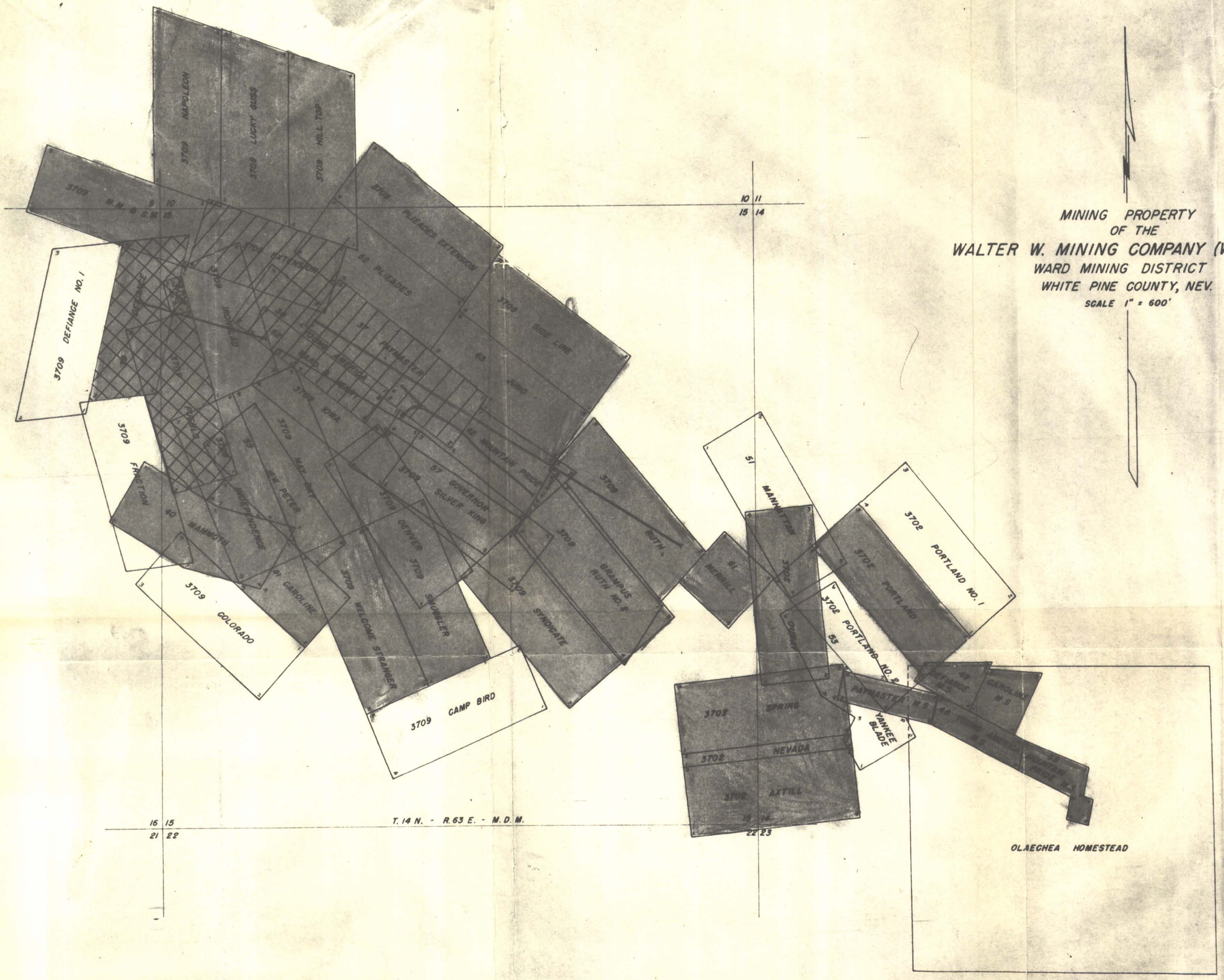
By _____
(Signature of authorized official)

November 7, 1952
(Date)

Vice-President & Treasurer
(Title)

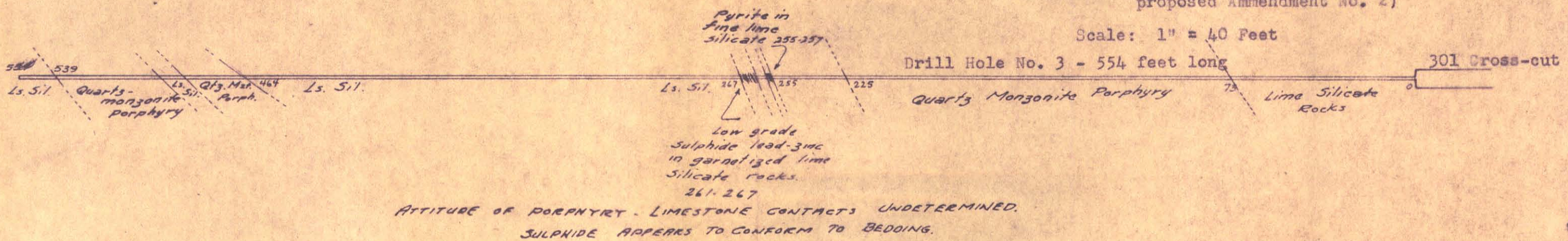
Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

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


MINING PROPERTY
OF THE
WALTER W. MINING COMPANY (WARD MINE)
WARD MINING DISTRICT
WHITE PINE COUNTY, NEV.
SCALE 1" = 600'
3709 NAPOLEON
3709 LUCKY BUSS
3709 HILL TOP
3709 PLEIADES EXTENSION
3709 SIDE LINE
3709 DEFIANCE NO. 1
3709 FRICTION
3709 COLORADO
3709 CAMP BIRD
3709 WELCOME STRANGER
3709 SYNDICATE
3709 GRAMPUS RUTH NO. 2
3709 RUTH
3709 SILVER KING
3709 SHUBELER
3709 MAY DAY
3709 IOWA
3709 IRONCLAD
3709 EXTENSION
3702 PORTLAND NO. 1
3702 PORTLAND
3702 PORTLAND NO. 2
3702 SPRING
3702 NEVADA
3702 AXTILL
YANKEE BLADE
OLAECHEA HOMESTEAD
T. 14 N. - R. 63 E. - M.D.M.

WARD MINE - WALKER CORPORATION
DRILL HOLE NO. 3 (Same as Drill Hole No. 2 on proposed Ammendment No. 2)

Scale: 1" = 40 Feet



ATTITUDE OF PORPHYRY - LIMESTONE CONTACTS UNDETERMINED.
SULPHIDE APPEARS TO CONFORM TO BEDDING.

LOG

0 - 73 feet	92.4% core recovery	Mottled gray lime silicate rocks
73-225 feet	78.2% core recovery	Quartz monzonite porphyry
225-464 feet	92.5% core recovery	Mottled gray lime silicate rocks, fine greenish lime silicate rocks, garnetiferous lime silicate rocks, scant mineralization (pyrite) at 255-257 (assayed) and at 261-267 (lead-zinc), assayed and shown on log above.
464-539 feet	88.7% core recovery	Quartz monzonite porphyry with ten foot section of lime silicate rocks included from 488-498
539-554 feet	100% core recovery	Greenish lime silicate rocks.

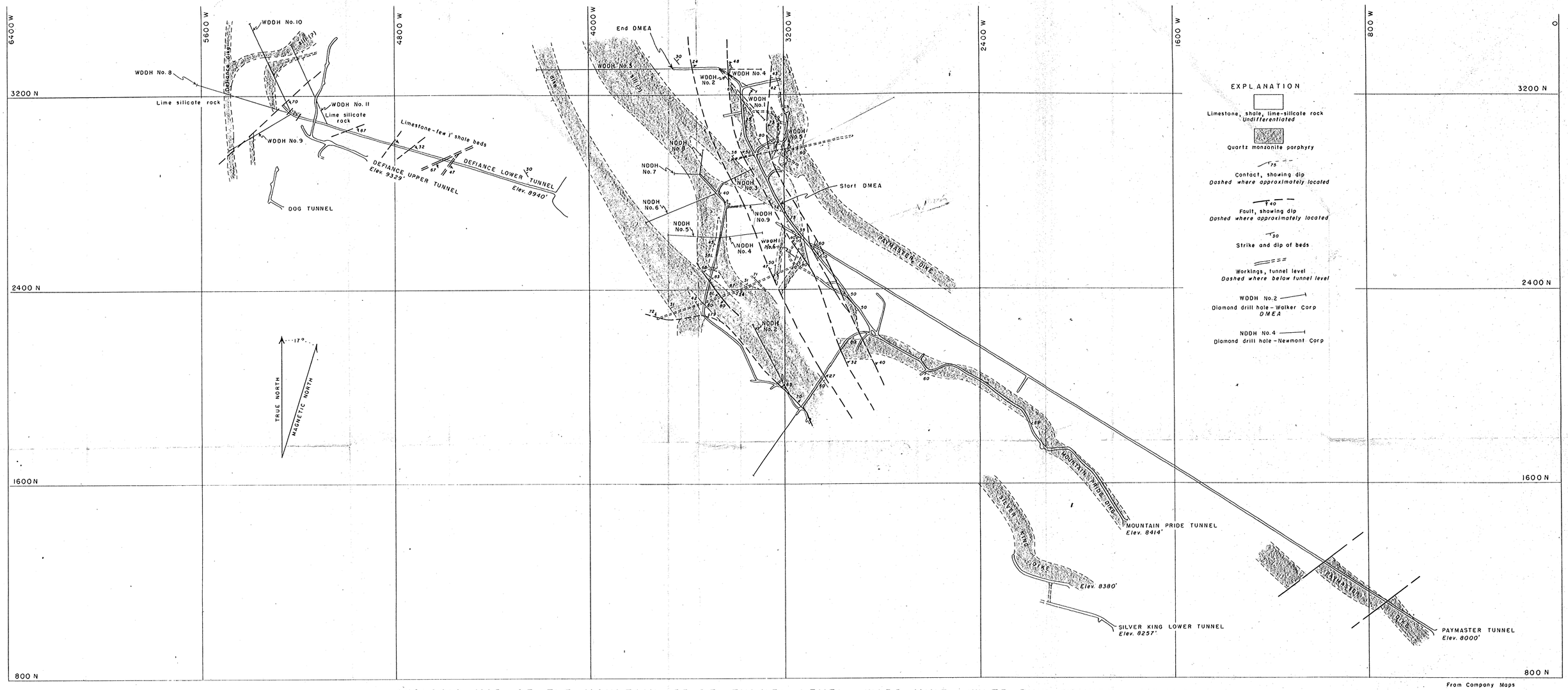
NOTE: All contacts barren of mineralization. Dikes encountered are believed to represent first the MOUNTAIN PRIDE DIKE and second the SILVER KING DIKE below the Ward Fault Zone.

ASSAYS

255-257		0.4% lead	1.27% copper	0.3% zinc
261-267	1.5 ozAg	1.8% lead	no copper	1.6% zinc

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 2257
Idm E-442
(Lead-zinc-copper)



From Company Maps

GEOLOGIC MAP OF THE MOUNTAIN PRIDE TUNNEL LEVEL, WARD MINE, WHITE PINE COUNTY, NEVADA

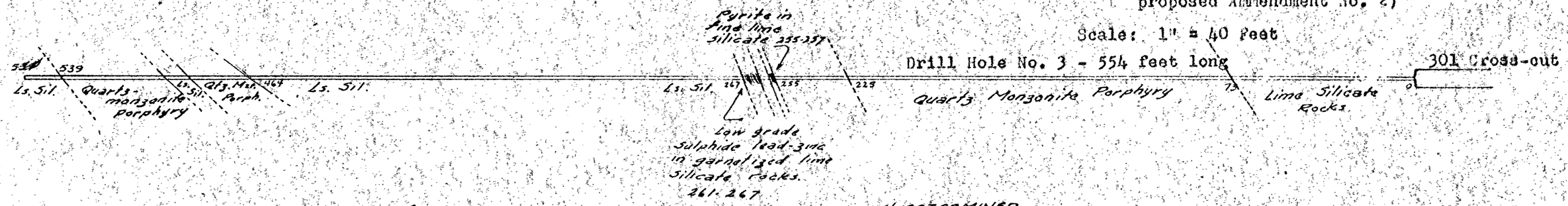
200 0 200 400 800 Feet

Figure 2

WARD MINE - WALKER CORPORATION
DRILL HOLE NO. 3 (Same as Drill Hole No. 2 on proposed Ammendment No. 2)

Scale: 1" = 40 feet

Drill Hole No. 3 - 554 feet long



ATTITUDE OF PORPHYRY - LIMESTONE CONTACTS UNDETERMINED.
SULPHIDE APPEARS TO CONFORM TO BEDDING.

LOG

0 - 73 feet	92.4% core recovery	Mottled gray lime silicate rocks
73-225 feet	78.2% core recovery	Quartz monzonite porphyry
225-464 feet	92.5% core recovery	Mottled gray lime silicate rocks, fine greenish lime silicate rocks, garnetiferous lime silicate rocks, scant mineralization (pyrite) at 255-257 (assayed) and at 261-267 (lead-zinc), assayed and shown on log above.
464-539 feet	88.7% core recovery	Quartz monzonite porphyry with ten foot section of lime silicate rocks included from 488-498
539-554 feet	100% core recovery	Greenish lime silicate rocks.

NOTE: All contacts barren of mineralization. Dikes encountered are believed to represent first the MOUNTAIN PRIDE DIKE and second the SILVER KING DIKE below the Ward Fault Zone.

ASSAYS

255-257		0.4% lead	1.27% copper	0.3% zinc
261-267	1.5 ozAg	1.8% lead	no copper	1.6% zinc